

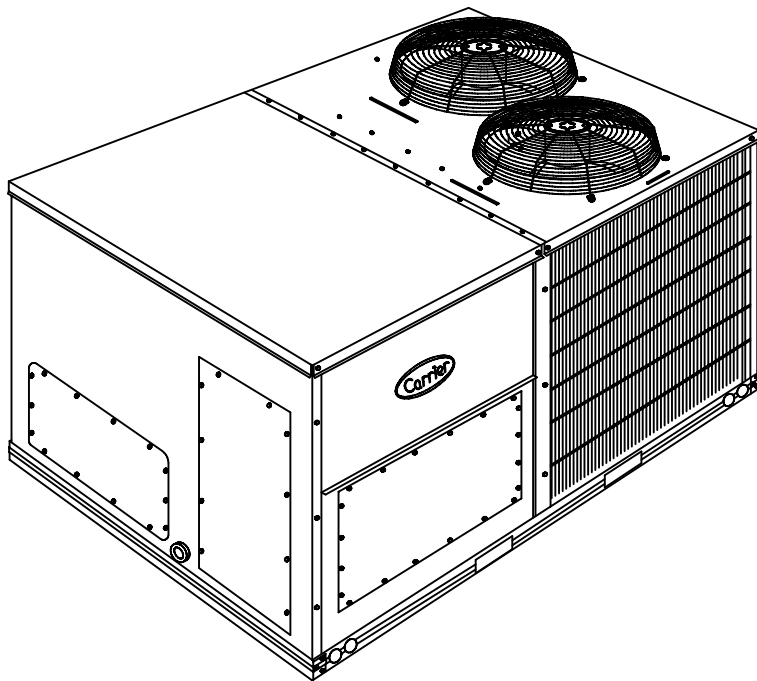
**50LJS/TJS007-014 (50Hz)
Single- Package
Rooftop Units
6 to 12.5 Nominal Tons**



Turn to the Experts.™

Product Data

Single package rooftop cooling units with electric heat option. Compact, horizontal discharge units (vertical discharge option), combining installation flexibility with efficient performance.



Features / Benefits

- **Higher Cooling Capacity.**
- Standard cooling operation at outdoor ambient temperature as high as 50 C (122 F).
- Galvanized steel cabinet with powder paint coat.
- 2-inch (51 mm) return-air filters.
- Commercial strength base rails (full perimeter).
- Corrosion-resistant sloped condensate pan.
- Single power entry to the unit.
- Commercial duty motors with permanently lubricated bearings.

All units feature sloped condensate drain pans in accordance with ASHRAE Standard 62. Also, the new sloped condensate pan permits either an external drain (outside the roof curb) or an internal bottom drain (inside the roof curb). Both options require an external, field-supplied disconnect, if desired.

In addition, these units have a standard filter access door, which permits tool less changes and provides an opening for outdoor air options and accessories (models 007-014). Field installed electrical heaters are available in a wide range of capacities. Single point wiring kit makes installation simple.

Simple electrical connections: Terminal boards, located in the base unit control box, facilitate connections to room thermostat, outdoor thermostat (s), economizer, and electrical heat permitting easy servicing.

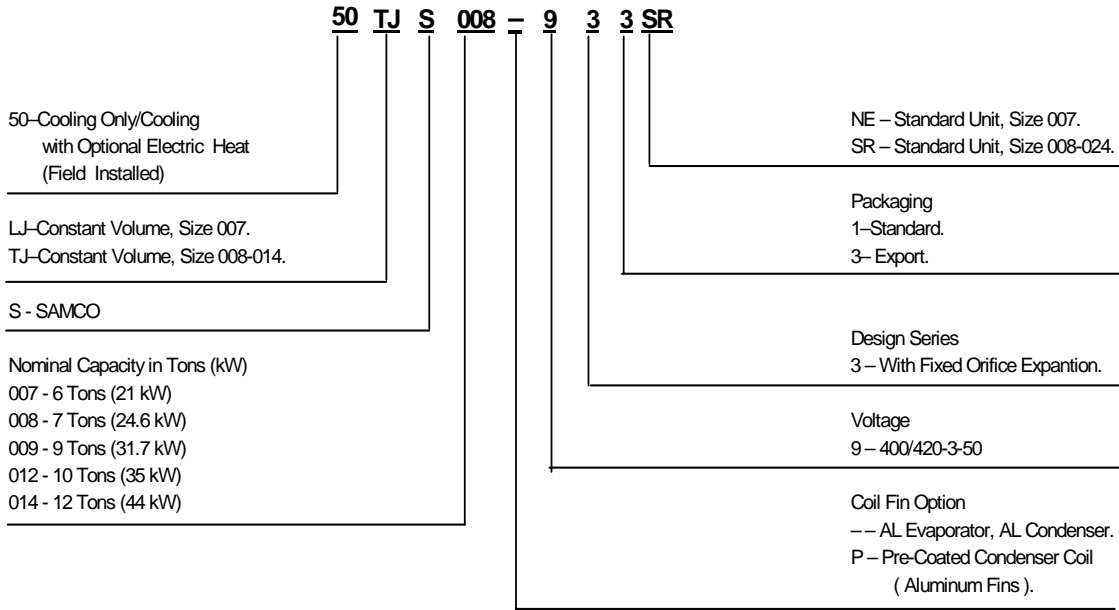
Thru-the-curb service connections accessory allow power and control wiring to be routed through the curb, minimizing roof penetrations. Both power and control connections are made on the same side of the unit to simplify installation.

Quite and efficient operation is provided by belt-driven evaporator fans. The belt-driven evaporator fan with variable pitch pulleys allows adjustment to available static pressure to meet the job requirements of even the most demanding applications.



Model Number Nomenclature

50LJS/TJS



LEGEND
AL Aluminum

Quality Assurance



Approvals :
ISO 9001 : 2000
EN ISO 9001 : 2000
ANSI/ASQC Q9001 : 2000

0410019950420

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ARI Capacity Rating*

| UNIT | NOMINAL TONS | STANDARD CFM | GROSS COOLING CAPACITY (Btuh) | NET COOLING CAPACITY (Btuh) | INPUT TOTAL kw | EER | SOUND RATING (Bels) |
|-----------------|--------------|--------------|-------------------------------|-----------------------------|----------------|-----|---------------------|
| 50LJS007 | 6 | 2200 | 67,600 | 65,000 | 6.6 | 9.8 | 8.4 |
| 50TJS008 | 7 | 2800 | 85,300 | 82,200 | 9.8 | 8.4 | 8.6 |
| 50TJS009 | 9 | 3000 | 106,600 | 103,200 | 10.9 | 9.5 | 8.6 |
| 50TJS012 | 10 | 4000 | 122,500 | 117,350 | 13.4 | 8.8 | 8.8 |
| 50TJS014 | 12 | 4750 | 146,700 | 138,050 | 14.1 | 9.8 | 8.8 |

Bels - Sound Levels (1 bel = 10 decibels)
 db - dry bulb
 EER - Energy Efficiency Ratio

*ARI - Air Conditioning and Refrigeration Institute.

1. Rated in accordance with ARI Standards 210/240-89 or 360-86 and 270-84.
2. Net values reflecting the effects of circulating fan heat.
3. Ratings are based on:



Cooling Standard: 80 F db, 67 wb indoor entering-air temperature and 95 F db air entering outdoor unit, Horizontal Discharge, 0.4 iwg External Static.

Physical data (50 Hz) — English

50LJS/TJS

| UNIT MODEL 50 SERIES | | LJS007 | TJS008 | TJS009 | TJS012 | TJS014 |
|--|---------------|--|-------------------------------|---------------|---------------|---------------|
| Electrical Configuration | V-PH-Hz | 400 - 3 – 50 (+/- 10%) | | | | |
| Nominal Cooling Capacity | TR | 6 | 7.0 | 9.0 | 10 | 12.0 |
| | Kbtu/hr | 72 | 84 | 108 | 120 | 144 |
| OPERATING WEIGHT | | | | | | |
| Unit | lbs | 520 | 755 | 760 | 915 | 930 |
| Economizer | lbs | 34 | 44 | 44 | 44 | 44 |
| Roof Curb | lbs | 115 | 143 | 143 | 143 | 143 |
| COMPRESSOR | type | Scroll | Hermetic, Reciprocating | | | Scroll |
| Quantity | no. | 1 | 2 | 2 | 2 | 2 |
| Oil (per compressor) | oz | 77 | 52 | 52 | 62 | 77 |
| REFRIGERANT | type | R -22 | | | | |
| Operating Charge | | | | | | |
| Circuit 1 | lbs-oz | 8 - 3 | 5 - 4 | 6 - 3 | 6 - 5 | 7 - 12 |
| Circuit 2 | lbs-oz | - | 5 - 4 | 6 - 3 | 6 - 5 | 7 - 12 |
| CONDENSER FAN | type | Propellar | | | | |
| Quantity Diameter | no....in. | 1 26 | 2 22 | 2 22 | 2 22 | 2 22 |
| Nominal CFM | CFM | 4300 | 8650 | 8650 | 9225 | 9225 |
| Motor* hp ... rpm | hp...rpm | 1/3960 | 1/2 1100 | 1/2 1100 | 1/2 1100 | 1/2 1100 |
| CONDENSER COIL | type | Enhanced Copper Tubes, Aluminum Double-Wavy Fins | | | | |
| Rows ... Fins/inch | no....per in. | 2 ...17 | 1 ...17 | 2 ...17 | 2 ...17 | 2 ...17 |
| Total Face Area | sq. ft | 12.25 | 20.5 | 18 | 17.42 | 25 |
| EVAPORATOR FAN | type | Centrifugal Type | | | | |
| Quantity Size | no....in. | 1 ...10 x 10 | 1 15 x15 | 1 15 x15 | 1 15 x15 | 1 15 x15 |
| Drive Type | type | Belt Driven | | | | |
| Nominal CFM | CFM | 2200 | 2800 | 3000 | 4000 | 4750 |
| Input Watts @ Nominal CFM | Watts | 800 | 900 | 1000 | 1500 | 2000 |
| Motor hp, rpm** | hp , rpm | 1.5, 1425 | 1.5 , 1425 | 1.5 , 1425 | 2 , 1425 | 3 , 1425 |
| Max. Continuous Bhp | hp | 2.4 | 2.4 | 2.4 | 2.9 | 3.7 |
| Motor Pulley Pitch Dia. | in. | 4.4 | 3.4 | 3.4 | 4.4 | 5 |
| Fan Pulley Pitch Dia. | in. | 5.19 | 5.5 | 5.5 | 7 | 7 |
| HIGH PRESSURE SWITCH | Psig | | | | | |
| Standard Compressor IPRV setting | | 400 - 500 | | | | |
| Cutout / Reset (Auto) | | 463 - 477 / 300 - 340 | | | | |
| LOW PRESSURE SWITCH | Psig | | | | | |
| Cutout / Reset (Manual) | | 4 – 10 / 17 – 27 | | 14 / 20 - 30 | | |
| FREEZE-PROTECTION SWITCH | °F | | | | | |
| Opens / Closes | | 25 - 35 / 40 - 50 | | | | |
| EVAPORATOR COIL | type | Enhanced Copper Tubes, Aluminum Double-Wavy Fins | | | | |
| Rows ... Fins / inch | no....per in. | 4 ...15 | 315 | 315 | 3 15 | 4 15 |
| Total Face Area | sq. ft | 5.5 | 8 | 8 | 10 | 11.1 |
| OUTDOOR AIR INLET SCREENS (With Optional Economizer) | type | Cleanable | | | | |
| Quantity Size | no....in. | 120x24x1 | 1 ... 20x25x1 + 116x25x1 | | | |
| RETURN AIR FILTERS | type | Throw away | | | | |
| Quantity Size | no....in. | 216x25x2 | 4 16x20x2 | 4 ... 20x20x2 | | |

* Condenser Motor Efficiency: 80%.

**Evaporator Motor Efficiency: LJ007 = 81%. TJ008-014 = 85%.

Physical data (50 Hz)— SI

| UNIT MODEL 50 SERIES | | LJS007 | TJS008 | TJS009 | TJS012 | TJS014 |
|----------------------------------|------------------|--|---|--------------------|-----------------|-----------------|
| Electrical Configuration | V-PH-Hz | 400 - 3 – 50 (+/- 10%) | | | | |
| Nominal Cooling Capacity | TR | 6 | 7.0 | 9.0 | 10 | 12.0 |
| | KW | 21.1 | 24.6 | 31.6 | 36.2 | 42.0 |
| OPERATING WEIGHT | | | | | | |
| Unit | Kg | 236.3 | 343.1 | 345.4 | 415.9 | 422.7 |
| Economizer | kg | 15.45 | 20 | 20 | 20 | 20 |
| Roof Curb | kg | 52.2 | 65 | 65 | 65 | 65 |
| COMPRESSOR | type | Scroll | Hermetic, Reciprocating | | | Scroll |
| Quantity | no. | 1 | 2 | 2 | 2 | 2 |
| Oil (per compressor) | ml | 2277 | 1538 | 1538 | 1834 | 2277 |
| REFRIGERANT | type | R -22 | | | | |
| Operating Charge | | | | | | |
| Circuit 1 | kg | 3.7 | 2.4 | 2.8 | 2.9 | 3.5 |
| Circuit 2 | kg | - | 2.4 | 2.8 | 2.9 | 3.5 |
| CONDENSER FAN | type | Propellar | | | | |
| Quantity Diameter | no ...mm | 1 660.4 | 2 558.8 | 2 558.8 | 2 558.8 | 2 558.8 |
| Nominal Airflow | L/s | 2029 | 4082 | 4082 | 4353 | 4353 |
| Motor*KW ... rps | KW ...rps | 0.2516 | 0.37 18.33 | 0.37 18.33 | 0.37 18.33 | 0.37 18.33 |
| CONDENSER COIL | type | Enhanced Copper Tubes, Aluminum Double-Wavy Fins | | | | |
| Rows ... Fins/inch | noper 25 mm | 2 ...17 | 1 ...17 | 2 ...17 | 2 ...17 | 2 ...17 |
| Total Face Area | sq. m | 1.14 | 1.9 | 1.67 | 1.61 | 2.32 |
| EVAPORATOR FAN | type | Centrifugal Type | | | | |
| Quantity Size | no....mm x mm | 1 ...254 x 254 | 1 381 x381 | 1 381 x381 | 1 381 x381 | 1 381 x381 |
| Drive Type | type | Belt Driven | | | | |
| Nominal Airflow | L/s | 1.38 | 1321 | 1416 | 1887 | 2242 |
| Input Watts @ Nominal L/s | Watts | 800 | 900 | 1000 | 1500 | 2000 |
| Motor Kw, rps** | Kw , rps | 1.1 , 23.8 | 1.1 , 23.8 | 1.1 , 23.8 | 1.5 , 23.8 | 2.2 , 23.8 |
| Max. Continuous BkW | kW | 1.8 | 1.8 | 1.8 | 2.1 | 2.7 |
| Motor Pulley Pitch Dia. | mm | 111.8 | 86.4 | 86.4 | 111.8 | 127 |
| Fan Pulley Pitch Dia. | mm | 132 | 139.7 | 139.7 | 177.8 | 177.8 |
| HIGH PRESSURE SWITCH | kPa | 2758 - 3448 | | | | |
| Standard Compressor IPRV setting | | 3192 - 3289 / 2068 - 2344 | | | | |
| Cutout / Reset (Auto) | | | | | | |
| LOW PRESSURE SWITCH | kPa | 28 - 69 / 117 - 186 | | | | |
| Cutout / Reset (Manual) | | 97 / 138 - 207 | | | | |
| FREEZE-PROTECTION SWITCH | °C | (-)4 to 1.66 / 4.44 to 10 | | | | |
| Opens / Closes | | | | | | |
| EVAPORATOR COIL | type | Enhanced Copper Tubes, Aluminum Double-Wavy Fins | | | | |
| Rows ... Fins / inch | no...per 25 mm | 4 ...15 | 315 | 315 | 3 15 | 4 15 |
| Total Face Area | sq. m | 0.51 | 0.74 | 0.74 | 0.929 | 1.03 |
| OUTDOOR AIR INLET SCREENS | type | Cleanable | | | | |
| (With Optional Economizer) | | | | | | |
| Quantity Size | no...mm | 1508x609.6x25.4 | 1 ... 508x635x25.4 + 1406.4x635x25.4 | | | |
| RETURN AIR FILTERS | type | Throw away | | | | |
| Quantity Size | no....mm | 2406.4x635x50.8 | 4 406.4x508x50.8 | 4 ... 508x508x50.8 | | |

* Condenser Motor Efficiency: 80%.

