



# Product Catalog

## **Packaged Rooftop Air Conditioners Precedent™ – Cooling and Gas/Electric 3 to 10 Tons – 60 Hz**





# Introduction

## Packaged Rooftop Air Conditioners

Trane customers demand products that provide exceptional reliability, meet stringent performance requirements, and are competitively priced. Trane delivers with Precedent™.

Precedent features cutting edge technologies: reliable compressors, Trane engineered ReliaTel controls, computer-aided run testing, and Integrated Comfort™ Systems. So, whether you're the contractor, the engineer, or the owner you can be certain Precedent products are built to meet your needs.

Through the years, Trane has designed and developed the most complete line of Packaged Rooftop products available in the market today. Trane was the first to introduce the Micro—microelectronic unit controls—and has continued to improve and revolutionize this design concept.

Electromechanical controls are available for simpler applications, and for the more sophisticated, ReliaTel™ microprocessor controls.

The ReliaTel control platform offers the same great features and functionality as the original Micro, with additional benefits for greater application flexibility.

With its sleek, compact cabinet, Precedent continues to provide the highest standards in quality and reliability, comfort, ease of service, and the performance of Trane light commercial products.

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## Revision History

RT-PRC023AJ-EN (20 March 2015)

- Updated catalog to include microchannel for T/YHC 10 Ton



# Features and Benefits

## Standard Features

- 5-year Limited Compressor Warranty
- 5-year Limited Heat Exchanger Warranty
- 1-year Limited Parts Warranty
- Anti-Short Cycle Timer (Standard with ReliaTel™)
- Colored and Numbered Wiring
- Convertible Airflow
- Crankcase Heaters<sup>1</sup>
- Direct Drive Plenum Fan<sup>2</sup>
- Easy Access Low Voltage Terminal Board (LTB)
- Electromechanical or ReliaTel Microprocessor Controls
- Filters are Standard on all Units
- Foil-Faced and Edge Captured Insulation
- High Pressure Control
- IAQ Dual Sloped, Plastic, Removable, Reversible Drain Pan
- Liquid Line Refrigerant Drier
- Low Ambient Cooling to 0°F on Microprocessor Models
- Low Ambient Cooling to 40°F on Electromechanical Models
- Low Pressure Control
- Microchannel Coils<sup>3</sup>
- Multispeed Direct Drive Motors
- Operating Charge of R-410A
- Plastic Drain Pan
- Patent-Pending Hybrid Condenser Coil for easy cleaning
- Phase Loss Protection
- Phase Monitor
- Phase Reversal Protection
- Phase Balance Protection
- Progressive Tubular Aluminized Steel Heat Exchanger
- Provisions for Through-the-Base Gas and Condensate Drain Connections
- Quick Access Panels
- Quick Adjust Fan Motor Mounting Plate
- Single Point Power
- Single Side Service
- Standardized Components
- Thermal Expansion Valve

<sup>1</sup> Crankcase heaters are optional on (T,Y)SC (036, 048, 060, 072, 090, 102, 120); standard on (T,Y)HC (036, 048, 060, 072, 092, 102, 120)

<sup>2</sup> Standard on: (T,Y)SC120F, (T,Y)HC092,102F, (T,Y)HC120F

<sup>3</sup> The microchannel type condenser coil is standard for T/YSC(072,090,092,102,120)F and T/YHC(048,060,072,092,102,120)F models. The microchannel type condenser coil is not offered on the T/YHC(048,060)F dehumidification model.

- Trane built Scroll Compressors

## Options<sup>1</sup>

### ***Factory Installed Options***

- Belt Drive Motors<sup>2</sup> (Three-phase)
- Black Epoxy Pre-Coated Coils<sup>3</sup>
- CO<sub>2</sub> Sensor (wiring only)
- CompleteCoat™ Condenser Coil
- Condensate Overflow Switch
- Crankcase Heaters
- Dehumidification Option
- Fault Detection & Diagnostics (FDD); Meets CA Title 24 Requirements
- Hinged Access Doors
- Human Interface - 5 inch Color Touchscreen
- Multiple Zone VAV (Variable Air Volume)
- Novar Return Air Sensor
- Novar Unit Controls
- Powered or Unpowered Convenience Outlet
- Single Zone Variable Air Volume (SZVAV)
- Stainless Steel Drain Pan
- Stainless Steel Heat Exchanger with 10-year warranty
- Supply, Return or Plenum Air Smoke Detector
- Through-the-Base Electrical Access
- Multi-Speed Indoor Fan System
- Through-the-Base Electrical with Circuit Breaker
- Through-the-Base Electrical with Disconnect Switch
- 2" MERV 8 Filters or 2" MERV 13 Filters with Filter Removal Tool

