48LC WeatherExpert® Series
Ultra High-Efficiency
Single Package Rooftop
Gas Heating/Electric Cooling Unit
Sizes 14–26 with Puron® (R-410A) Refrigerant

Submittal Data

— PERFORMANCE DATA
— CERTIFIED DIMENSION PRINTS
— CERTIFIED ROOF CURB DIMENSION PRINTS
DESCRIPTION

48LC units are ultra high-efficiency, single-packaged electric cooling, gas heating units. Units utilize three stages of cooling capacity control with matching indoor fan motor speed control. All models are available with belt drive indoor fan motors with Variable Frequency Drive (VFD) speed controller and Direct Drive - ECM outdoor fan motor. Models use electro mechanical controls with Carrier’s Comfort Control Logic and LED indicators.

All units are factory tested in both heating and cooling modes, and rated in accordance with AHRI Standards 340/360.

STANDARD FEATURES

**Base Unit**
- Puron® (R-410A) HFC refrigerant
- IEERs up to 19.1 with with EERs up to 12.5
- ASHRAE 90.1-2013 compliant
- Rated in accordance with AHRI Standards 340/360
- Designed in accordance with Underwriters Laboratories Std 1995
- Listed by ETL
- 3-stage cooling capacity control with crankcase heaters
- Belt drive indoor fan and pulley system with Variable Frequency Drive (VFD) controller
- High-efficiency ECM outdoor fan motor
- Standard ambient cooling operation down to 40°F (4°C) with lower operation with integrated economizer.
  SystemVu™ controls allow operation down to 0°F (-18°C). All units operate up to 125°F (52°C).
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or center drain
- Dedicated vertical and horizontal airflow models available ordered as factory option. No special kits required.
- Proven tandem scroll compressor design with internal line-break overload protection
- Single refrigerant circuit design with full face activated evaporator coil
- Two-inch disposable return air filters on slide out track. Four-inch track available as field-installed accessory.
- Provisions for thru-the-bottom power entry capability as standard
- Single point gas and electric connections
- 24-volt control circuit protected with resettable circuit breaker
- Permanently lubricated evaporator-fan motor
- Totally enclosed condenser motors with permanently lubricated bearings
- Low-pressure and high-pressure switch protection
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Sound levels as low as 84 dB

**Cabinet**
- Innovative, easy starting, no-strip screw feature on unit access panels
- Access panels with easy grip handles and tool-less filter access door
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet with foil faced insulation

**Refrigerant System**
- Precision sized TXV refrigerant metering devices
- High capacity liquid line filter drier
- High performance internally enhanced copper tube, aluminum fin coils with optional corrosion resistant coils

**Gas Heat**
- Exclusive IGC solid-state gas heat exchanger control for on-board diagnostics, anti-cycle protection, LED error code designation, burner control logic and energy saving indoor fan motor delay
- Gas efficiencies up to 82%
- Induced draft gas heat combustion
- Redundant gas valves with up to two stages of heating
- Flame roll-out safety protector
- Solid-state electronic direct spark ignition system

**Standard Limited Parts Warranty**
- 15-year gas heat exchanger parts - Stainless Steel
- 10-year gas heat exchanger parts - Aluminized
- 5-year compressor parts
- 3-year SystemVu™ controller
- 1-year parts
PERFORMANCE DATA

Unit Operating Weight ____________ lb
Curb Weight ____________ lb

Cooling
Gross Total Capacity: ____________ Btuh
   at Condenser Air Temperature ________ °F
Gross Sensible Capacity: ____________ Btuh
Compressor Power Input: ____________ kW
Indoor Entering db ______ °F wb ______ °F
Airflow ______ CFM  External Static Pressure ______ in. wg
Indoor Fan Motor Size ____________ Hp
Exhaust Fan Motor Size ____________ Hp

Heating
Total Heating Capacity:
INPUT
   Stage 1 ____________ Btuh
   Stage 2 ____________ Btuh
OUTPUT
   Stage 1 ____________ kW
   Stage 2 ____________ kW
Thermal Efficiency State ____________ %

ELECTRICAL DATA

Power Supply to Unit ____________ Volts ____________ Phase ____________ Hz
Minimum Circuit Amps ____________ Maximum Overcurrent Protection ____________

SUBMITTAL DATA

Job Name ______________________________________________________________________
Architect ______________________________________________________________________
Engineer ______________________________________________________________________
Contractor ______________________________________________________________________
Unit Designation __________________________________________________________________

Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.
**FACTORY-INSTALLED OPTIONS (FIOPs)**

- **Economizer with DRY BULB sensing and barometric relief.**
  - Standard Air Leak Dampers —
    - Models with W7220 controller meet California Title 24 (section 120.2) Fault Detection and Diagnostic (FDD) requirements. EconoMi$er X.
    - Models with RTU Open controller meet California Title 24 (section 120.2) Fault Detection and Diagnostic (FDD) requirements. EconoMi$er 2.