**Evaporator Motor Efficiency: LJ007 = 81%. TJ008-014 = 85%.

Performance data

COOLING CAPACITIES

| 50LJS007 (6 TONS) | | | | | | | | | | | | |
|---------------------------------------|-----|----------------------------------|------|------|-----------|-------------|------|-----------|------|------|--|--|
| Temp (F) Air Entering Condenser (Edb) | | Evaporator Air Quantity — Cfm/BF | | | | | | | | | | |
| | | 1060/0.04 | | | 2200/0.06 | | | 2750/0.07 | | | | |
| | | Evaporator Air — Ewb (F) | | | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 | | |
| 75 | TC | 77.6 | 71.0 | 64.8 | 81.8 | 74.6 | 67.7 | 85.7 | 76.1 | 69.9 | | |
| | SHC | 37.3 | 46.4 | 55.1 | 41.5 | 53.1 | 64.3 | 45.7 | 58.8 | 69.8 | | |
| | kW | 4.37 | 4.35 | 4.32 | 4.39 | 4.36 | 4.33 | 4.41 | 4.37 | 4.35 | | |
| 85 | TC | 74.7 | 67.7 | 60.5 | 78.6 | 71.1 | 63.8 | 80.8 | 72.7 | 67.3 | | |
| | SHC | 36.3 | 45.1 | 53.2 | 40.6 | 52.0 | 62.1 | 44.5 | 58.0 | 67.2 | | |
| | kW | 4.77 | 4.73 | 4.67 | 4.81 | 4.76 | 4.71 | 4.83 | 4.78 | 4.74 | | |
| 95 | TC | 71.8 | 64.4 | 56.2 | 75.4 | 67.6 | 59.9 | 76.9 | 69.3 | 65.6 | | |
| | SHC | 35.3 | 43.9 | 51.4 | 39.7 | 50.9 | 59.9 | 43.3 | 57.3 | 64.5 | | |
| | kW | 5.18 | 5.11 | 5.02 | 5.23 | 5.16 | 5.08 | 5.25 | 5.18 | 5.13 | | |
| 105 | TC | 68.4 | 60.3 | 50.8 | 71.4 | 63.8 | 56.2 | 73.4 | 65.4 | 61.2 | | |
| | SHC | 34.2 | 42.3 | 48.8 | 38.4 | 49.5 | 56.2 | 42.5 | 56.1 | 61.1 | | |
| | kW | 5.59 | 5.48 | 5.37 | 5.64 | 5.55 | 5.46 | 5.68 | 5.59 | 5.53 | | |
| 115 | TC | 64.7 | 54.6 | 45.0 | 67.7 | 57.6 | 52.0 | 69.4 | 60.6 | 57.3 | | |
| | SHC | 32.9 | 40.1 | 45.0 | 37.3 | 47.3 | 51.9 | 41.5 | 45.2 | 57.3 | | |
| | kW | 5.99 | 5.86 | 5.74 | 6.06 | 5.93 | 5.85 | 6.10 | 5.97 | 5.93 | | |
| 125 | TC | 60.9 | 48.9 | 39.3 | 64.1 | 51.5 | 47.7 | 65.3 | 55.8 | 53.4 | | |
| | SHC | 31.7 | 37.9 | 39.3 | 36.1 | 45.0 | 47.7 | 40.4 | 52.4 | 53.4 | | |
| | kW | 6.39 | 6.23 | 6.12 | 6.48 | 6.31 | 6.24 | 6.53 | 6.36 | 6.32 | | |

| 50TJS008 (7.0 TONS) | | | | | | | | | | | | | |
|---------------------------------------|-----|----------------------------------|------|------|-----------|-------------|------|-----------|------|------|-----------|-------|------|
| Temp (F) Air Entering Condenser (Edb) | | Evaporator Air Quantity — Cfm/BF | | | | | | | | | | | |
| | | 2250/0.07 | | | 2800/0.09 | | | 3000/0.10 | | | 3750/0.12 | | |
| | | Evaporator Air — Ewb (F) | | | | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 99.2 | 91.5 | 83.2 | 102.1 | 94.8 | 86.9 | 102.7 | 95.5 | 87.6 | 107.5 | 100.0 | 92.1 |
| | SHC | 47.7 | 59.6 | 70.6 | 50.8 | 65.4 | 78.7 | 51.7 | 67.4 | 81.1 | 57.3 | 76.2 | 90.8 |
| | kW | 7.40 | 7.07 | 6.74 | 7.55 | 7.24 | 6.93 | 7.59 | 7.30 | 6.97 | 7.74 | 7.45 | 7.11 |
| 85 | TC | 94.8 | 87.0 | 78.7 | 98.2 | 90.3 | 82.2 | 99.0 | 91.1 | 83.0 | 103.0 | 95.3 | 88.2 |
| | SHC | 46.3 | 58.1 | 68.7 | 49.8 | 64.1 | 76.8 | 51.0 | 66.2 | 79.1 | 55.9 | 74.8 | 88.0 |
| | kW | 7.94 | 7.61 | 7.26 | 8.11 | 7.78 | 7.45 | 8.15 | 7.82 | 7.49 | 8.28 | 7.96 | 7.67 |
| 95 | TC | 90.5 | 82.2 | 73.9 | 93.6 | 85.3 | 77.2 | 94.2 | 85.9 | 78.4 | 97.8 | 89.8 | 83.9 |
| | SHC | 44.8 | 56.2 | 66.4 | 48.4 | 62.3 | 74.5 | 49.6 | 64.5 | 76.2 | 54.7 | 73.2 | 83.9 |
| | kW | 8.48 | 8.13 | 7.76 | 8.67 | 8.30 | 7.92 | 8.71 | 8.34 | 7.98 | 8.81 | 8.46 | 8.21 |
| 105 | TC | 85.3 | 77.0 | 68.3 | 87.8 | 79.9 | 72.0 | 88.4 | 80.5 | 73.3 | 92.3 | 84.1 | 79.3 |
| | SHC | 43.0 | 54.2 | 63.7 | 46.5 | 60.4 | 71.6 | 47.7 | 62.5 | 73.0 | 53.3 | 71.3 | 79.3 |
| | kW | 9.00 | 8.61 | 8.28 | 9.13 | 8.77 | 8.44 | 9.19 | 8.81 | 8.50 | 9.31 | 8.96 | 8.73 |
| 115 | TC | 82.8 | 73.8 | 66.0 | 85.2 | 76.8 | 69.6 | 85.6 | 77.4 | 71.0 | 89.4 | 81.0 | 77.5 |
| | SHC | 42.6 | 53.8 | 63.2 | 46.4 | 60.4 | 69.6 | 47.8 | 62.6 | 71.0 | 53.9 | 71.8 | 77.3 |
| | kW | 9.50 | 9.10 | 8.73 | 9.64 | 9.25 | 8.96 | 9.69 | 9.29 | 9.04 | 9.83 | 9.44 | 9.27 |
| 122 | TC | 81.0 | 71.6 | 64.4 | 83.4 | 74.6 | 67.9 | 83.6 | 75.2 | 69.4 | 87.3 | 78.8 | 76.2 |
| | SHC | 42.3 | 53.5 | 62.9 | 46.3 | 60.4 | 68.2 | 47.9 | 62.6 | 69.6 | 54.2 | 72.2 | 75.9 |
| | kW | 9.85 | 9.45 | 9.05 | 10.01 | 9.58 | 9.32 | 10.03 | 9.63 | 9.42 | 10.19 | 9.77 | 9.65 |

| 50TJS009 (9.0 TONS) | | | | | | | | | | | | | |
|---------------------------------------|-----|----------------------------------|-------|-------|-----------|--------------|-------|-----------|-------|-------|------------|-------|-------|
| Temp (F) Air Entering Condenser (Edb) | | Evaporator Air Quantity — Cfm/BF | | | | | | | | | | | |
| | | 2550/0.08 | | | 3000/0.10 | | | 3400/0.11 | | | 4250/0.135 | | |
| | | Evaporator Air — Ewb (F) | | | | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 121.8 | 113.3 | 103.5 | 124.6 | 116.3 | 106.4 | 125.5 | 117.9 | 108.3 | 130.4 | 122.4 | 113.3 |
| | SHC | 75.1 | 64.7 | 79.3 | 78.6 | 68.0 | 85.1 | 84.1 | 71.1 | 89.5 | 34.9 | 78.8 | 100.6 |
| | kW | 7.82 | 7.62 | 7.42 | 7.91 | 10.74 | 7.48 | 7.94 | 6.76 | 7.56 | 8.02 | 7.85 | 7.65 |
| 85 | TC | 118.4 | 108.9 | 98.2 | 120.9 | 111.7 | 101.4 | 122.5 | 113.6 | 103.2 | 128.0 | 118.3 | 108.5 |
| | SHC | 56.4 | 70.7 | 84.0 | 58.8 | 75.8 | 91.0 | 60.8 | 79.8 | 96.7 | 67.0 | 89.7 | 107.7 |
| | kW | 8.51 | 8.27 | 8.01 | 5.57 | 8.36 | 8.09 | 8.65 | 8.43 | 8.17 | 8.77 | 8.53 | 8.28 |
| 95 | TC | 114.0 | 103.8 | 91.2 | 116.2 | 106.6 | 95.5 | 117.6 | 108.3 | 97.9 | 122.9 | 112.8 | 114.5 |
| | SHC | 55.0 | 68.9 | 80.9 | 57.5 | 74.1 | 88.7 | 59.7 | 78.5 | 94.4 | 66.3 | 88.7 | 103.7 |
| | kW | 8.95 | 9.02 | 8.73 | 9.04 | 9.11 | 8.84 | 9.11 | 9.17 | 8.91 | 4.79 | 9.30 | 9.05 |
| 105 | TC | 107.9 | 98.2 | 85.1 | 110.7 | 100.6 | 88.4 | 112.2 | 102.1 | 91.9 | 116.6 | 106.5 | 98.9 |
| | SHC | 52.8 | 56.4 | 77.9 | 55.9 | 72.2 | 85.1 | 58.3 | 76.4 | 90.5 | 64.4 | 86.8 | 98.9 |
| | kW | 9.80 | 9.49 | 9.13 | 9.91 | 9.60 | 9.27 | 9.98 | 9.66 | 9.35 | 10.09 | 9.78 | 9.54 |
| 115 | TC | 97.7 | 87.9 | 75.9 | 99.9 | 90.4 | 78.8 | 101.3 | 91.8 | 82.4 | 105.0 | 95.7 | 90.1 |
| | SHC | 48.7 | 61.7 | 71.9 | 51.8 | 66.9 | 78.1 | 54.0 | 71.2 | 82.3 | 59.7 | 81.0 | 90.0 |
| | kW | 10.33 | 9.97 | 9.61 | 10.46 | 10.10 | 9.75 | 10.54 | 10.18 | 9.88 | 10.61 | 10.30 | 10.10 |
| 122 | TC | 90.5 | 80.7 | 69.5 | 92.4 | 83.2 | 72.1 | 93.6 | 84.6 | 75.8 | 96.8 | 88.1 | 83.9 |
| | SHC | 45.8 | 65.4 | 67.7 | 48.9 | 63.2 | 73.2 | 51.0 | 67.6 | 76.6 | 56.4 | 76.9 | 83.7 |
| | kW | 10.70 | 10.31 | 9.94 | 10.85 | 10.45 | 10.09 | 10.93 | 10.55 | 10.25 | 10.97 | 10.67 | 10.49 |

COOLING CAPACITIES (Cont.)

50TJS012 (10 TONS)

| Temp (F) Air Entering Condenser (Edb) | | Evaporator Air Quantity — Cfm/BF | | | | | | | | |
|--|-----|----------------------------------|-------|-------|------------|--------------|-------|-----------|-------|-------|
| | | 3000/0.095 | | | 4000/0.125 | | | 5000/0.15 | | |
| | | Evaporator Air — Ewb (F) | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 139.8 | 128.4 | 115.3 | 146.6 | 134.5 | 123.3 | 153.8 | 140.8 | 129.8 |
| | SHC | 68.7 | 85.0 | 100.2 | 75.3 | 96.2 | 116.0 | 83.7 | 109.6 | 129.2 |
| | KW | 9.86 | 9.50 | 9.19 | 10.10 | 9.71 | 9.36 | 10.27 | 9.85 | 9.50 |
| 85 | TC | 133.8 | 123.1 | 107.0 | 140.0 | 128.8 | 117.8 | 147.0 | 134.2 | 124.7 |
| | SHC | 66.1 | 82.8 | 96.5 | 73.1 | 94.5 | 113.4 | 81.3 | 106.9 | 124.6 |
| | KW | 10.51 | 10.17 | 9.84 | 10.78 | 10.38 | 10.04 | 10.95 | 10.51 | 10.19 |
| 95 | TC | 127.7 | 117.0 | 99.5 | 133.3 | 122.5 | 110.0 | 139.4 | 128.1 | 119.7 |
| | SHC | 64.0 | 80.7 | 92.6 | 71.1 | 92.5 | 109.0 | 78.6 | 105.1 | 119.6 |
| | KW | 11.24 | 10.89 | 10.50 | 11.49 | 11.10 | 10.74 | 11.64 | 11.25 | 10.94 |
| 105 | TC | 121.5 | 107.6 | 90.4 | 126.3 | 115.2 | 101.4 | 132.3 | 120.9 | 113.3 |
| | SHC | 62.1 | 77.0 | 87.7 | 68.8 | 90.3 | 101.4 | 76.7 | 103.1 | 113.3 |
| | KW | 12.05 | 11.64 | 11.21 | 12.25 | 11.86 | 11.52 | 12.39 | 12.01 | 11.77 |
| 115 | TC | 111.5 | 94.9 | 81.6 | 116.3 | 100.7 | 90.5 | 121.2 | 108.5 | 101.6 |
| | SHC | 57.6 | 70.2 | 80.8 | 64.4 | 82.3 | 90.5 | 72.0 | 95.5 | 101.6 |
| | KW | 12.63 | 12.17 | 11.74 | 12.85 | 12.42 | 12.13 | 12.98 | 12.57 | 12.36 |
| 122 | TC | 104.5 | 86.1 | 75.4 | 109.3 | 90.6 | 82.9 | 113.5 | 99.9 | 93.5 |
| | SHC | 54.4 | 65.4 | 76.0 | 61.2 | 76.6 | 82.9 | 68.6 | 90.1 | 93.5 |
| | KW | 13.03 | 12.55 | 12.11 | 13.28 | 12.82 | 12.56 | 13.39 | 12.96 | 12.78 |

50LJS/TJS

50TJS014 (12.5 TONS)

| Temp (F) Air Entering Condenser (Edb) | | Evaporator Air Quantity — Cfm/BF | | | | | | | | | | | |
|---|-----|----------------------------------|-------|-------|------------|-------|-------|-----------|--------------|-------|-----------|-------|-------|
| | | 3750/0.10 | | | 4500/0.125 | | | 5000/0.15 | | | 6250/0.15 | | |
| | | Evaporator Air — Ewb (F) | | | | | | | | | | | |
| | | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 | 72 | 67 | 62 |
| 75 | TC | 166.5 | 153.9 | 141.5 | 171.7 | 158.8 | 146.3 | 173.5 | 161.5 | 148.3 | 181.1 | 169.0 | 156.5 |
| | SHC | 81.2 | 101.8 | 121.5 | 86.7 | 110.2 | 133.1 | 89.3 | 115.9 | 139.0 | 98.8 | 130.9 | 155.5 |
| | KW | 9.96 | 9.68 | 9.40 | 10.06 | 9.78 | 9.49 | 10.15 | 9.87 | 9.49 | 10.25 | 9.96 | 9.68 |
| 85 | TC | 160.6 | 147.7 | 133.3 | 165.2 | 152.5 | 139.4 | 167.8 | 154.6 | 142.0 | 175.6 | 161.8 | 150.8 |
| | SHC | 79.6 | 99.4 | 117.6 | 85.0 | 108.0 | 130.0 | 87.9 | 113.6 | 136.2 | 97.6 | 129.1 | 150.5 |
| | KW | 10.81 | 10.43 | 10.15 | 10.90 | 10.62 | 10.34 | 11.00 | 10.72 | 10.34 | 11.19 | 10.81 | 10.53 |
| 95 | TC | 153.6 | 141.2 | 125.2 | 158.2 | 145.6 | 131.9 | 160.8 | 147.7 | 135.4 | 167.6 | 154.3 | 144.8 |
| | SHC | 77.2 | 96.7 | 113.7 | 82.6 | 105.4 | 126.3 | 86.0 | 111.2 | 133.0 | 95.1 | 126.6 | 144.8 |
| | KW | 11.66 | 11.28 | 10.90 | 11.84 | 11.47 | 11.09 | 11.94 | 11.56 | 11.19 | 12.03 | 11.66 | 11.37 |
| 105 | TC | 146.9 | 134.0 | 116.7 | 150.6 | 137.9 | 123.5 | 152.7 | 140.0 | 128.0 | 159.9 | 146.3 | 138.6 |
| | SHC | 75.0 | 94.1 | 109.5 | 80.1 | 102.6 | 121.5 | 83.3 | 108.4 | 127.9 | 93.5 | 123.7 | 138.5 |
| | KW | 12.60 | 12.13 | 11.75 | 12.69 | 12.31 | 11.84 | 12.78 | 12.41 | 11.94 | 12.97 | 12.50 | 12.22 |
| 115 | TC | 128.7 | 116.4 | 99.5 | 132.4 | 120.6 | 107.7 | 134.0 | 122.7 | 112.5 | 139.3 | 128.1 | 122.1 |
| | SHC | 67.0 | 84.2 | 97.1 | 71.9 | 92.6 | 107.6 | 74.8 | 98.2 | 112.4 | 83.4 | 112.2 | 122.0 |
| | KW | 13.87 | 13.39 | 12.90 | 14.07 | 13.58 | 13.10 | 14.07 | 13.68 | 13.19 | 14.16 | 13.77 | 13.48 |
| 122 | TC | 115.9 | 104.0 | 87.5 | 119.7 | 108.5 | 96.7 | 121.0 | 110.5 | 101.7 | 124.9 | 115.3 | 110.5 |
| | SHC | 61.5 | 77.3 | 88.4 | 66.2 | 85.6 | 97.9 | 68.9 | 91.1 | 101.6 | 76.3 | 104.1 | 110.4 |
| | KW | 14.76 | 14.27 | 13.71 | 15.03 | 14.47 | 13.97 | 14.96 | 14.57 | 14.07 | 15.00 | 14.66 | 14.37 |