### ***Factory or Field Installed Options***

- Barometric Relief
- Clogged Filter/Fan Failure Switch
- Demand Control Ventilation
- Discharge Air Temperature Sensing Kit
- Economizer: Standard and Low Leak
- Electric Heaters
- Froststat™
- LonTalk® Communications Interface (LCI)
- BACnet® Communications Interface (BCI)

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<sup>1</sup> Refer to model number description for option availability.

<sup>2</sup> Option on 3 to 5 ton high efficiency units

<sup>3</sup> Not available on microchannel coils.



## Features and Benefits

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- Reference or Comparative Enthalpy
- Tool-less Hail Guards
- Trane Communications Interface (TCI)

### ***Field Installed Options***

- CO<sub>2</sub> Sensor<sup>1</sup>
- Dual Thermistor Remote Zone Sensor
- Economizer: Low Leak
- High Altitude Kit
- High Static Drive
- Humidity Sensor/Humidistat
- LP Conversion Kit
- Manual Outside Air Damper
- Motorized Outside Air Dampers
- Powered Exhaust
- Quick Adapt Curbs
- Quick Start Kit
- Remote Potentiometer
- Roof Curb
- Thermostat
- Ventilation Override Accessory
- Wireless Zone Sensor
- Zone Sensor

## Other Benefits

- Cabinet design ensures water integrity
- Ease of Service, Installation and Maintenance
- Mixed model build enables “fastest in the industry” ship cycle times
- Outstanding Airflow Distribution
- ReliaTel™ Controls
- Unmatched Product Support is one of our finest assets. Trane Sales Representatives are a Support Group that can assist you with:
  - Product
  - Application
  - Service
  - Training
  - Special Applications
  - Specifications
  - Computer Programs and much more

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<sup>1</sup> CO<sub>2</sub> sensor always field installed; associated with demand control ventilation

## Standard Features

### Anti-Short Cycle Timer (Standard with ReliaTel)

Provides a 3 minute minimum "ON" time and 3 minute "OFF" time for compressors to enhance compressor reliability by assuring proper oil return.

### Direct Drive Motors

For additional static requirements, single-phase units offer multi-speed, direct drive motors. All 10 ton units and 7½-8½ high efficiency units offer variable speed direct drive motors.

### Colored And Numbered Wiring

Save time and money tracing wires and diagnosing the unit.

### Compressors



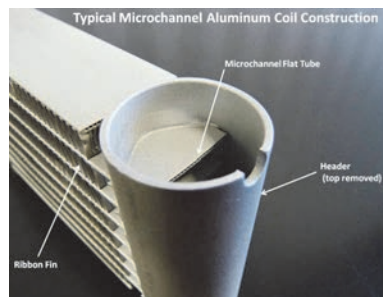
Precedent contains the best compressor technology available to achieve the highest possible performance. Dual compressors are outstanding for humidity control, light load cooling conditions and system back-up applications. Dual compressors are available on 7½ to 10 ton models and allow for efficient cooling utilizing 3-stages of compressor operation (high efficiency models only).

### Condenser Coil



Precedent™ boasts a patent-pending 1+1+1 condenser coil, permanently gapped for easy cleaning.

### Microchannel Condenser Coils



Due to flat streamlined tubes with small ports, and metallurgical tube-to-fin bond, microchannel coil has better heat transfer performance. Microchannel condenser coil can reduce system refrigerant charge by up to 50% because of smaller internal volume, which leads to better compressor reliability. Compact all-aluminum microchannel coils also help to reduce the unit weight. These all aluminum coils are recyclable. Galvanic corrosion is also minimized due to all aluminum construction. Strong aluminum brazed structure provides better fin protection. In addition, flat streamlined tubes also make microchannel coils more dust resistant and easier to clean.

### Controls – ReliaTel™ or Electromechanical

ReliaTel microprocessor controls provide unit control for heating, cooling and ventilating utilizing input from sensors that measure indoor and outdoor temperature and other zone sensors. ReliaTel also provides outputs for building automation systems and expanded diagnostics. For a complete list of ReliaTel offerings, refer to the "Other Benefits" section within the Features and Benefits section of this catalog.