- **Economizer with ENTHALPY sensing and barometric relief.**
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- **Economizer with DRY BULB sensing and barometric relief.**
  - ULTRA LOW LEAK Air Dampers —
    - Models with W7220 controller meet California Title 24 (section 120.2) Fault Detection and Diagnostic (FDD) requirements, have return, outside air and relief damper leakage that meet Title 24 (section 140.4 and ASHRAE 90.1-2013) requirements - plus 5-year limited parts warranty. EconoMi$er X.
    - Models with RTU Open controller meet California Title 24 (section 120.2) Fault Detection and Diagnostic (FDD) requirements, have return, outside air and relief damper leakage that meet Title 24 (section 140.4 and ASHRAE 90.1-2013) requirements - plus 5-year limited parts warranty. EconoMi$er 2.

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- **Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)**
- **Non-fused disconnect**
- **HACR breaker**
- **Powered 115-volt convenience outlet**
- **Non-powered 115-volt convenience outlet**
- **Return air smoke detector**
- **Supply air smoke detector**
- **CO₂ sensor**
- **Condenser hail guard - louvered style**
- **Special coating protection for evaporator and condenser coils**
- **Hinged access panels**
- **Patented Humidi-MiZer® adaptive dehumidification system (not available with SystemVu™ controls)**
- **RTU Open multi-protocol controller communicates to LON, MODBUS®, BACnet® and Johnson N2 protocols.**
- **SystemVu™ Controls:**
  - Large full text - multi line display
  - Intuitive multi button navigation
  - USB Flash Port for data transfer
  - Built in i-Vu®, CCN and BACnet
  - Refrigerant pressure from display
  - Quick LED Status - Run, Alert, Fault
  - Historical component runtime and starts
  - Conventional Stat or Sensor capabilities
  - Cooling Operation down to 0°F (-18°C)

**OPTIONAL EXTENDED WARRANTIES**

- **Complete Unit Parts only up to 5 years**
- **Complete Unit Parts and Labor up to 5 years**

Many other optional warranties are available. See the Commercial Start-Up and Optional Extended Warranty Price pages for further information.

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* MODBUS is a registered trademark of Schneider Electric.
† BACnet is a registered trademark of ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).
FIELD-INSTALLED ACCESSORIES

☐ **Economizer with DRY BULB sensing and barometric relief.**

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☐ **Display Kit for Variable Frequency Drive (VFD).**

  Allows additional set up and diagnostics of the VFD controller. Kit includes display and cable. Kit can be used on size 07 thru 26 LC units.

☐ **Energy Demand System - wireless automated demand management and response controllers**

☐ **Power exhaust - prop fan design**

☐ **Roof curb - 14 inch (356 mm) tall**

☐ **Roof curb - 24 inch (610 mm) tall**

☐ **Adapter curb (available for sizes 14-20 only)**

☐ **Barometric Relief Hood for Horizontal Economizer applications**

☐ **Condenser hail guard - louvered style**

☐ **Flue discharge deflector**

☐ **Liquid propane (LP) conversion kit**

☐ **High altitude conversion kit**

☐ **Phase monitor (loss of phase/phase reversal)**

☐ **Time Guard II compressor anti-cycle protection**

☐ **4-inch filter track upgrade kit**

☐ **Thermostats and Sensors –**

  48LC size 14-26 units require a three-stage cooling thermostat to perform at the listed operating efficiencies. Carrier offers a Honeywell branded T7350D 3 Cool/3 Heat Commercial Programmable Thermostat which provides the following features:
  - 7-day programmable
  - 365-day clock with holiday programming
  - Automatic Daylight Saving Time adjustment
  - Backlit display
  - Changeover selections: automatic or manual
  - Fan configurable: continuous or intermittent during occupied

**Economizer Sensors**

☐ Single dry bulb control

☐ Single enthalpy control

☐ Differential enthalpy control

☐ CO₂ - wall mounted

☐ CO₂ - duct mounted

☐ CO₂ - unit mounted
CERTIFIED DIMENSION 48LC17, 20

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* STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING.

FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.
CERTIFIED DIMENSION 48LC24, 26

- Standard unit weight is with low gas heat and without packaging.

For other options and accessories, refer to the product data catalog.