LEGEND

- BF – Bypass factor
- Edb – Entering Dry-Bulb
- Ewd – Entering Wet-Bulb
- KW – Compressor Motor Power Input
- ldb – Leaving Dry-Bulb
- lwb – Leaving Wet-Bulb
- SHC – Sensible Heat Capacity (1000 Rtu/h) Gross
- TC – Total Capacity (1000 Btu/h) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. the following formulas may be used:

$$tldb = tedb - \frac{\text{Sensible capacity (Btu/h)}}{1.10 \times \text{cfm}}$$

Tlwb = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil.

$$hldb = hedb - \frac{\text{Total capacity (Btu/h)}}{4.5 \times \text{cfm}}$$

Where: hewb = Enthalpy of air entering evaporator coil

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.

Below 80 F edb, subtract (corr factor x cfm) from SHC.

Above 80 F edb, add (corr factor x cfm) to SHC.

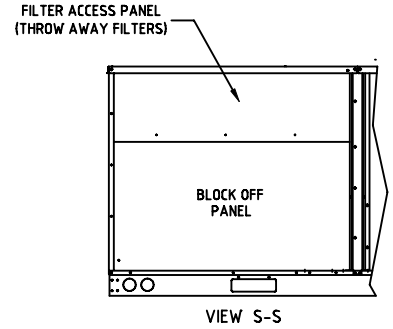
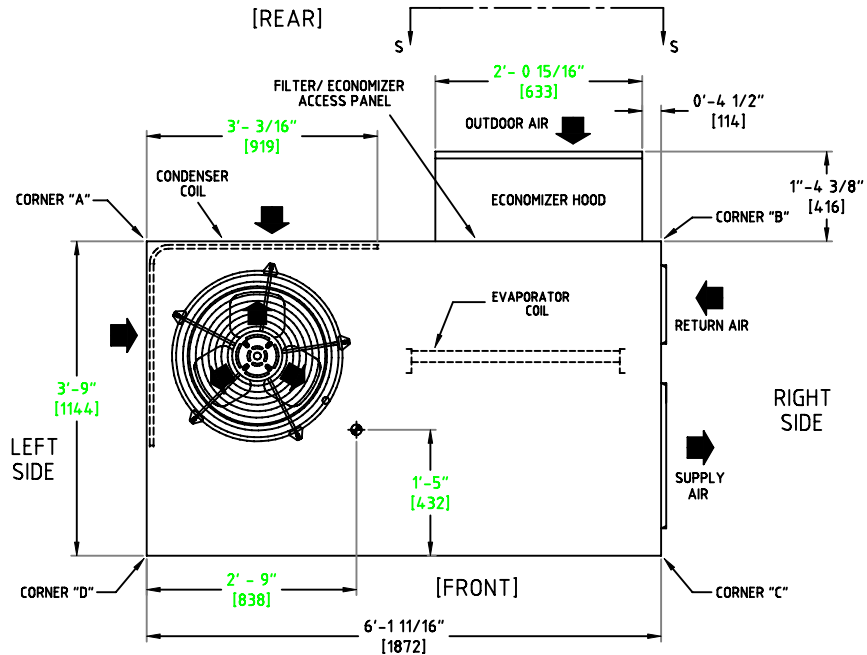
| BYPASS FACTOR (BF) | ENTERING AIR DRY-BULB TEMP (F) | | | | | |
|--------------------|--------------------------------|------|------|------|------|--------------------------|
| | 79 | 78 | 77 | 76 | 75 | Under 75 |
| | 81 | 82 | 83 | 84 | 85 | Over 85 |
| Correction factor | | | | | | |
| .05 | 1.04 | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10 | .98 | 1.96 | 2.94 | 3.92 | 4.90 | |
| .20 | .87 | 1.74 | 2.62 | 3.49 | 4.36 | |
| .30 | .76 | 1.53 | 2.29 | 3.05 | 3.82 | |
| | | | | | | |

Interpolation is permissible.

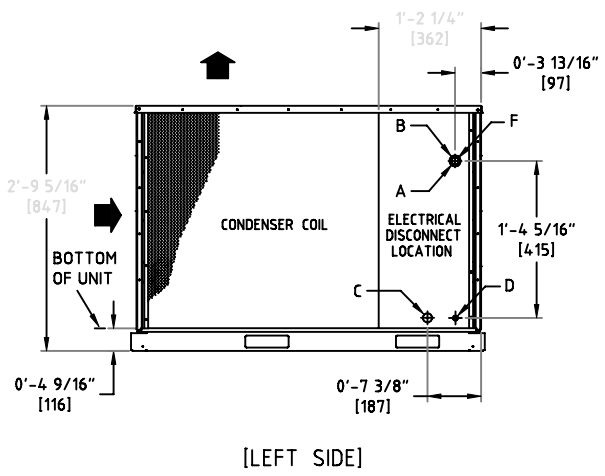
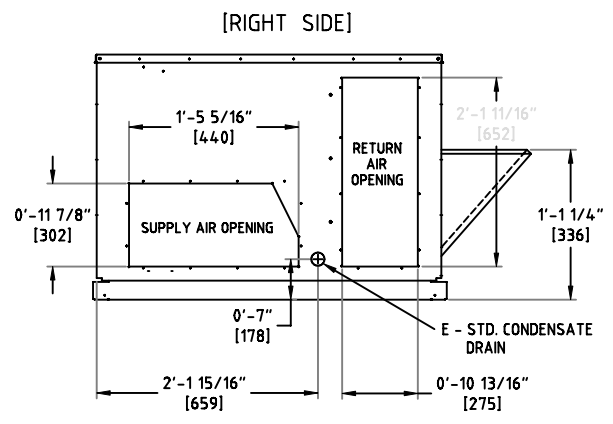
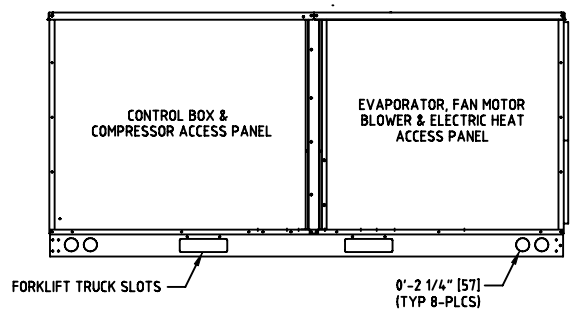
$$\text{Correction factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$$

Base unit dimensions — 50LJS007

| UNIT 50TJ | STANDARD UNIT WEIGHT | | ECONOMIZER WEIGHT | | CORNER WEIGHT | | | | | | | |
|-----------|----------------------|-----|-------------------|------|---------------|----|----|----|-----|------|-----|------|
| | | | | | A | | B | | C | | D | |
| | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg |
| 007 | 520 | 236 | 34 | 15.4 | 108 | 49 | 88 | 40 | 145 | 65.8 | 178 | 80.7 |



| CONNECTION SIZES | |
|------------------|---|
| A | 1-3/8" dia [35] Field power supply hole |
| B | 2-1/2" dia [64] power supply knock-out |
| C | 1-3/4" dia [44] charging port hole |
| D | 7/8" dia [22] field control wiring hole |
| E | 3/4"-14 NPT condensate drain |
| F | 2" dia [51] power supply knock-out |



- NOTES :
- Dimensions in [] are in millimeters.
 - Center of gravity
 - Direction of airflow
 - Ductwork to be attached to accessory roof curb only.
 - Minimum clearance (local codes or jurisdiction may prevail):
 - Bottom to combustible surfaces (when not using curb) 0 inches. On horizontal
 - Condenser coil, for proper airflow, 36 in. one side, 12 in. the other. The side getting the greater clearance is optional.
 - Overhead, 60 in. to assure proper condenser fan operation.
 - Between units, control box side, 42 in. per NEC (National Electrical Code).
 - Between unit and undergrounded surfaces, control box side, 36 in. per NEC.
 - Between unit and block or concrete walls and other grounded surfaces, control box side, 42 in. per NEC.
 - Horizontal supply and return end, 0 inches.
 - With the exception of the clearance for the condenser coil as stated in notes 5b and C, a removable fence or barricade requires no clearance
 - Units may be installed on combustible floors made from wood or class A, B, or C roof covering material.

50LJS/TJS

Base unit dimensions — 50TJS008-014

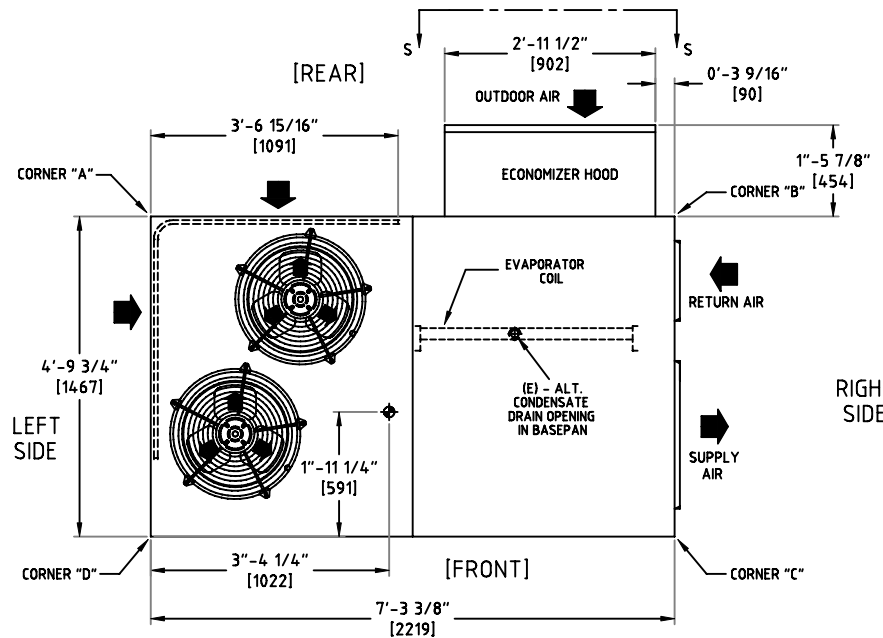
| UNIT 50TJ | CORNER WEIGHT | | | | | | | | DIMENSIONS | | | | | |
|--------------|---------------|----|-----|----|-----|-----|-----|-----|------------|------|----------|------|-----------|-----|
| | A | | B | | C | | D | | "H" | | "J" | | "K" | |
| | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Ft-in. | mm | Ft-in. | mm | Ft-in. | mm |
| 008 | 164 | 74 | 140 | 64 | 208 | 94 | 243 | 110 | 1-2 7/8 | 378 | 3-5 5/16 | 1050 | 2-9 11/16 | 856 |
| 009 | 165 | 75 | 141 | 64 | 209 | 94 | 245 | 111 | 3-3 7/8 | 1013 | 3-5 5/16 | 1050 | 2-9 11/16 | 856 |
| 012 | 199 | 90 | 170 | 77 | 252 | 114 | 294 | 134 | 2-5 7/8 | 759 | 4-1 5/16 | 1253 | 3-0 3/8 | 924 |
| 014 | 202 | 92 | 172 | 78 | 256 | 116 | 300 | 136 | 1-2 7/8 | 378 | 4-1 5/16 | 1253 | 3-0 3/8 | 924 |

BOTTOM POWER CHART: THESE HOLES REQUIRED FOR USE WITH ACCESSORY PACKAGES -
CRBTMPWR001A00 (1/2", 3/4")
CRBTMPWR002A00 (1/2", 1-1/4")

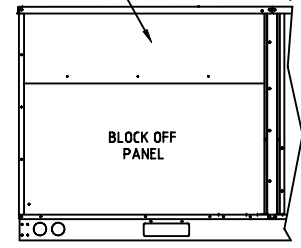
| THREADED CONDUIT SIZE | WIRE USE | REQ'D HOLE SIZES (MAX.) |
|-----------------------|-------------|-------------------------|
| 1/2" | 24 V POWER* | 7/8" [22.2] |
| 3/4" | POWER* | 1-1/8" [28.4] |
| 1-1/4" | POWER* | 1-3/4" [44.4] |

*Weights are for unit only (aluminum plate fins) and do not include options or crating.

*Select either 3/4" or 1/4" for power, depending on wire size.



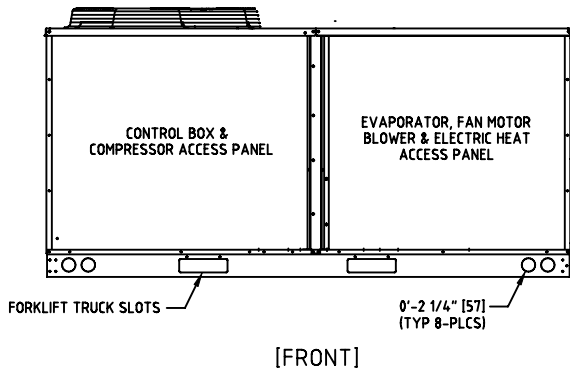
FILTER ACCESS PANEL (THROW AWAY FILTERS)



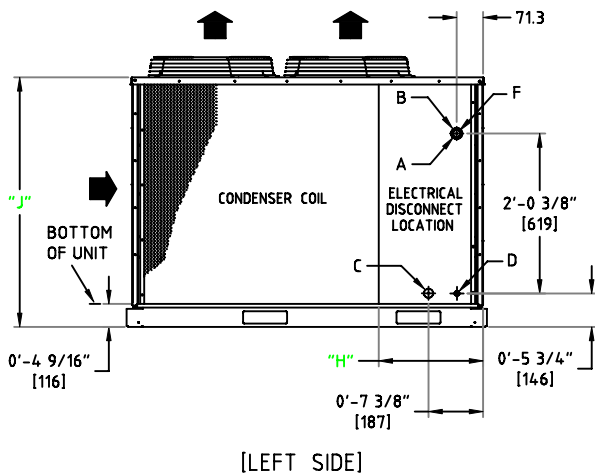
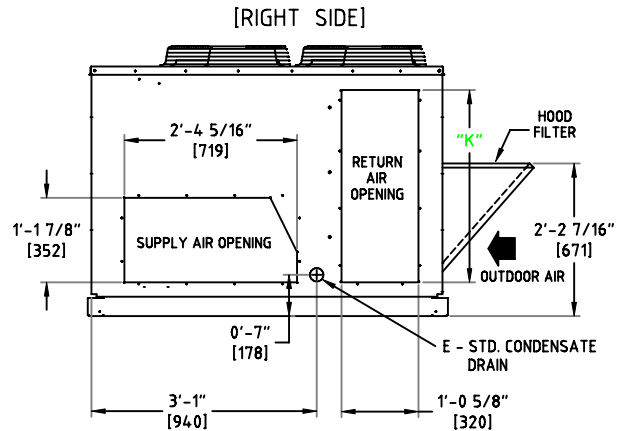
VIEW S-S

CONNECTION SIZES

| CONNECTION | SIZES |
|------------|--|
| A | 1-3/8" dia [35] Field power supply hole. |
| B | 2-1/2" dia [64] power supply knock-out |
| C | 1-3/4" dia [44] charging port hole |
| D | 7/8" dia [22] field control wiring hole |
| E | 3/4"-14 NPT condensate drain |
| F | 2" dia [51] power supply knock-out |



[FRONT]



NOTES :

- Dimensions in [] are in millimeters.
- Center of gravity
- Direction of airflow
- Ductwork to be attached to accessory roof curb only.
- Minimum clearance (local codes or jurisdiction may prevail):
 - Bottom to combustible surfaces (when not using curb) 0 inches. On horizontal
 - Condenser coil, for proper airflow, 36 in. one side, 12 in. the other. The side getting the greater clearance is optional.
 - Overhead, 60 in. to assure proper condenser fan operation.
 - Between units, control box side, 42 in. per NEC (National Electrical Code).
 - Between unit and underground surfaces, control box side, 36 in. per NEC.
 - Between unit and block or concrete walls and other grounded surfaces, control box side, 42 in. per NEC.
 - Horizontal supply and return end, 0 inches.
- With the exception of the clearance for the condenser coil or combustibles as stated
- Units may be installed on combustible floors made from wood or class A, B, or C roof covering material.
- The vertical center of gravity is 1'-7 1/2" [495] for 008 and 009, 2'-0" [610] for 012 and 014 up from the bottom of the base rail. Horizontal center of gravity is shown.