For the simpler job that does not require a building automation system, or expanded diagnostics capabilities, Precedent offers electromechanical controls. This 24-volt control includes the control transformer and contactor pressure lugs for power wiring.

## Features and Benefits

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### Convertible Units



The units ship in a downflow configuration. They can be easily converted to horizontal by simply moving two panels.

Units come complete with horizontal duct flanges so the contractor doesn't have to field fabricate them. These duct flanges are a time and cost saver.

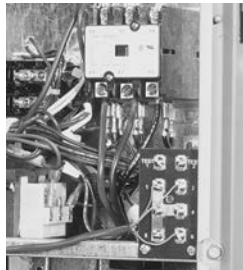
### Cooling

Standard or High Efficiency cooling available.

### Crankcase Heaters<sup>1</sup>

These band heaters provide improved compressor reliability by warming the oil to prevent migration during off-cycles or low ambient conditions.

### Easy Access Low Voltage Terminal Board



Precedent's Low Voltage Terminal Board is external to the electrical control cabinet. It is extremely easy to locate and attach the thermostat wire and test operation of all unit functions. This is another cost and time saving installation feature.

### Foil Faced Insulation



All panels in the evaporator section of the unit have cleanable foil-faced insulation. All edges are either captured or sealed to ensure no insulation fibers get into the airstream.

### Heat Exchanger

The compact cabinet features a progressive tubular heat exchanger in low, medium and high heat capacities.

The heat exchanger is fabricated using stainless steel burners and corrosion-resistant aluminized steel tubes as standard on all models. It has an induced draft blower to pull the gas mixture through the burner tubes. The heater has a direct spark ignition system which doubles as a safety device to prove the flame.

Gas/Electric Precedent models exceed all California seasonal efficiency requirements. They also perform better than required to meet the California NOx emission requirements.

### High Pressure Control

All units include High Pressure Control as standard.

### IAQ Dual Sloped, Plastic, Removable, Reversible Drain Pans



Every Precedent unit has a plastic, removable, dual-sloped drain pan that's easy to clean and reversible to allow installation of drain trap on either side of the unit.

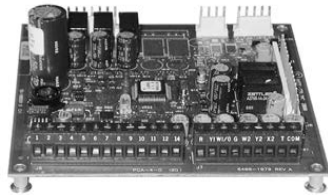
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<sup>1</sup> Crankcase heaters are optional on (T,Y)SC (036, 048, 060, 072, 090, 102, 120); standard on (T,Y)HC (036, 048, 060, 072, 092, 102, 120)

### Low Ambient Cooling

All Precedent microprocessor units have cooling capabilities down to 0°F as standard. Electromechanical models have cooling capabilities to 40°F as built, or to 0°F by adding the optional low ambient control (Frostat™).

### Low Voltage Connections



The wiring of the low voltage connections to the unit and the zone sensors is as simple as 1-1, 2-2, and 3-3. This simplified system makes it easy for the installer to wire.

### Phase Monitoring Protection

Precedent™ units with 3-phase power are equipped with phase monitoring protection as standard. These devices protect motors and compressors against problems caused by phase loss, phase imbalance and phase reversal indication.

### Plenum Fan<sup>1</sup>

The following units are equipped with a direct drive plenum fan design (all 10 ton units and 7½-8½ ton high efficiency units). Plenum fan design includes a backward-curved fan wheel along with an external rotor direct drive variable speed indoor motor. All plenum fan designs have a variable speed adjustment potentiometer located in the control box.

### Quick-Access Panels

Remove two screws for access to the standardized internal components and wiring.

### Single Point Power

A single electrical connection powers the unit.

### Single Side Service

Single side service is standard on all units.

### Standardized Components

Components are placed in the same location on all Precedent units.

Due to standardized components throughout the Precedent line, contractors/owners can stock fewer parts.

### Thermal Expansion Valve

This feature is standard on all units.

### Through-the-Base Condensate

Every unit includes provisions for through-the-base condensate drain connections. This allows the drain to be connected through the roof curb instead of a roof penetration.

<sup>1</sup> Standard on: (T,Y)SC120F, (T,Y)HC092, 102F, (T/Y)HC120F