50LJS/TJS

Performance data (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS

50LJS007 (6 TONS) — STANDARD MOTOR (BELT DRIVE)*

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| | 0.1 | | | 0.2 | | | 0.4 | | | 0.6 | | | 0.8 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 1800 | 765 | 0.45 | 487 | 821 | 0.51 | 532 | 923 | 0.65 | 638 | 1019 | 0.81 | 843 | 1099 | 0.96 | 883 |
| 1900 | 802 | 0.45 | 539 | 854 | 0.58 | 585 | 953 | 0.73 | 700 | 1046 | 0.90 | 835 | 1126 | 1.06 | 965 |
| 2000 | 840 | 0.60 | 600 | 888 | 0.66 | 646 | 984 | 0.82 | 771 | 1073 | 0.99 | 907 | 1154 | 1.16 | 1047 |
| 2100 | 878 | 0.69 | 669 | 923 | 0.75 | 716 | 1015 | 0.91 | 843 | 1101 | 1.08 | 981 | 1182 | 1.27 | 1140 |
| 2200 | 916 | 0.78 | 739 | 958 | 0.85 | 795 | 1046 | 1.01 | 924 | 1129 | 1.19 | 1072 | 1209 | 1.39 | 1241 |
| 2300 | 954 | 0.89 | 827 | 993 | 0.96 | 883 | 1079 | 1.13 | 1022 | 1160 | 1.31 | 1173 | 1237 | 1.51 | 1344 |
| 2400 | 993 | 1.00 | 916 | 1029 | 1.07 | 973 | 1112 | 1.25 | 1123 | 1190 | 1.43 | 1275 | 1264 | 1.63 | 1447 |
| 2500 | 1031 | 1.13 | 1022 | 1066 | 1.20 | 1081 | 1145 | 1.39 | 1241 | 1220 | 1.57 | 1396 | 1292 | 1.77 | 1569 |
| 2600 | 1070 | 1.26 | 1131 | 1103 | 1.34 | 1199 | 1179 | 1.52 | 1353 | 1251 | 1.71 | 1517 | 1322 | 1.92 | 1700 |
| 2700 | 1109 | 1.41 | 1258 | 1140 | 1.48 | 1318 | 1212 | 1.67 | 1482 | 1283 | 1.87 | 1656 | 1352 | 2.09 | 1849 |
| 2800 | 1148 | 1.57 | 1396 | 1177 | 1.64 | 1456 | 1246 | 1.83 | 1621 | 1316 | 2.04 | 1805 | 1383 | 2.26 | 1997 |
| 2900 | 1188 | 1.74 | 1543 | 1215 | 1.81 | 1604 | 1281 | 2.00 | 1770 | 1349 | 2.22 | 1962 | 1413 | 2.44 | 2154 |
| 3000 | 1227 | 1.92 | 1700 | 1253 | 2.00 | 1770 | 1316 | 2.19 | 1936 | 1382 | 2.42 | 2136 | 1444 | 2.63 | 2317 |

50LJS007 (6 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| | 1.0 | | | 1.2 | | | 1.4 | | | 1.6 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 1800 | 1178 | 1.14 | 1031 | 1249 | 1.32 | 1182 | 1316 | 1.52 | 1353 | 1382 | 1.72 | 1526 |
| 1900 | 1201 | 1.23 | 1106 | 1274 | 1.43 | 1275 | 1338 | 1.62 | 1439 | 1402 | 1.83 | 1621 |
| 2000 | 1226 | 1.33 | 1190 | 1297 | 1.53 | 1361 | 1363 | 1.73 | 1534 | 1424 | 1.94 | 1718 |
| 2100 | 1252 | 1.45 | 1292 | 1320 | 1.64 | 1456 | 1388 | 1.85 | 1639 | 1448 | 2.07 | 1831 |
| 2200 | 1280 | 1.58 | 1404 | 1345 | 1.77 | 1569 | 1410 | 1.97 | 1744 | 1473 | 2.20 | 1945 |
| 2300 | 1309 | 1.71 | 1517 | 1372 | 1.91 | 1691 | 1434 | 2.11 | 1866 | 1496 | 2.34 | 2067 |
| 2400 | 1336 | 1.85 | 1639 | 1400 | 2.06 | 1823 | 1459 | 2.26 | 1997 | 1519 | 2.48 | 2188 |
| 2500 | 1363 | 2.00 | 1770 | 1428 | 2.22 | 1962 | 1486 | 2.43 | 2145 | 1543 | 2.65 | 2335 |
| 2600 | 1390 | 2.15 | 1901 | 1456 | 2.38 | 2102 | 1514 | 2.61 | 2300 | 1569 | 2.83 | 2487 |
| 2700 | 1418 | 2.31 | 2041 | 1483 | 2.56 | 2257 | 1543 | 2.80 | 2462 | — | — | — |
| 2800 | 1446 | 2.48 | 2188 | 1510 | 2.73 | 2403 | — | — | — | — | — | — |
| 2900 | 1476 | 2.67 | 2352 | 1537 | 2.92 | 2562 | — | — | — | — | — | — |
| 3000 | 1506 | 2.88 | 2529 | — | — | — | — | — | — | — | — | — |

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOF — Factory-Installed Option
Watts — Input Watts to Motor

*Motor drive range: 1070 to 1460 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** Out of Drive Package or Motor range .

2. Maximum usable watts input is 2120 and maximum continuous bhp is 2.40. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

3. Values include losses for filters, unit casing, and wet coils.

4. Use of a field-supplied motor may affect wire sizing. Contact your Carrier representative for details.

5. Interpolation is permissible. Do not extrapolate.

6. Motor Efficiency: 81%.

Performance data (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS

50TJS008 (7½/TONS) — STANDARD MOTOR (BELT DRIVE)*

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| | 0.2 | | | 0.4 | | | 0.6 | | | 0.8 | | | 1.0 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2250 | 465 | 0.43 | 473 | 554 | 0.64 | 630 | 630 | 0.86 | 803 | 695 | 1.09 | 989 | 757 | 1.34 | 1199 |
| 2300 | 471 | 0.45 | 487 | 559 | 0.66 | 646 | 635 | 0.89 | 827 | 699 | 1.12 | 1014 | 760 | 1.37 | 1224 |
| 2400 | 482 | 0.50 | 524 | 569 | 0.71 | 684 | 645 | 0.95 | 875 | 708 | 1.18 | 1064 | 768 | 1.44 | 1284 |
| 2500 | 494 | 0.54 | 554 | 581 | 0.76 | 723 | 654 | 1.01 | 924 | 717 | 1.25 | 1123 | 776 | 1.51 | 1344 |
| 2550 | 501 | 0.57 | 577 | 587 | 0.79 | 747 | 659 | 1.05 | 956 | 722 | 1.29 | 1156 | 780 | 1.55 | 1378 |
| 2660 | 507 | 0.59 | 592 | 592 | 0.82 | 771 | 663 | 1.08 | 981 | 727 | 1.32 | 1182 | 784 | 1.58 | 1404 |
| 2700 | 520 | 0.65 | 638 | 604 | 0.89 | 827 | 672 | 1.14 | 1031 | 737 | 1.40 | 1250 | 793 | 1.66 | 1473 |
| 2800 | 533 | 0.71 | 684 | 615 | 0.95 | 875 | 683 | 1.20 | 1081 | 747 | 1.49 | 1327 | 802 | 1.75 | 1552 |
| 2900 | 546 | 0.77 | 731 | 626 | 1.02 | 932 | 693 | 1.27 | 1140 | 756 | 1.57 | 1396 | 813 | 1.84 | 1630 |
| 3000 | 559 | 0.83 | 779 | 637 | 1.09 | 989 | 704 | 1.35 | 1207 | 765 | 1.66 | 1473 | 823 | 1.94 | 1718 |
| 3100 | 572 | 0.90 | 835 | 648 | 1.17 | 1056 | 715 | 1.43 | 1275 | 775 | 1.74 | 1543 | 832 | 2.05 | 1814 |
| 3200 | 585 | 0.96 | 883 | 660 | 1.24 | 1114 | 727 | 1.52 | 1353 | 785 | 1.83 | 1627 | 841 | 2.15 | 1901 |
| 3300 | 598 | 1.03 | 940 | 671 | 1.32 | 1182 | 739 | 1.62 | 1439 | 795 | 1.91 | 1691 | 851 | 2.26 | 1997 |
| 3400 | 610 | 1.10 | 998 | 682 | 1.41 | 1258 | 750 | 1.72 | 1526 | 806 | 2.01 | 1779 | 860 | 2.36 | 2084 |
| 3500 | 623 | 1.17 | 1056 | 694 | 1.50 | 1335 | 761 | 1.82 | 1613 | 817 | 2.11 | 1866 | 870 | 2.47 | 2180 |
| 3600 | 636 | 1.25 | 1123 | 707 | 1.60 | 1422 | 772 | 1.93 | 1709 | 828 | 2.23 | 1971 | 880 | 2.57 | 2266 |
| 3700 | 649 | 1.33 | 1190 | 720 | 1.71 | 1517 | 783 | 2.03 | 1796 | 840 | 2.35 | 2076 | 890 | 2.69 | 2369 |
| 3750 | 655 | 1.37 | 1224 | 727 | 1.77 | 1569 | 789 | 2.09 | 1849 | 846 | 2.42 | 2136 | 896 | 2.75 | 2420 |

50LJS/TJS

50TJS008 (7½/TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
| | 1.2 | | | 1.4 | | | 1.6 | | | 1.8 | | | 2.0 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2250 | 810 | 1.62 | 1439 | 850 | 1.91 | 1691 | 873 | 2.20 | 1945 | 883 | 2.50 | 2206 | 895 | 2.78 | 2445 |
| 2300 | 816 | 1.65 | 1465 | 859 | 1.94 | 1718 | 888 | 2.24 | 1980 | 903 | 2.55 | 2249 | 911 | 2.85 | 2504 |
| 2400 | 824 | 1.72 | 1526 | 872 | 2.01 | 1779 | 909 | 2.32 | 2050 | 931 | 2.64 | 2326 | 935 | 2.96 | 2595 |
| 2500 | 832 | 1.79 | 1587 | 882 | 2.09 | 1849 | 925 | 2.40 | 2119 | 955 | 2.72 | 2394 | 972 | 3.06 | 2678 |
| 2550 | 836 | 1.83 | 1621 | 887 | 2.13 | 1884 | 931 | 2.45 | 2162 | 964 | 2.77 | 2436 | 986 | 3.11 | 2718 |
| 2660 | 839 | 1.87 | 1656 | 891 | 2.17 | 1919 | 936 | 2.49 | 2197 | 973 | 2.82 | 2479 | 999 | 3.16 | 2759 |
| 2700 | 846 | 1.95 | 1726 | 898 | 2.26 | 1997 | 946 | 2.58 | 2275 | 987 | 2.91 | 2554 | 1019 | 3.26 | 2839 |
| 2800 | 855 | 2.04 | 1805 | 906 | 2.35 | 2076 | 954 | 2.67 | 2352 | 997 | 3.01 | 2637 | 1034 | 3.36 | 2917 |
| 2900 | 863 | 2.13 | 1884 | 913 | 2.44 | 2154 | 961 | 2.77 | 2436 | 1006 | 3.12 | 2727 | — | — | — |
| 3000 | 872 | 2.22 | 1962 | 921 | 2.54 | 2240 | 969 | 2.88 | 2529 | 1014 | 3.22 | 2807 | — | — | — |
| 3100 | 882 | 2.33 | 2058 | 930 | 2.65 | 2335 | 976 | 2.99 | 2620 | 1021 | 3.34 | 2902 | — | — | — |
| 3200 | 892 | 2.45 | 2162 | 939 | 2.76 | 2428 | 984 | 3.10 | 2710 | — | — | — | — | — | — |
| 3300 | 902 | 2.57 | 2266 | 948 | 2.88 | 2529 | 993 | 3.21 | 2799 | — | — | — | — | — | — |
| 3400 | 912 | 2.69 | 2369 | 958 | 3.01 | 2637 | 1002 | 3.34 | 2902 | — | — | — | — | — | — |
| 3500 | 921 | 2.82 | 2479 | 968 | 3.15 | 2751 | — | — | — | — | — | — | — | — | — |
| 3600 | 930 | 2.95 | 2587 | 978 | 3.29 | 2862 | — | — | — | — | — | — | — | — | — |
| 3700 | 940 | 3.07 | 2686 | — | — | — | — | — | — | — | — | — | — | — | — |
| 3750 | 945 | 3.14 | 2743 | — | — | — | — | — | — | — | — | — | — | — | — |

LEGEND

- Bhp** — Brake Horsepower Input to Fan
- FIOP** — Factory-Installed Option
- Watts** — Input Watts to Motor

*Motor drive range: 590 to 840 rpm.
All other rpms require field-supplied drive.

NOTES:

1. **Boldface** Out of Drive Package or Motor range .

2. Maximum usable watts input is 2120 and maximum continuous bhp is 2.90. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

3. Values include losses for filters, unit casing, and wet coils.
4. Use of a field-supplied motor may affect wire sizing. Contact your Carrier representative for details.
5. Interpolation is permissible. Do not extrapolate.
6. Motor Efficiency: 85%.

Performance data (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS

50TJS009 (8 1/2 TONS) STANDARD MOTOR (BELT DRIVE)*

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| | 0.2 | | | 0.4 | | | 0.6 | | | 0.8 | | | 1.0 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2550 | 501 | 0.57 | 577 | 587 | 0.79 | 747 | 659 | 1.05 | 956 | 722 | 1.29 | 1156 | 780 | 1.55 | 1378 |
| 2660 | 507 | 0.59 | 592 | 592 | 0.82 | 771 | 663 | 1.08 | 981 | 727 | 1.32 | 1182 | 784 | 1.58 | 1404 |
| 2700 | 520 | 0.65 | 638 | 604 | 0.89 | 827 | 672 | 1.14 | 1031 | 737 | 1.40 | 1250 | 793 | 1.66 | 1473 |
| 2800 | 533 | 0.71 | 684 | 615 | 0.95 | 875 | 683 | 1.20 | 1081 | 747 | 1.49 | 1327 | 802 | 1.75 | 1552 |
| 2900 | 546 | 0.77 | 731 | 626 | 1.02 | 932 | 693 | 1.27 | 1140 | 756 | 1.57 | 1396 | 813 | 1.84 | 1630 |
| 3000 | 559 | 0.83 | 779 | 637 | 1.09 | 989 | 704 | 1.35 | 1207 | 765 | 1.66 | 1473 | 823 | 1.94 | 1718 |
| 3100 | 572 | 0.90 | 835 | 648 | 1.17 | 1056 | 715 | 1.43 | 1275 | 775 | 1.74 | 1543 | 832 | 2.05 | 1814 |
| 3200 | 585 | 0.96 | 883 | 660 | 1.24 | 1114 | 727 | 1.52 | 1353 | 785 | 1.83 | 1321 | 841 | 2.15 | 1901 |
| 3300 | 598 | 1.03 | 940 | 671 | 1.32 | 1182 | 739 | 1.62 | 1439 | 795 | 1.91 | 1691 | 851 | 2.26 | 1997 |
| 3400 | 610 | 1.10 | 998 | 682 | 1.41 | 1258 | 750 | 1.72 | 1526 | 806 | 2.01 | 1779 | 860 | 2.36 | 2084 |
| 3500 | 623 | 1.17 | 1056 | 694 | 1.50 | 1335 | 761 | 1.82 | 1613 | 817 | 2.11 | 1866 | 870 | 2.47 | 2180 |
| 3600 | 636 | 1.25 | 1123 | 707 | 1.60 | 1422 | 772 | 1.93 | 1709 | 828 | 2.23 | 1971 | 880 | 2.57 | 2266 |
| 3700 | 649 | 1.33 | 1190 | 720 | 1.71 | 1517 | 783 | 2.03 | 1796 | 840 | 2.35 | 2076 | 890 | 2.69 | 2369 |
| 3750 | 655 | 1.37 | 1224 | 727 | 1.77 | 1569 | 789 | 2.09 | 1849 | 846 | 2.42 | 2136 | 896 | 2.75 | 2420 |
| 3800 | 661 | 1.41 | 1258 | 733 | 1.82 | 1613 | 795 | 2.15 | 1901 | 852 | 2.48 | 2188 | 901 | 2.80 | 2462 |
| 3900 | 674 | 1.49 | 1327 | 746 | 1.93 | 1709 | 806 | 2.26 | 1997 | 863 | 2.61 | 2300 | 912 | 2.93 | 2571 |
| 4000 | 687 | 1.57 | 1396 | 759 | 2.05 | 1814 | 817 | 2.38 | 2102 | 874 | 2.75 | 2420 | 923 | 3.08 | 2694 |
| 4100 | 699 | 1.60 | 1473 | 772 | 2.17 | 1919 | 828 | 2.50 | 2206 | 885 | 2.88 | 2529 | 935 | 3.23 | 2815 |
| 4200 | 712 | 1.75 | 1552 | 785 | 2.30 | 2032 | 840 | 2.64 | 2326 | 897 | 3.03 | 2653 | 947 | 3.39 | 2940 |
| 4250 | 719 | 1.80 | 1595 | 792 | 2.37 | 2093 | 846 | 2.71 | 2386 | 903 | 3.10 | 2710 | — | — | — |

50TJS009 (8 1/2 TONS) STANDARD MOTOR (BELT DRIVE)* (cont)

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
| | 1.2 | | | 1.4 | | | 1.6 | | | 1.8 | | | 2.0 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2550 | 836 | 1.83 | 1621 | 887 | 2.13 | 1884 | 931 | 2.45 | 2162 | 964 | 2.77 | 2436 | 986 | 3.11 | 2718 |
| 2660 | 839 | 1.87 | 1656 | 891 | 2.17 | 1919 | 936 | 2.49 | 2197 | 973 | 2.82 | 2479 | 999 | 3.16 | 2759 |
| 2700 | 846 | 1.95 | 1726 | 898 | 2.26 | 1997 | 946 | 2.58 | 2275 | 987 | 2.91 | 2554 | 1019 | 3.26 | 2839 |
| 2800 | 855 | 2.04 | 1805 | 906 | 2.35 | 2076 | 954 | 2.67 | 2352 | 997 | 3.01 | 2637 | 1034 | 3.36 | 2917 |
| 2900 | 863 | 2.13 | 1884 | 913 | 2.44 | 2154 | 961 | 2.77 | 2436 | 1006 | 3.12 | 2727 | — | — | — |
| 3000 | 872 | 2.22 | 1962 | 921 | 2.54 | 2240 | 969 | 2.88 | 2529 | 1014 | 3.22 | 2807 | — | — | — |
| 3100 | 882 | 2.33 | 2058 | 930 | 2.65 | 2335 | 976 | 2.99 | 2620 | 1021 | 3.34 | 2902 | — | — | — |
| 3200 | 892 | 2.45 | 2162 | 939 | 2.76 | 2428 | 984 | 3.10 | 2710 | — | — | — | — | — | — |
| 3300 | 902 | 2.57 | 2266 | 948 | 2.88 | 2529 | 993 | 3.21 | 2799 | — | — | — | — | — | — |
| 3400 | 912 | 2.69 | 2369 | 958 | 3.01 | 2637 | 1002 | 3.34 | 2902 | — | — | — | — | — | — |
| 3500 | 921 | 2.82 | 2479 | 968 | 3.15 | 2751 | — | — | — | — | — | — | — | — | — |
| 3600 | 930 | 2.95 | 2587 | 978 | 3.29 | 2862 | — | — | — | — | — | — | — | — | — |
| 3700 | 940 | 3.07 | 2686 | — | — | — | — | — | — | — | — | — | — | — | — |
| 3750 | 945 | 3.14 | 2743 | — | — | — | — | — | — | — | — | — | — | — | — |
| 3800 | 949 | 3.20 | 2781 | — | — | — | — | — | — | — | — | — | — | — | — |
| 3900 | 959 | 3.33 | 2894 | — | — | — | — | — | — | — | — | — | — | — | — |
| 4000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 4100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 4200 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 4250 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option
Watts — Input Watts to Motor

*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** Out of Drive Package or Motor range .

2. Maximum usable watts input is 2120 and maximum continuous bhp is 2.90. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

3. Values include losses for filters, unit casing, and wet coils.

4. Use of a field-supplied motor may affect wire sizing. Contact your Carrier representative for details.

5. Interpolation is permissible. Do not extrapolate.

6. Motor Efficiency: 85%.

Performance data (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS

50TJS012 (10 TONS) STANDARD MOTOR (BELT DRIVE)*

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | | | | |
|------------------|-----------------------------------|------|-------|-----|------|-------|------------|-------------|-------------|------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|
| | 0.2 | | | 0.4 | | | 0.6 | | | 0.8 | | | 1.0 | | | 1.2 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 3000 | 532 | 0.64 | 630 | 605 | 0.81 | 763 | 670 | 0.97 | 891 | 725 | 1.12 | 1014 | 778 | 1.28 | 1148 | 825 | 1.43 | 1275 |
| 3100 | 544 | 0.70 | 677 | 616 | 0.86 | 803 | 680 | 1.03 | 940 | 735 | 1.20 | 1081 | 787 | 1.36 | 1216 | 835 | 1.52 | 1353 |
| 3200 | 557 | 0.75 | 716 | 628 | 0.93 | 859 | 690 | 1.10 | 998 | 746 | 1.28 | 1148 | 796 | 1.44 | 1284 | 844 | 1.61 | 1430 |
| 3300 | 570 | 0.81 | 763 | 639 | 0.99 | 907 | 700 | 1.18 | 1064 | 757 | 1.36 | 1216 | 805 | 1.52 | 1353 | 854 | 1.70 | 1508 |
| 3400 | 583 | 0.88 | 818 | 651 | 1.06 | 965 | 711 | 1.25 | 1123 | 767 | 1.44 | 1284 | 815 | 1.61 | 1430 | 863 | 1.79 | 1587 |
| 3500 | 596 | 0.94 | 867 | 663 | 1.14 | 1031 | 721 | 1.33 | 1190 | 777 | 1.52 | 1353 | 826 | 1.71 | 1517 | 871 | 1.88 | 1665 |
| 3600 | 609 | 1.01 | 924 | 674 | 1.22 | 1097 | 732 | 1.42 | 1267 | 787 | 1.61 | 1430 | 836 | 1.80 | 1595 | 880 | 1.98 | 1753 |
| 3700 | 622 | 1.09 | 989 | 686 | 1.30 | 1165 | 744 | 1.50 | 1335 | 797 | 1.70 | 1508 | 847 | 1.91 | 1691 | 890 | 2.09 | 1849 |
| 3800 | 635 | 1.16 | 1047 | 698 | 1.39 | 1241 | 755 | 1.59 | 1413 | 808 | 1.80 | 1595 | 857 | 2.01 | 1779 | 901 | 2.20 | 1945 |
| 3900 | 649 | 1.25 | 1123 | 713 | 1.48 | 1318 | 767 | 1.68 | 1491 | 818 | 1.90 | 1683 | 867 | 2.11 | 1866 | 912 | 2.32 | 2050 |
| 4000 | 662 | 1.33 | 1190 | 722 | 1.57 | 1396 | 778 | 1.78 | 1578 | 829 | 2.01 | 1779 | 878 | 2.22 | 1962 | 922 | 2.44 | 2203 |
| 4100 | 675 | 1.42 | 1267 | 734 | 1.67 | 1482 | 790 | 1.89 | 1674 | 839 | 2.12 | 1875 | 888 | 2.33 | 2058 | 933 | 2.56 | 2309 |
| 4200 | 689 | 1.52 | 1353 | 746 | 1.77 | 1569 | 801 | 1.99 | 1761 | 851 | 2.23 | 1971 | 898 | 2.45 | 2212 | 943 | 2.69 | 2424 |
| 4300 | 702 | 1.61 | 1430 | 759 | 1.88 | 1665 | 813 | 2.11 | 1866 | 862 | 2.34 | 2067 | 908 | 2.58 | 2326 | 953 | 2.81 | 2533 |
| 4400 | 715 | 1.72 | 1526 | 772 | 1.99 | 1761 | 825 | 2.22 | 1962 | 873 | 2.46 | 2221 | 919 | 2.71 | 2442 | 963 | 2.94 | 2651 |
| 4500 | 729 | 1.83 | 1621 | 785 | 2.10 | 1858 | 837 | 2.35 | 2076 | 885 | 2.59 | 2335 | 929 | 2.85 | 2569 | 973 | 3.08 | 2782 |
| 4600 | 742 | 1.94 | 1718 | 797 | 2.22 | 1962 | 848 | 2.48 | 2238 | 896 | 2.72 | 2451 | 940 | 2.98 | 2688 | 984 | 3.22 | 2914 |
| 4700 | 756 | 2.06 | 1823 | 810 | 2.34 | 2067 | 860 | 2.61 | 2353 | 908 | 2.86 | 2578 | 951 | 3.12 | 2727 | 994 | 3.38 | 3068 |
| 4800 | 770 | 2.18 | 1927 | 823 | 2.46 | 2221 | 872 | 2.75 | 2505 | 919 | 3.00 | 2707 | 963 | 3.27 | 2847 | 1003 | 3.43 | 3202 |
| 4900 | 783 | 2.31 | 2041 | 836 | 2.60 | 2344 | 884 | 2.89 | 2605 | 931 | 3.14 | 2838 | 974 | 3.41 | 2956 | 1013 | 3.59 | 3349 |
| 5000 | 797 | 2.44 | 2203 | 849 | 2.73 | 2460 | 897 | 3.04 | 2661 | 943 | 3.30 | 2870 | 984 | 3.44 | 3211 | 1023 | 3.75 | 3501 |

50LJS/TJS

50TJS012 (10 TONS) STANDARD MOTOR (BELT DRIVE)* (cont)

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | |
|------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1.4 | | | 1.6 | | | 1.8 | | | 2.0 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 3000 | 874 | 1.60 | 1422 | 926 | 1.82 | 1613 | 974 | 2.11 | 1920 | 1012 | 2.41 | 2134 |
| 3100 | 880 | 1.68 | 1491 | 933 | 1.87 | 1656 | 983 | 2.16 | 1963 | 1017 | 2.44 | 2177 |
| 3200 | 888 | 1.77 | 1569 | 934 | 1.94 | 1718 | 988 | 2.18 | 1980 | 1025 | 2.47 | 2230 |
| 3300 | 897 | 1.86 | 1648 | 940 | 2.03 | 1853 | 989 | 2.24 | 2031 | 1032 | 2.53 | 2282 |
| 3400 | 907 | 1.97 | 1744 | 947 | 2.14 | 1946 | 991 | 2.32 | 2099 | 1038 | 2.57 | 2318 |
| 3500 | 916 | 2.07 | 1831 | 956 | 2.25 | 2039 | 997 | 2.43 | 2195 | 1043 | 2.64 | 2380 |
| 3600 | 926 | 2.18 | 1927 | 966 | 2.41 | 2134 | 1004 | 2.54 | 2291 | 1045 | 2.74 | 2478 |
| 3700 | 934 | 2.28 | 2015 | 976 | 2.48 | 2238 | 1013 | 2.66 | 2397 | 1051 | 2.85 | 2569 |
| 3800 | 943 | 2.41 | 2160 | 985 | 2.60 | 2334 | 1023 | 2.79 | 2514 | 1059 | 2.98 | 2688 |
| 3900 | 952 | 2.51 | 2265 | 994 | 2.72 | 2451 | 1032 | 2.92 | 2633 | 1068 | 3.12 | 2819 |
| 4000 | 962 | 2.63 | 2371 | 1003 | 2.84 | 2560 | 1042 | 3.06 | 2763 | 1078 | 3.26 | 2952 |
| 4100 | 973 | 2.77 | 2496 | 1011 | 2.97 | 2679 | 1051 | 3.20 | 2895 | 1087 | 3.41 | 3097 |
| 4200 | 983 | 2.91 | 2624 | 1021 | 3.11 | 2810 | 1060 | 3.34 | 3029 | 1090 | 3.51 | 3276 |
| 4300 | 994 | 3.05 | 2754 | 1031 | 3.25 | 2943 | 1068 | 3.48 | 3166 | 1097 | 3.70 | 3453 |
| 4400 | 1004 | 3.19 | 2885 | 1042 | 3.41 | 3097 | 1080 | 3.63 | 3388 | 1105 | 3.91 | 3642 |
| 4500 | 1015 | 3.33 | 2020 | 1051 | 3.45 | 3218 | 1090 | 3.75 | 3493 | 1112 | 4.12 | 3843 |
| 4600 | 1025 | 3.48 | 3166 | 1060 | 3.61 | 3369 | 1100 | 3.92 | 3655 | 1119 | 4.35 | 4057 |
| 4700 | 1037 | 3.58 | 3335 | 1070 | 3.84 | 3325 | 1111 | 4.10 | 3822 | 1126 | 4.59 | 4284 |
| 4800 | 1048 | 3.75 | 3494 | 1080 | 3.95 | 3686 | 1121 | 4.28 | 3995 | 1133 | 4.85 | 4523 |
| 4900 | 1060 | 3.92 | 3659 | 1089 | 4.13 | 3854 | 1132 | 4.48 | 4174 | 1140 | 5.12 | 4775 |
| 5000 | 1072 | 4.11 | 3830 | 1099 | 4.32 | 4027 | 1144 | 4.67 | 4359 | — | — | — |

LEGEND

- Bhp** — Brake Horsepower Input to Fan
- FIOF** — Factory-Installed Option
- Watts** — Input Watts to Motor

electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

*Standard motor drive range: 685 to 935 rpm.

All other rpms require field-supplied drive.

NOTES:

1. **Boldface** Out of Motor and Drive Package range.
2. Maximum usable watts input is 2120 with standard motor, Maximum continuous bhp is 2.90 with standard motor.

3. Values include losses for filters, unit casings, and wet coils.
4. Use of a field-supplied motor may affect wire sizing. Contact your Carrier representative for details.
5. Interpolation is permissible. Do not extrapolate.
6. Motor Efficiency: 85%

Performance data (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS

50TJS014 (12 1/2 TONS) STANDARD MOTOR (BELT DRIVE)*

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| | 0.2 | | | 0.4 | | | 0.6 | | | 0.8 | | | 1.0 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 3700 | 607 | 0.97 | 947 | 670 | 1.18 | 1113 | 732 | 1.37 | 1267 | 782 | 1.56 | 1423 | 833 | 1.73 | 1565 |
| 3800 | 621 | 1.05 | 1010 | 681 | 1.25 | 1170 | 742 | 1.45 | 1332 | 795 | 1.66 | 1506 | 842 | 1.82 | 1641 |
| 3900 | 636 | 1.13 | 1073 | 693 | 1.32 | 1226 | 751 | 1.53 | 1398 | 808 | 1.76 | 1590 | 851 | 1.92 | 1725 |
| 4000 | 650 | 1.21 | 1137 | 705 | 1.40 | 1291 | 761 | 1.61 | 1464 | 819 | 1.86 | 1674 | 861 | 2.02 | 1811 |
| 4100 | 665 | 1.30 | 1210 | 717 | 1.48 | 1357 | 772 | 1.71 | 1548 | 830 | 1.96 | 1759 | 871 | 2.13 | 1905 |
| 4200 | 680 | 1.39 | 1283 | 728 | 1.57 | 1431 | 783 | 1.81 | 1632 | 839 | 2.05 | 1836 | 883 | 2.25 | 2009 |
| 4300 | 696 | 1.49 | 1365 | 739 | 1.66 | 1506 | 794 | 1.91 | 1717 | 848 | 2.14 | 1914 | 896 | 2.38 | 2123 |
| 4400 | 711 | 1.60 | 1456 | 750 | 1.75 | 1582 | 805 | 2.02 | 1811 | 857 | 2.24 | 2000 | 908 | 2.51 | 2237 |
| 4500 | 727 | 1.70 | 1540 | 762 | 1.85 | 1666 | 817 | 2.12 | 1897 | 867 | 2.35 | 2096 | 919 | 2.63 | 2343 |
| 4600 | 742 | 1.82 | 1641 | 774 | 1.96 | 1759 | 828 | 2.23 | 1992 | 877 | 2.46 | 2193 | 929 | 2.75 | 2450 |
| 4700 | 758 | 1.94 | 1742 | 786 | 2.07 | 1854 | 840 | 2.34 | 2088 | 888 | 2.59 | 2307 | 938 | 2.87 | 2557 |
| 4800 | 773 | 2.06 | 1845 | 799 | 2.18 | 1948 | 852 | 2.46 | 2193 | 899 | 2.72 | 2423 | 947 | 2.98 | 2656 |
| 4900 | 789 | 2.19 | 1957 | 812 | 2.30 | 2053 | 863 | 2.57 | 2290 | 910 | 2.86 | 2548 | 957 | 3.11 | 2773 |
| 5000 | 805 | 2.32 | 2070 | 826 | 2.43 | 2166 | 875 | 2.70 | 2405 | 921 | 2.99 | 2665 | 966 | 3.24 | 2891 |
| 5100 | 821 | 2.47 | 2202 | 840 | 2.57 | 2290 | 887 | 2.83 | 2521 | 932 | 3.13 | 2792 | 976 | 3.38 | 3019 |
| 5200 | 837 | 2.61 | 2325 | 854 | 2.71 | 2414 | 898 | 2.96 | 2638 | 943 | 3.28 | 2928 | 987 | 3.53 | 3157 |
| 5300 | 853 | 2.76 | 2459 | 868 | 2.85 | 2539 | 909 | 3.09 | 2755 | 955 | 3.42 | 3056 | 998 | 3.69 | 3304 |
| 5400 | 869 | 2.92 | 2602 | 882 | 3.01 | 2683 | 920 | 3.24 | 2891 | 967 | 3.57 | 3193 | 1009 | 3.86 | 3461 |
| 5500 | 885 | 3.09 | 2755 | 897 | 3.17 | 2828 | 932 | 3.38 | 3019 | 978 | 3.72 | 3331 | 1029 | 4.03 | 3618 |
| 5600 | 901 | 3.26 | 2910 | 911 | 3.33 | 2973 | 943 | 3.54 | 3166 | 990 | 3.87 | 3470 | 1031 | 4.20 | 3775 |
| 5700 | 917 | 3.44 | 3074 | 926 | 3.50 | 3129 | 956 | 3.70 | 3313 | 1002 | 4.03 | 3618 | 1042 | 4.38 | 3943 |
| 5800 | 933 | 3.62 | 3239 | 941 | 3.68 | 3294 | 968 | 3.87 | 3470 | 1013 | 4.20 | 3775 | 1053 | 4.56 | 4111 |
| 5900 | 949 | 3.81 | 3414 | 956 | 3.87 | 3470 | 981 | 4.05 | 3637 | 1025 | 4.37 | 3934 | 1065 | 4.74 | 4279 |
| 6000 | 965 | 4.01 | 3600 | 972 | 4.06 | 3646 | 995 | 4.23 | 3804 | 1037 | 4.55 | 4102 | 1076 | 4.92 | 4447 |
| 6100 | 981 | 4.21 | 3785 | 987 | 4.26 | 3832 | 1008 | 4.42 | 3981 | 1042 | 4.73 | 4270 | 1088 | 5.10 | 4614 |
| 6200 | 997 | 4.42 | 3981 | 1002 | 4.46 | 4018 | 1022 | 4.62 | 4167 | 1058 | 4.91 | 4437 | — | — | — |
| 6300 | 1014 | 4.64 | 4186 | 1018 | 4.68 | 4223 | 1036 | 4.83 | 4363 | 1070 | 5.11 | 4624 | — | — | — |

50TJS014 (12 1/2 TONS) STANDARD MOTOR (BELT DRIVE)* (cont)

| Airflow (Cfm) | External Static Pressure (in. wg) | | | | | | | | | | | | | | |
|---------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| | 1.2 | | | 1.4 | | | 1.6 | | | 1.8 | | | 2.0 | | |
| | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 3700 | 879 | 1.95 | 1751 | 927 | 2.17 | 1940 | 973 | 2.38 | 2123 | 1013 | 2.57 | 2290 | 1046 | 2.73 | 2432 |
| 3800 | 889 | 2.03 | 1819 | 934 | 2.26 | 2018 | 980 | 2.48 | 2210 | 1022 | 2.69 | 2396 | 1058 | 2.87 | 2557 |
| 3900 | 898 | 2.12 | 1897 | 942 | 2.36 | 2105 | 987 | 2.59 | 2307 | 1030 | 2.81 | 2503 | 1068 | 3.01 | 2683 |
| 4000 | 908 | 2.21 | 1974 | 950 | 2.46 | 2193 | 994 | 2.70 | 2405 | 1037 | 2.92 | 2602 | 1077 | 3.14 | 2801 |
| 4100 | 917 | 2.32 | 2070 | 960 | 2.55 | 2272 | 1001 | 2.81 | 2503 | 1045 | 3.04 | 2710 | 1085 | 3.21 | 2919 |
| 4200 | 925 | 2.44 | 2175 | 969 | 2.65 | 2370 | 1009 | 2.92 | 2602 | 1051 | 3.17 | 2828 | 1092 | 3.40 | 3037 |
| 4300 | 935 | 2.56 | 2281 | 979 | 2.77 | 2468 | 1018 | 3.03 | 2701 | 1058 | 3.29 | 2937 | 1100 | 3.53 | 3157 |
| 4400 | 945 | 2.68 | 2387 | 988 | 2.89 | 2575 | 1028 | 3.14 | 2801 | 1066 | 3.41 | 3047 | 1106 | 3.67 | 3285 |
| 4500 | 955 | 2.82 | 2512 | 996 | 3.02 | 2692 | 1037 | 3.25 | 2901 | 1074 | 3.54 | 3166 | 1113 | 3.81 | 3414 |
| 4600 | 967 | 2.96 | 2638 | 1005 | 3.16 | 2819 | 1046 | 3.38 | 3019 | 1084 | 3.66 | 3276 | 1121 | 3.95 | 3544 |
| 4700 | 980 | 3.11 | 2773 | 1015 | 3.30 | 2946 | 1056 | 3.52 | 3147 | 1093 | 3.79 | 3396 | 1129 | 4.09 | 3674 |
| 4800 | 992 | 3.26 | 2910 | 1025 | 3.45 | 3083 | 1064 | 3.67 | 3285 | 1103 | 3.92 | 3516 | 1137 | 4.22 | 3795 |
| 4900 | 1003 | 3.41 | 3047 | 1036 | 3.61 | 3230 | 1073 | 3.83 | 3433 | 1112 | 4.07 | 3655 | 1147 | 4.36 | 3925 |
| 5000 | 1014 | 3.56 | 3184 | 1049 | 3.79 | 3396 | 1083 | 4.00 | 3590 | 1121 | 4.23 | 3804 | 1157 | 4.50 | 4055 |
| 5100 | 1024 | 3.71 | 3322 | 1061 | 3.96 | 3553 | 1093 | 4.17 | 3748 | 1129 | 4.40 | 3962 | 1166 | 4.66 | 4202 |
| 5200 | 1033 | 3.84 | 3442 | 1073 | 4.14 | 3720 | 1103 | 4.34 | 3906 | 1138 | 4.58 | 4130 | 1175 | 4.82 | 4354 |
| 5300 | 1042 | 3.98 | 3572 | 1084 | 4.31 | 3878 | 1115 | 4.53 | 4157 | 1148 | 4.76 | 4326 | 1184 | 5.01 | 4531 |
| 5400 | 1051 | 4.14 | 3720 | 1095 | 4.49 | 4046 | 1128 | 4.74 | 4279 | 1158 | 4.95 | 4475 | 1193 | 5.20 | 4707 |
| 5500 | 1061 | 4.30 | 3818 | 1105 | 4.66 | 4204 | 1140 | 4.94 | 4465 | 1168 | 5.15 | 4661 | — | — | — |
| 5600 | 1071 | 4.46 | 4018 | 1114 | 4.81 | 4344 | 1152 | 5.14 | 4652 | — | — | — | — | — | — |
| 5700 | 1081 | 4.64 | 4186 | 1123 | 4.98 | 4503 | — | — | — | — | — | — | — | — | — |
| 5800 | 1092 | 4.84 | 4372 | 1132 | 5.15 | 4661 | — | — | — | — | — | — | — | — | — |
| 5900 | 1103 | 5.04 | 4558 | — | — | — | — | — | — | — | — | — | — | — | — |
| 6000 | 1114 | 5.24 | 4745 | — | — | — | — | — | — | — | — | — | — | — | — |
| 6100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 6200 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 6300 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option
Watts — Input Watts to Motor

*Standard motor drive range: 860 to 1080 rpm. Alternate motor drive range: 900 to 1260 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** Out of Drive Package or Motor range .

- Maximum usable watts input is 3313 with standard motor. Maximum continuous bhp is 3.70 with standard motor. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.
- Values include losses for filters, unit casing, and wet coils.
- Use of a field-supplied motor may affect wire sizing. Contact your Carrier representative for details.
- Interpolation is permissible. Do not extrapolate.
- Motor Efficiency: 85%

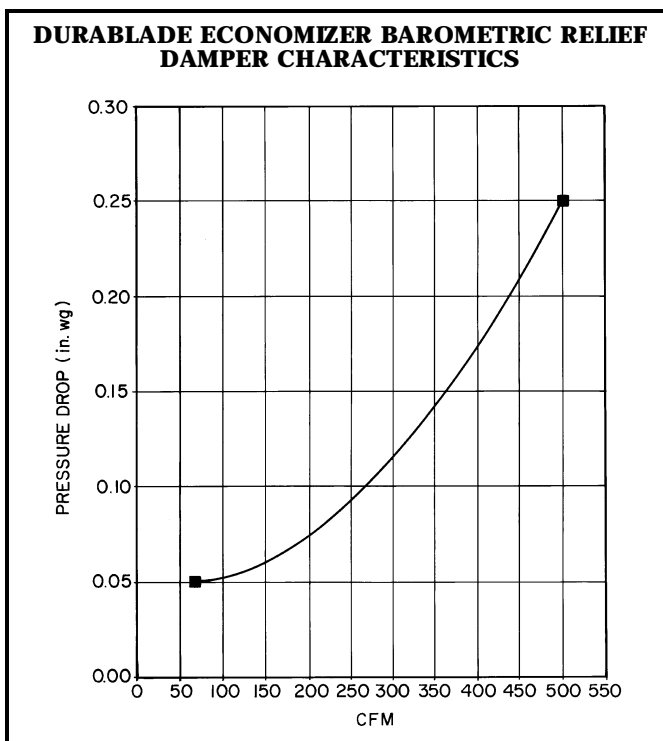
FAN RPM AT MOTOR PULLEY SETTINGS*— 50 Hz

| UNIT | MOTOR PULLEY TURNS OPEN | | | | | | | | | | |
|----------|-------------------------|------|------|-------|------|-------|------|-------|-----|-------|-----|
| | 0 | 1/2 | 1 | 1 1/2 | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 |
| 50LJS007 | 1205 | 1180 | 1150 | 1125 | 1095 | 1070 | 1040 | 1015 | 985 | 960 | 930 |
| 50TJS008 | 880 | 855 | 830 | 800 | 775 | 750 | 725 | 700 | 675 | 650 | 620 |
| 50TJS009 | 880 | 855 | 830 | 800 | 775 | 750 | 725 | 700 | 675 | 650 | 620 |
| 50TJS012 | 900 | 875 | 855 | 835 | 815 | 795 | 775 | 755 | 735 | 715 | 690 |
| 50TJS014 | 1017 | 992 | 972 | 952 | 932 | 912 | 892 | 872 | 852 | 832 | 814 |

* Approximate fan RPM shown

OUTDOORS SOUND POWER

| UNIT | SOUND RATING (Bels) | OCTAVE BANDS | | | | | | | |
|--------------|---------------------|--------------|------|------|------|------|------|------|------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 50LJS007 | 8.2 | 78.5 | 84 | 77.5 | 73 | 70.5 | 72 | 65 | 58.5 |
| 50TJS008,009 | 8.6 | 83.2 | 87.4 | 83.5 | 82.8 | 83 | 77.7 | 71.8 | 67 |
| 50TJS012 | 8.8 | 97.6 | 90.4 | 85.7 | 84.8 | 83.9 | 77.5 | 71.3 | 65.8 |
| 50TJS014 | 8.8 | 83.7 | 87.2 | 83.4 | 82.8 | 83 | 77.7 | 71.8 | 67 |



50LJS/TJS

Electrical Data – 50LJS007, 50TJS008 – 014 (50 Hz)

50LJS/TJS

| UNIT MODEL | NOMINAL V-Ph-Hz | IFM TYPE | VOLTAGE RANGE | | COMPRESSOR (ea) | | OFM (ea) | | | IFM FLA | ELECTRIC HEAT* | | POWER SUPPLY | | DISCONNECT SIZE | |
|------------|-----------------|----------|---------------|-----|-----------------|-----|----------|-----|-----|---------|----------------|------|--------------|------|-----------------|-----|
| | | | MIN | MAX | RLA | LRA | Qty | Hp | FLA | | NOMINAL KW** | FLA | MCA | MOCP | FLA | LRA |
| 50LJS 007 | 400-3-50 | STD | 342 | 440 | 12 | 100 | 1 | 1/3 | 1.5 | 2.6 | - | - | 19.1 | 25 | -- | -- |
| | | | | | | | | | | | 4.2 | 6.1 | 19.1 | 25 | -- | |
| | | | | | | | | | | | 8 | 11.5 | 19.2 | 25 | -- | |
| | | | | | | | | | | | 9.7 | 14 | 23 | 25 | -- | |
| | | | | | | | | | | | 16 | 23.2 | 35 | 30 | -- | |
| | | | | | | | | | | | 17.7 | 25.6 | 37.5 | 40 | -- | |
| 50TJS 008 | 400-3-50 | STD | 342 | 440 | 6.6 | 53 | 2 | 1/2 | 1.8 | 3.4 | - | - | 18.8 | 20 | 19 | 130 |
| | | | | | | | | | | | 9.7 | 13.9 | 21.7 | 20 | 19 | |
| | | | | | | | | | | | 11.5 | 16.5 | 24.9 | 25 | 22 | |
| | | | | | | | | | | | 19.3 | 27.8 | 39.1 | 40 | 35 | |
| | | | | | | | | | | | 22.9 | 33.1 | 45.6 | 45 | 41 | |
| | | | | | | | | | | | 29 | 41.8 | 56.5 | 60 | 51 | |
| 50TJS 009 | 400-3-50 | STD | 342 | 440 | 7.5 | 62 | 2 | 1/2 | 1.8 | 3.4 | - | - | 21.5 | 25 | 21 | 147 |
| | | | | | | | | | | | 9.7 | 13.9 | 21.7 | 25 | 21 | |
| | | | | | | | | | | | 11.5 | 16.5 | 24.9 | 25 | 22 | |
| | | | | | | | | | | | 19.3 | 27.8 | 39.1 | 40 | 35 | |
| | | | | | | | | | | | 22.9 | 33.1 | 45.6 | 45 | 41 | |
| | | | | | | | | | | | 29 | 41.8 | 56.5 | 60 | 51 | |
| 50TJS 012 | 400-3-50 | STD | 342 | 440 | 9 | 82 | 2 | 1/2 | 1.8 | 3.4 | - | - | 23.2 | 30 | 24 | 158 |
| | | | | | | | | | | | 9.7 | 16.5 | 23.9 | 30 | 24 | |
| | | | | | | | | | | | 19.3 | 27.8 | 38.1 | 40 | 35 | |
| | | | | | | | | | | | 22.9 | 33.1 | 44.6 | 45 | 41 | |
| | | | | | | | | | | | 29 | 41.8 | 55.5 | 60 | 51 | |
| | | | | | | | | | | | 34.7 | 50.1 | 65.9 | 70 | 61 | |
| 50TJS 014 | 400-3-50 | STD | 342 | 440 | 12 | 100 | 2 | 1/2 | 1.8 | 4.8 | - | - | 33.3 | 40 | 35 | 232 |
| | | | | | | | | | | | 11.5 | 18 | 33.3 | 40 | 35 | |
| | | | | | | | | | | | 19.3 | 30.3 | 43.9 | 45 | 40 | |
| | | | | | | | | | | | 22.9 | 36.1 | 51.1 | 60 | 47 | |
| | | | | | | | | | | | 29 | 45.5 | 62.8 | 70 | 58 | |
| | | | | | | | | | | | 34.7 | 54.6 | 74.2 | 80 | 68 | |

LEGEND AND NOTES FOR ELECTRICAL DATA TABLES

LEGEND

- FLA** — Full Load Amps
- HACR** — Heating, Air Conditioning and Refrigeration
- IFM** — Indoor (Evaporator) Fan Motor
- LRA** — Locked Rotor Amps
- MCA** — Minimum Circuit Amps
- MOCP** — Maximum Overcurrent Protection
- NEC** — National Electrical Code
- OFM** — Outdoor (Condenser) Fan Motor
- RLA** — Rated Load Amps

*Heater capacity (kW) is based on heater voltage of 208 v, 240 v, 480 v, and 600 v. Heaters are rated at 240 v, 480 v, or 600 v. If power distribution voltage to unit varies from rated heater voltage, heater kW will vary accordingly. To determine heater capacity at actual unit voltage, multiply 240 v, 480 v, or 600 v capacity by multipliers found in table on page 51.

†Used to determine minimum disconnect size per NEC.

**Heaters are field installed only.

‡ Fuse or HACR circuit breaker.

||Fusing in single point box provides the required branch circuit protection.

NOTES:

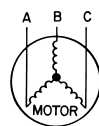
1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. The Canadian units may be fuse or circuit breaker.

2. Unbalanced 3-Phase Supply Voltage

Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460-3-60.



- AB = 452 v
- BC = 464 v
- AC = 455 v

$$\begin{aligned} \text{Average Voltage} &= \frac{452 + 464 + 455}{3} \\ &= \frac{1371}{3} \\ &= 457 \end{aligned}$$

Determine maximum deviation from average voltage.

- (AB) 457 – 452 = 5 v
- (BC) 464 – 457 = 7 v
- (AC) 457 – 455 = 2 v

Maximum deviation is 7 v.

Determine percent of voltage imbalance.

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{7}{457} \\ &= 1.53\% \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

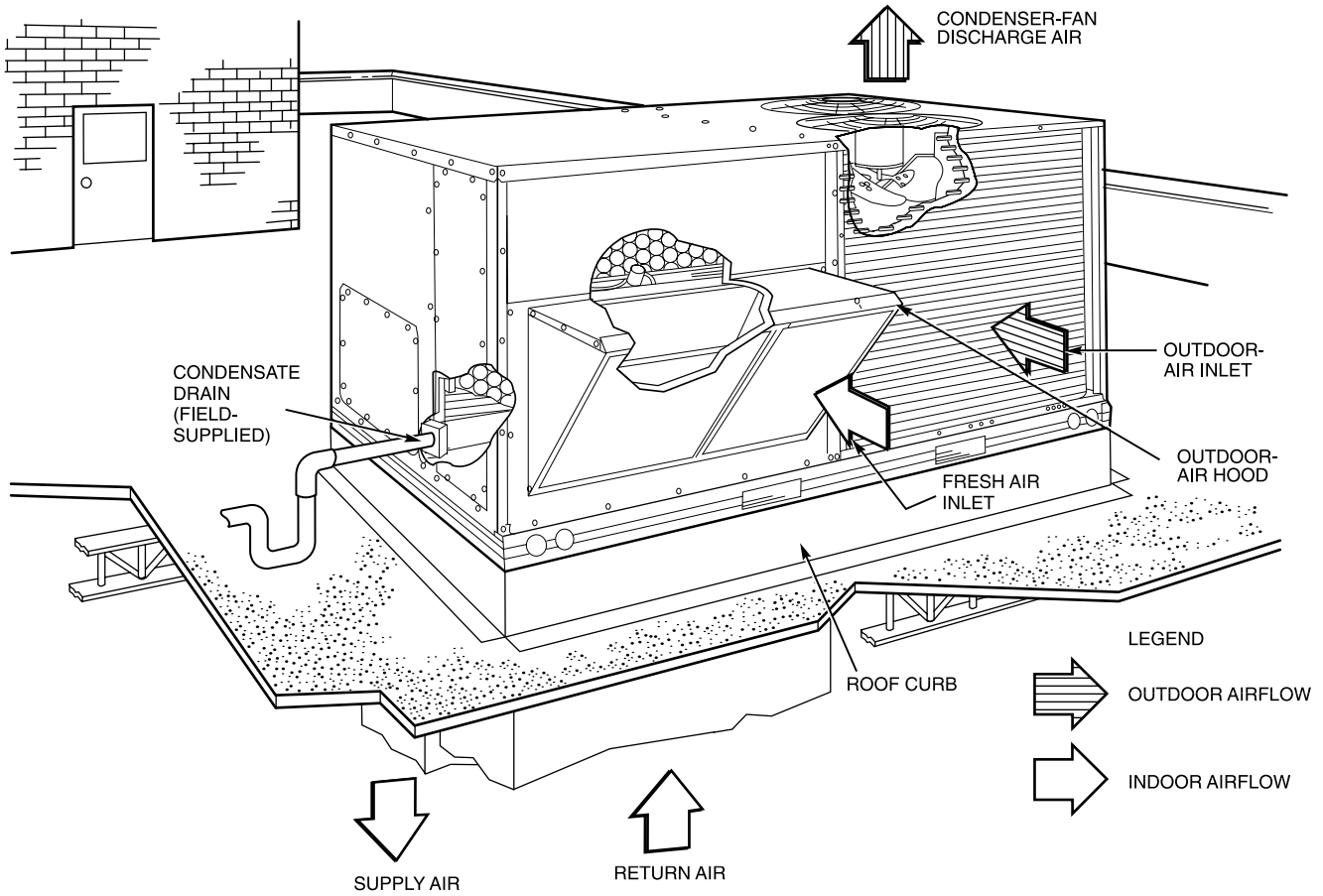
IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.



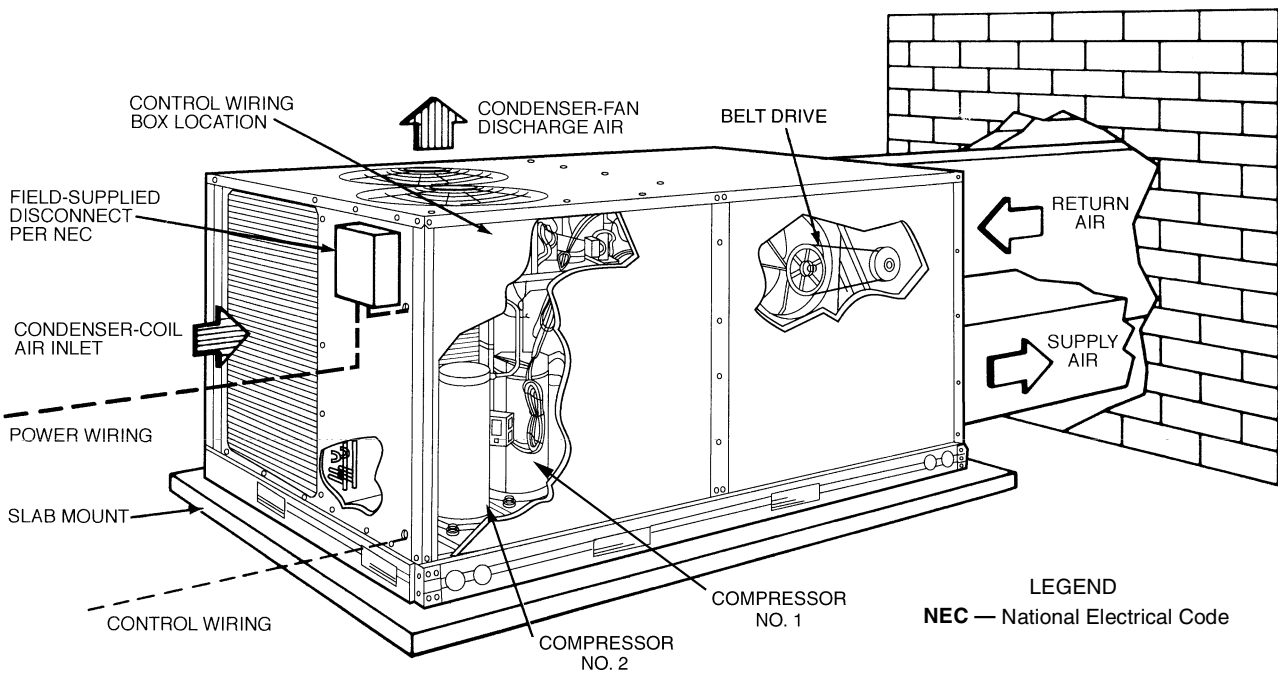
Typical piping and wiring — 50LJS007 (50TJS 008-014 shown)

50LJS/TJS

VERTICAL DISCHARGE DUCTING

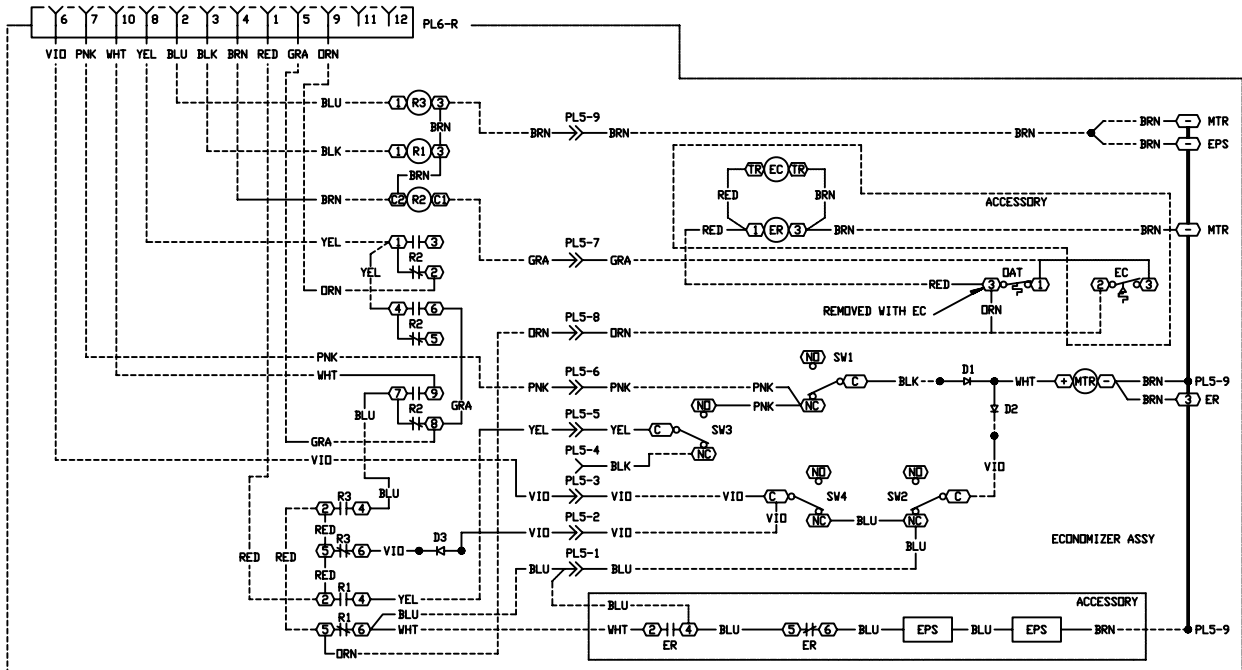


HORIZONTAL DISCHARGE DUCTING

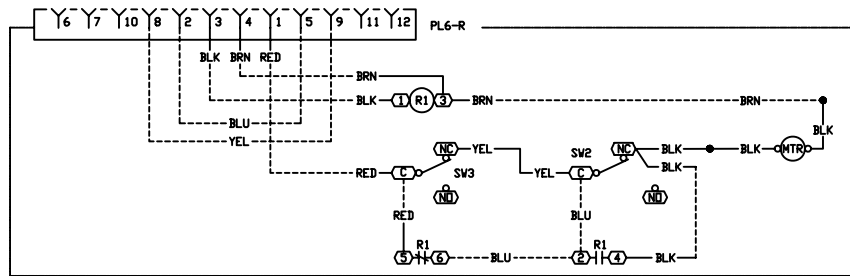


Typical wiring schematic — 50LJS007

FOR ECONOMIZER ASSEMBLY



FOR TWO POSITION DAMPER ASSEMBLY



LEGEND :

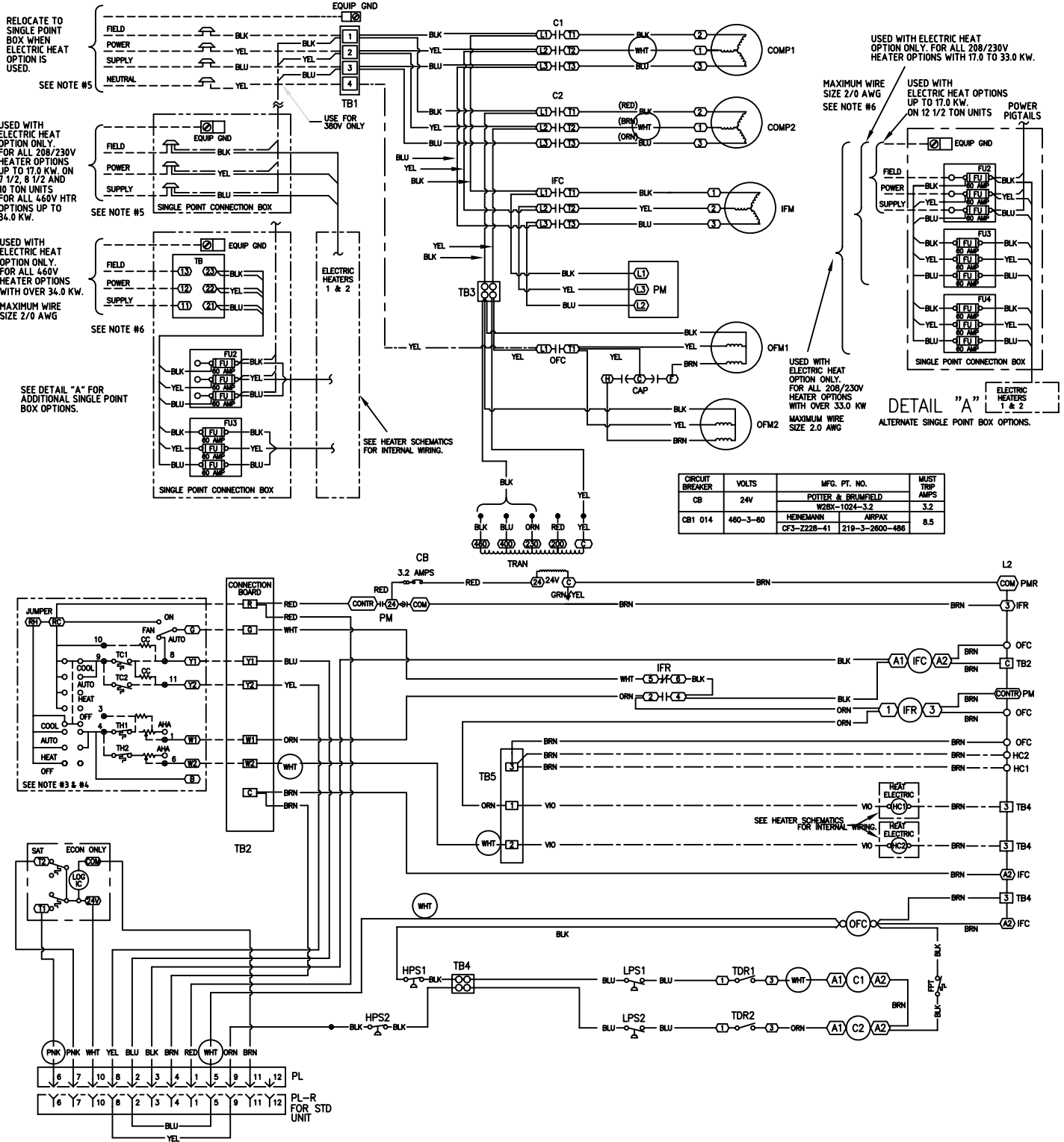
- | | | | |
|------|-----------------------------|-------|---------------------------------|
| ODM | OUTDOOR FAN MOTOR | CC | COOLING COMPENSATOR |
| P | PLUG | COMP | COMPRESSOR MOTOR |
| PL | PLUG ASSEMBLY | D | DIODE |
| QT | QUADRUPLE TERMINAL | EC | ENTHALPY CONTROL |
| R | RELAY | EPS | EMERGENCY POWER SUPPLY |
| RS | ROLLOUT SWITCH | EQUIP | EQUIPMENT |
| SAT | SUPPLY AIR THERMOSTAT | ER | ECONOMIZER RELAY |
| SEN | SENSOR | FPT | FREEZE UP PROTECTION THERMOSTAT |
| SW1 | SWITCH FULLY OPEN | FU | FUSE |
| SW2 | SWITCH FULLY CLOSED | GND | GROUND |
| SW3 | SWITCH MIN. VENT POSITION | HC | HEATER CONTACTOR (STRIP HEAT) |
| SW4 | SWITCH MAX. VENT POSITION | HPS | HIGH PRESSURE SWITCH |
| TB | TERMINAL BLOCK | IFC | INDOOR FAN CONTACTOR |
| TC | THERMOSTAT-COOLING | IFM | INDOOR FAN MOTOR |
| TH | THERMOSTAT-HEATING | IFR | INDOOR FAN RELAY |
| TRAN | TRANSFORMER | LPS | LOW PRESSURE SWITCH |
| PM | PHASE MONITOR | LSM | LIMIT SWITCH (MANUAL RESET) |
| TDR | TIME DELAY RELAY | MGV | MAIN GAS VALVE |
| AHA | ADJUSTABLE HEAT ANTICIPATOR | MTR | MOTOR |
| C | CONTACTOR, COMPRESSOR | DAT | OUTDOOR AIR THERMOSTAT |
| CAP | CAPACITOR | DFC | OUTDOOR FAN CONTACTOR |
| CB | CIRCUIT BREAKER | | |

- | | | | |
|--|---------------------|--|------------------------------------|
| | FIELD SPLICE | | FACTORY WIRING |
| | MARKED WIRE | | FIELD CONTROL WIRING |
| | TERMINAL (MARKED) | | ACCESSORY OR OPTIONAL WIRING |
| | TERMINAL (UNMARKED) | | TO INDICATE COMMON POTENTIAL ONLY: |
| | TERMINAL BLOCK | | NOT TO REPRESENT WIRING |
| | SPLICE | | |
| | SPLICE (MARKED) | | |

50LJS/TJS

Typical wiring schematic — 50TJS008-014

50LJS/TJS

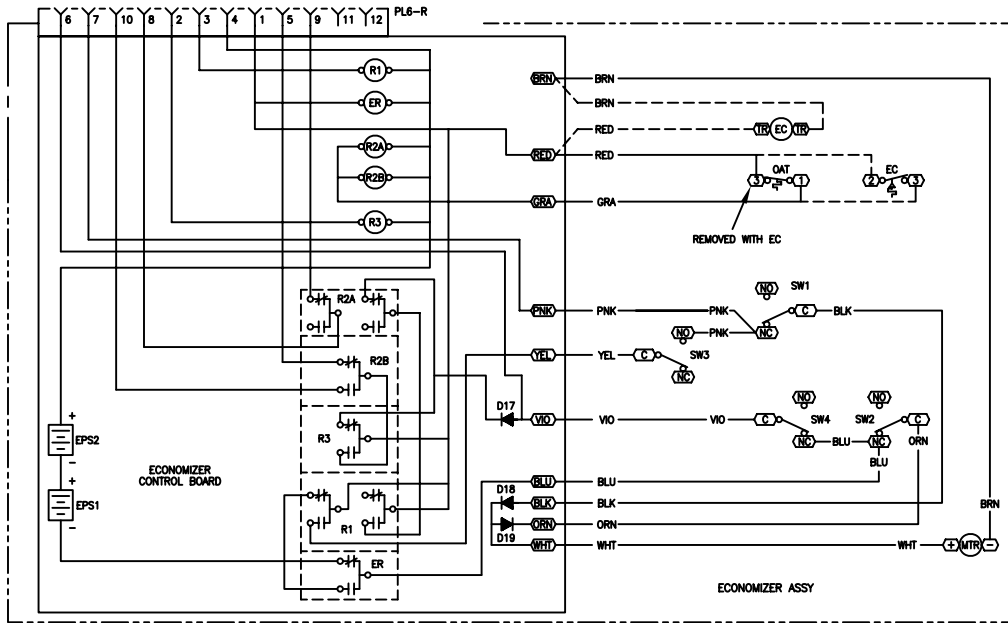


- NOTES :
1. IF ANY OF THE ORIGINAL WIRE FURNISHED MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE 90 C WIRE OR ITS EQUIVALENT.
 2. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS.

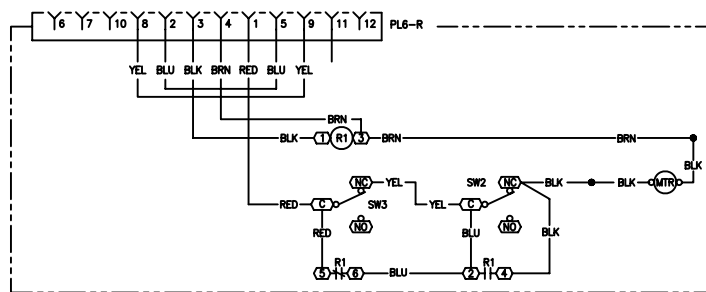
3. THERMOSTAT: HH07AT170, 172, 174 & P272-2783
SUBBASE: HH93AZ176, 178 & P272-1882, 1883
4. SET HEAT ANTICIPATOR AT 1 AMP.
5. USE COPPER CONDUCTORS ONLY.
6. USE COPPER, COPPER CLAD ALUMINUM OR ALUMINUM CONDUCTORS.

Typical wiring schematic — 50TJS008-014 (Cont.)

FOR ECONOMIZER ASSEMBLY



FOR TWO POSITION DAMPER ASSEMBLY

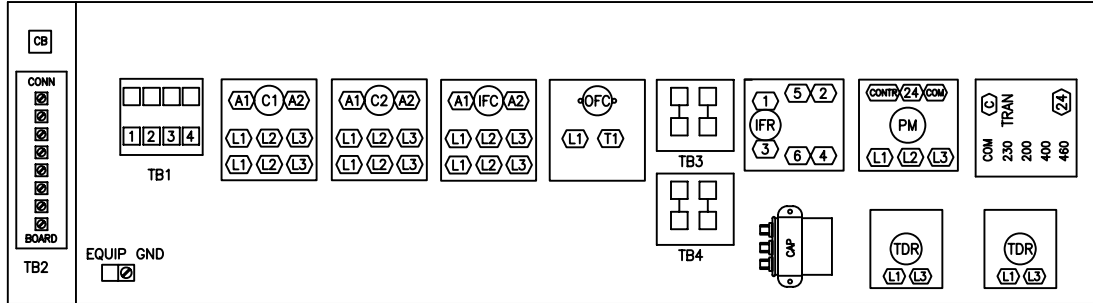


50LJS/TJS

Typical wiring schematic — 50LJS007 (Cont.)

50LJS/TJS

COMPONENT ARRANGEMENT



LEGEND

- FIELD SPLICE
 - MARKED WIRE
 - TERMINAL (MARKED)
 - TERMINAL (UNMARKED)
 - TERMINAL BLOCK
 - SPLICE
 - SPLICE (MARKED)
 - FACTORY WIRING
 - FIELD WIRING
 - ACCESSORY WIRING
 - OPTIONAL WIRING
 - TO INDICATE COMMON POTENTIAL ONLY:
 - NOT TO REPRESENT WIRING
- SW1 SWITCH FULLY OPEN
 - SW2 SWITCH FULLY CLOSED
 - SW3 SWITCH MIN. VENT POSITION
 - SW4 SWITCH MAX. VENT POSITION
 - TB TERMINAL BLOCK
 - TC THERMOSTAT-COOLING
 - TH THERMOSTAT-HEATING
 - TRAN TRANSFORMER
 - PM PHASE MONITOR
 - TDR TIME DELAY RELAY

- AHA ADJUSTABLE HEAT ANTICIPATOR
- C CONTACTOR, COMPRESSOR
- CAP CAPACITOR
- CB CIRCUIT BREAKER
- CC COOLING COMPENSATOR
- COMP COMPRESSOR MOTOR
- D DIODE
- EC ENTHALPY CONTROL
- ECON ECONOMIZER
- EPS EMERGENCY POWER SUPPLY (NINE VOLT BATTERY)
- EQUIP EQUIPMENT
- ER ECONOMIZER RELAY
- FPT FREEZE UP PROTECTION THERMOSTAT
- FU FUSE
- GND GROUND
- HC HEATER CONTACTOR (STRIP HEAT)
- HPS HIGH PRESSURE SWITCH
- IFC INDOOR FAN CONTACTOR
- IFM INDOOR FAN MOTOR
- IFR INDOOR FAN RELAY
- LPS LOW PRESSURE SWITCH
- MTR MOTOR
- OAT OUTDOOR AIR THERMOSTAT
- OFM OUTDOOR FAN MOTOR
- PL-R RECEPTACLE ASSY.
- PL PLUG ASSEMBLY
- QT QUADRUPLE TERMINAL
- R RELAY
- SAT SUPPLY AIR THERMOSTAT
- SEN SENSOR

Controls

Operating sequence

Cooling, units without economizer

-

When thermostat calls for cooling, terminal G and Y1 are energized. The indoor (evaporator) fan contactor (IFC), and compressor contactor no 1 (C1) are energized and evaporator-fan motor, compressor no. 1 (50TJS008-014), and condenser fans start. The condenser-fan motor runs continuously while unit is cooling. On 50TJS008 – 014 units, if the thermostat calls for a secondary stage of cooling by energizing Y2, compressor contactor no.2 (C2) is energized and compressor no. 2 starts.

Heating, units without economizer (If Accessory or Optional Heater is Installed) -

Upon a call for heating through terminal W1, IFC and heater contactor no. 1 (HC1) are energized. On units equipped for 2 stages of heat, when additional heat is needed, HC2 is energized through W2.

Cooling, units with economizer (50LJ007, 50TJS008 – 014) –

When the outdoor-air temperature is above the outdoor-air thermostat (OAT) setting and the room thermostat calls for cooling, compressor contactor no.1 is energized to start compressor no. 1 and the condenser-fan motor. The evaporator-fan motor is energized and the economizer damper moves to the minimum position. Upon a further call for cooling, compressor contactor no. 2 will be energized (50TJS008 – 014), starting compressor no. 2. After the thermostat is satisfied, the damper moves to the fully closed position.

When the outdoor-air temperature is below the OAT setting and the thermostats call for cooling, the economizer damper moves to

the minimum position. If the supply air temperature is above 57 F, the damper continues to open until it reaches the fully open position or until the supply-air temperature drops below 57 F.

When the supply-air temperature falls to between 57 F and 52 F, the damper will remain at an intermediate open position. If the supply –air temperature falls below 52 F, the damper will modulate closed until it reaches the minimum position or until the supply-air temperature is above 52 F. when the thermostat is satisfied, the damper will move to the fully closed position.

If the outdoor air alone can not satisfy the cooling requirements of the conditioned space, economizer cooling is integrated with mechanical cooling, providing second-stage cooling. Compressor no. 1 and the condenser fan will be energized and the position of the economizer damper will be determined by the supply-air temperature. Compressor no. 2 (50TJS008 – 014) is locked out.

When the second stage of cooling is satisfied, the compressor and condenser-fan motor will be deenergized. The damper position will be determined by the supply-air temperature.

When the first stage of cooling is satisfied, the damper will move to fully closed position.

Heating, units with economizer (50LJ007,50TJS008-014) (If Accessory or Optional Heater is Installed) -

When the room thermostat calls for heat through terminal W1, the evaporator-fan contactor and heater contactor no. 1 are energized. On units equipped with 2 stages of heat, when additional heat is needed, heater contactor no. 2 is energized through W2. The economizer damper moves to the minimum position during heating. When the thermostat is satisfied, the damper moves to the fully closed position.

Guide specifications

Packaged Rooftop Cooling Unit with Electric Heat Option — Constant Volume Application

HVAC Guide Specifications

Carrier Model: 50LJS007/TJS008 - 014

Part 1 — General

1.01 SYSTEM DESCRIPTION

Outdoor rooftop- or slab-mounted, electrically controlled cooling unit with optional heat utilizing a hermetic compressor for cooling duty and electric resistance coils for heating duty. Unit shall discharge supply air vertically or horizontally as shown on contract drawings. Vertical discharge is a factory option. Unit shall have Fixed Orifice for refrigerant control.

1.02 QUALITY ASSURANCE

- A. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
- B. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- C. Unit shall be manufactured in a facility registered to ISO 9001:2000.

1.03 DELIVERY, STORAGE, AND HANDLING

Unit(s) shall be stored and handled as per manufacturer's recommendations.

Part 2 — Products

2.01 EQUIPMENT (STANDARD)

A. General:

Factory-assembled, single-piece cooling unit with optional heat. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge (R-22), and special features required prior to field startup.

B. Unit Cabinet:

- 1. Unit cabinet shall be constructed of galvanized steel, shall be bonderized and coated with a baked enamel finish on all externally exposed surfaces.
- 2. Evaporator fan cabinet interior shall be insulated with a minimum 1/2-in. thick, 1-lb density Aluminum faced, flexible fiberglass insulation.
- 3. Cabinet panels shall be easily removable for servicing.
- 4. Holes shall be provided in the base rails for rigging shackles to facilitate overhead rigging,

and forklift slots shall be provided to facilitate maneuvering.

5. Unit shall have a factory-installed, sloped condensate drain pan made of a noncorrosive plastic material, providing a minimum 3/4-in. connection with both vertical and horizontal drains and shall comply with ASHRAE 62.

6. Unit shall have factory-installed filter access panel to provide filter access with tool-less removal.

C. Fans:

- 1. Indoor blower (evaporator fan) shall be of the belt-driven, double inlet, forward curved, centrifugal type. Belt drive shall include an adjustable-pitch motor pulley.
- 2. Indoor blower (evaporator fan) shall be made from steel with a corrosion-resistant finish and shall be dynamically balanced.
- 3. Bearings shall be of the sealed, permanently lubricated, ball-bearing type for longer life and lower maintenance.
- 4. Condenser fan shall be of the direct-driven propeller type and shall discharge air vertically.
- 5. Condenser fan shall have aluminum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

D. Compressor(s):

- 1. Reciprocating or scroll type, fully hermetic type, internally protected.
- 2. Factory mounted on rubber grommets and internally spring mounted for vibration isolation.
- 3. Two independent circuits (TJ 008-014).

E. Coils:

- 1. Condenser coils shall have aluminum plate fins mechanically bonded to enhanced copper tubes with all joints brazed.
- 2. Tube sheet openings shall be belled to prevent tube wear.
- 3. Evaporator coil shall be of the full face active design.
- 4. Condenser coils shall be protected by a wire grill.

F. Refrigerant Components:

Refrigerant circuit components shall include:

- 1. Fixed Expansion Orifices.
- 2. Refrigerant filter.
- 3. Service gage connections on suction, discharge, and liquid line.

G. Filter Section:

- 1. Standard filter section shall consist of factory installed low-velocity, throwaway 2-in.

thick fiberglass filters of commercially available sizes.

2. Filter face velocity shall not exceed 320 fpm at nominal airflows.

3. Filter section shall use only one size filter.

4. Filters shall be accessible through an access panel with “no-tool” removal.

H. Controls and Safeties:

1. Unit Controls:

Unit shall be complete with self-contained low voltage control circuit.

2. Standard Safeties:

a. Unit shall incorporate compressor over temperature and over current safety devices to shut off compressor.

b. Contain high pressure as well as loss of charge/low pressure and freeze protection switches.

c. For models with Scroll compressors, unit shall have phase monitor to prevent reverse rotation.

d. Compressor Cycle Delay:

Unit shall be prevented from restarting for a minimum of 5 minutes after shutdown.

I. Operating Characteristics:

1. Unit shall be capable of starting and running at 125 F ambient outdoor temperature, meeting maximum load criteria of ARI Standard 210/ 240 or 360 at $\pm 10\%$ voltage.

2. Compressor with standard controls shall be capable of operation down to 40 F ambient outdoor temperature.

3. Optional crankcase heater should be installed where temperature falls below 45°F and cooling operation is required.

J. Electrical Requirements:

All unit power wiring shall enter unit cabinet at a single factory-predrilled location.

K. Motors:

1. Compressor motors shall be cooled by refrigerant passing through motor windings and shall have line break thermal and current overload protection.

2. Indoor blower (evaporator fan) motor shall have permanently lubricated bearings and inherent automatic-reset thermal overload protection.

3. Totally enclosed condenser-fan motor shall have permanently lubricated bearings, and inherent automatic-reset thermal overload protection.

4. (50TJS008-014): High-static motor(s) and drive(s) shall be factory- installed to provide an additional performance range.

5. Outdoor motor shall have F – Class Insulation.

L. Special Options:

1. Condenser coil shall pre-coated aluminum-fin coils shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.

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Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations