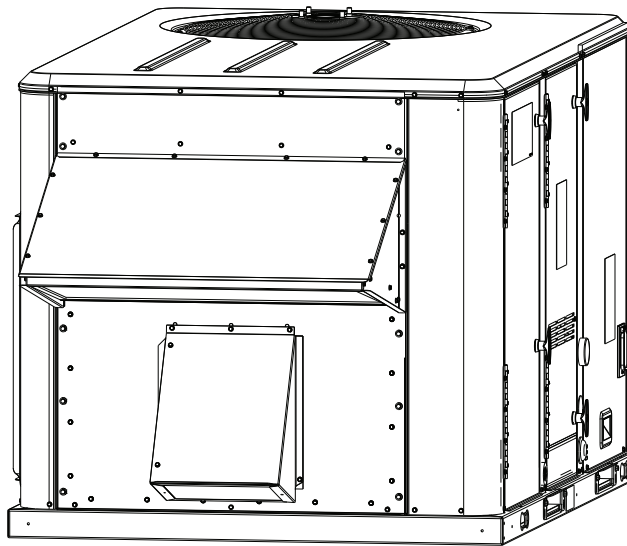


Installation Instructions

Precedent™ Packaged Rooftop Units Low Leak Economizer ReliaTel™ - Vertical Installation Only



Model Number:	Used With:
BAYECON705*	Precedent™ B/F cabinet with ReliaTel™ controls - WSC060EDR, T/YHC036E*R, T/YHC037E*R, WSC036-048H*R, T/YZC036E*R, T/YSC036-060G*R, D/WHC036H*R
BAYECON704*	Precedent™ C/D/E cabinet with ReliaTel™ controls - T/YHC047-067E*R, T/YHC072-102F*R, T/YHC120E*R, WSC060H*R, T/YSC(072-120)F/H*R, WSC072-120**R, T/YHC048-060F*R, D/WHC048-120H*R, T/YZC048-120**R

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

Introduction

Read this manual thoroughly before operating or servicing this unit.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

- ⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
- NOTICE** Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in **NEC** and your local/state/national electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

⚠ WARNING

Follow EHS Policies!

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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Revision History

Updated Gear side of the economizer and Smoke detector figure in Powered Exhaust and Smoke detector topic in Field Installed Assembly and Installation chapter.

General Information

Model Number Description

All products are identified by a multiple-character model number that precisely identifies a particular type of unit. Its use will enable the owner/operator, installing contractors, and service engineers to define the operation, specific components, and other options for any specific unit. When ordering replacement parts or requesting service, be sure to refer to the specific model number and serial number.

Table 1. Parts list

Qty	Description	Qty	Description
1	Low Leak Economizer	1	Mixed Air Sensor
1	Barometric Relief Mist Filter	1	Top Filler Panel ^(a)
1	Top Hood Mist Filter	1	Bag Parts
1	Two Piece Hood	16	Self-Drilling Screws (33Std. and 14 TEK)
2	Hood Triangles	2	Smoke Detector Grommets
1	Hood Base	26	Feet Gasketing
1	Barometric Relief Hood	1	Powered Exhaust Gasket
1	Barometric Relief Triangle	1	Smoke Detector Bracket
1	FA Hood Front Support	2	FA Hood Mist Eliminator Side Retainer
1	FA Hood Mist Eliminator Rear Blockoff		

(a) Model number digit 30 = D, E or F

Field Installed Assembly and Installation

This section covers installation of economizer units that were not installed in the rooftop unit at the factory. Specifically, the following model numbers are included: BAYECON704* and BAYECON705*.

Mechanical Assembly

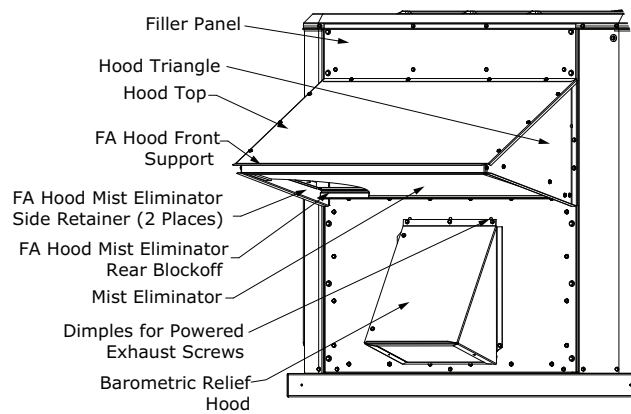
⚠ WARNING

Hazardous Voltage!

Failure to disconnect power before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Verify that no power is present with a voltmeter.

Remove the existing economizer hood end panel (provided) from the RTU and discard (see [Figure 1](#)).

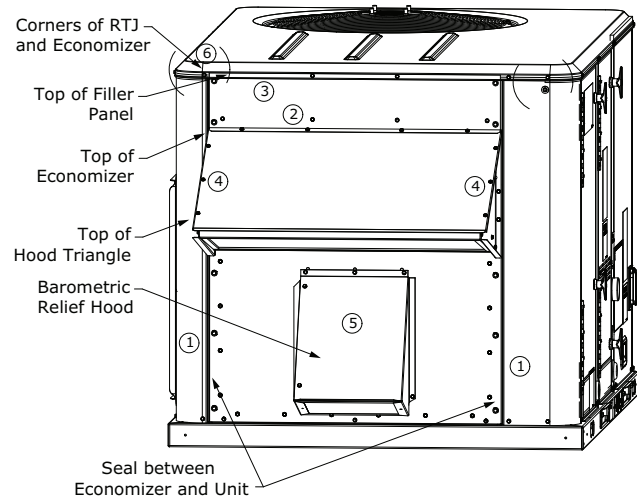
Figure 1. Economizer



Apply 1-inch gasket material to disassembled unit as described below. See [Figure 2](#).

1. On RTU unit (seal between economizer and unit).
2. Top of economizer (seal between economizer and top of unit); or between economizer and top filler panel.
3. Between top of filler panel and unit; if filler panel is required.
4. Top of hood triangle (seal between hood and hood flange).
5. Around barometric relief hood (seal between barometric relief hood and unit).
6. Apply 1-inch gasket in corners to seal area between RTU unit and economizer.

Figure 2. Gasket material position



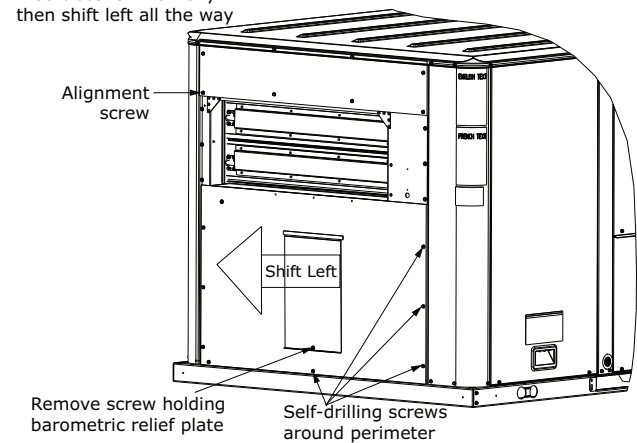
7. Remove the hood top from the non-linkage side of the economizer and set aside for [Step 11](#).
8. Install economizer fully into RTU, shift left, and install single screw into alignment holes.

Note: Screw will be removed later.

9. Use self-drilling screws through remaining large holes around perimeter of economizer.
10. Remove alignment screw.

Figure 3. Pictorial layout of aforementioned steps

Insert economizer fully then shift left all the way

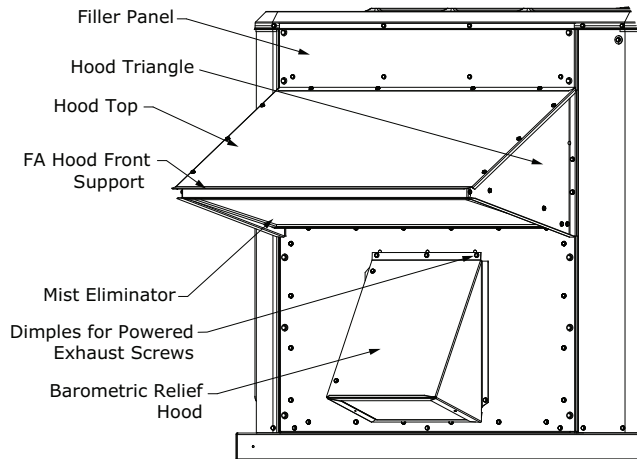


11. Assemble flange to hood top (removed in [Step 7](#)), then to hood triangles and attach to economizer. See [Figure 4](#).
12. Install mist eliminator into hood assembly and secure with filter clips provided on hood top.
13. Install filler panel above hood if necessary (only if T/YSC036-060G, T/YSC092-120, T/YHC072-102, T/YZC072-120, D/W*C036-048H, T/YHC120 or D/W*C090-120).
14. Remove shipping screw from aluminum relief blade.

Field Installed Assembly and Installation

- If a powered exhaust is to be installed go to "[Powered Exhaust](#)," p. 6.
- Assemble and install barometric relief hood.

Figure 4. Barometric relief hood

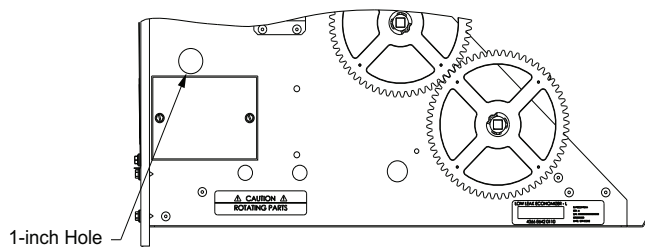


Powered Exhaust

- Remove aluminum barometric relief blade and discard.
- Open 1-inch hole near the gear side of the economizer and install 1-inch grommet.

Note: Grommet in economizer parts bag.

Figure 5. Gear side of the economizer



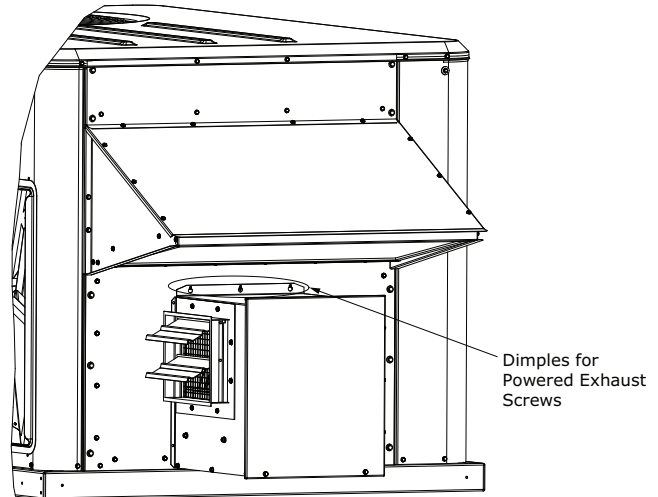
- Partially insert self-drilling screws in three dimples above opening and just below top hood. See [Figure 6](#).

Note: Do not re-use barometric relief damper holes.

- Install gasketing around perimeter of powered exhaust assembly.
- Route the powered exhaust wire harness through the 1-inch hole near the gear side of the economizer.
- Hang powered exhaust on three partially inserted screws and remove the slack in wire harness.
- Attach powered exhaust with self-drilling screws. See [Figure 6](#).
- Verify wire harness is clear of gears, doors, and any sharp edges of metal.

- Hook up electrical as described in *Power Exhaust Kit - Standard and Low Leak Economizers 6 to 10 Tons Installation Instructions (ACC-SVN57*-EN)*.

Figure 6. Powered exhaust



Smoke Detector

- If smoke detector is installed, remove copper pipe and flexible tubing from above return air opening and all brackets associated with it.
- Open hole to the right of the RTEM board and install smoke detector in it; and in bracket on inside of economizer.

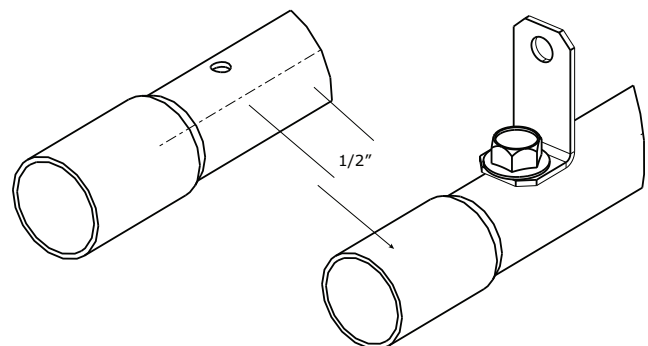
Note: Grommets are in economizer parts bag.

- Attach retaining bracket to pipe. See [Figure 7](#). Large economizer will need to have a 1/8-inch hole drilled in pipe on opposite side of existing breathing holes.

Notes:

- Retaining bracket in economizer parts bag.
- In [Figure 7](#), intake holes must be down for unit to work.

Figure 7. Tubing

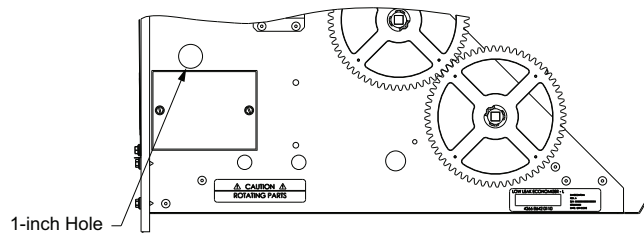


- Insert smoke detector pipe into hole of economizer (next to RTEM board) and into back bracket inside economizer.
- Using a self-drilling screw, attach retaining bracket to economizer. See [Figure 8](#).

- Shorten flexible tubing and connect from the copper tubing to the smoke detector unit.

Important: Verify holes in copper tube are facing down. Unit will not sense smoke if holes are not facing down.

Figure 8. Smoke detector



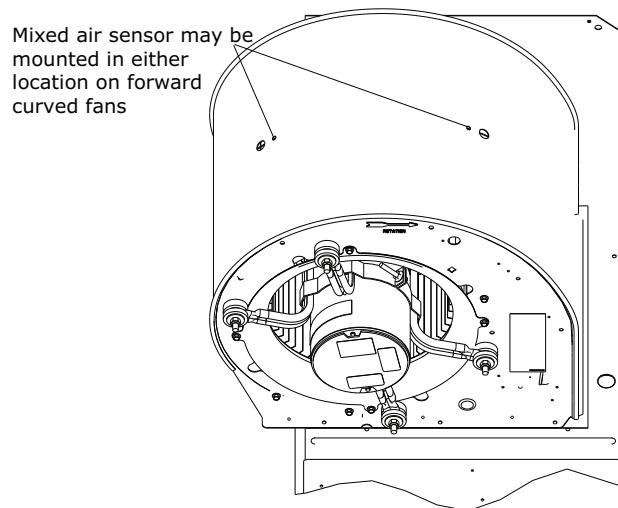
Install Mixed Air Sensor

⚠ WARNING

Hazardous Voltage!

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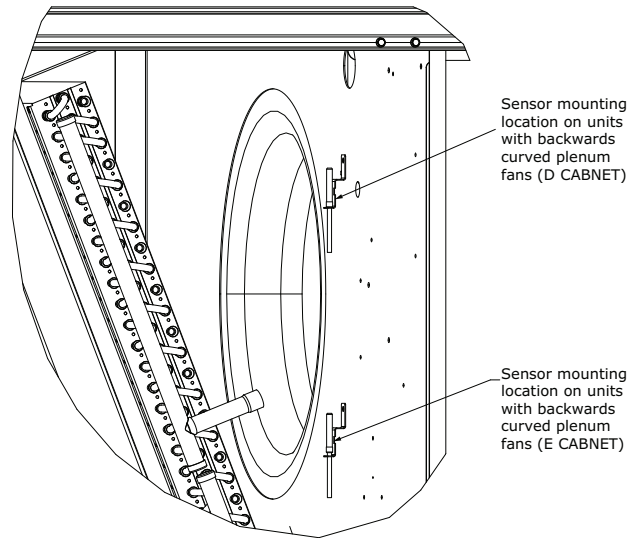
Figure 9. Forward curved fan



Mixed Air Sensor Wiring

The black wires from the mixed air sensor plug into the ReliaTel™ harness. The black wires are interchangeable INTO BLUE WIRE_W28; PURPLE WIRE_146.

Figure 10. Plenum fan



Economizer Wiring

Two plugs from the rooftop unit are installed into the RTEM board.

- 2 pin (PURPLE_146-BLUE_147) plugged into MAT
- 4 pin (RED_136-BLUE_135-BLACK_133-PURPLE_134) is plugged into COMMUNICATION

Notes:

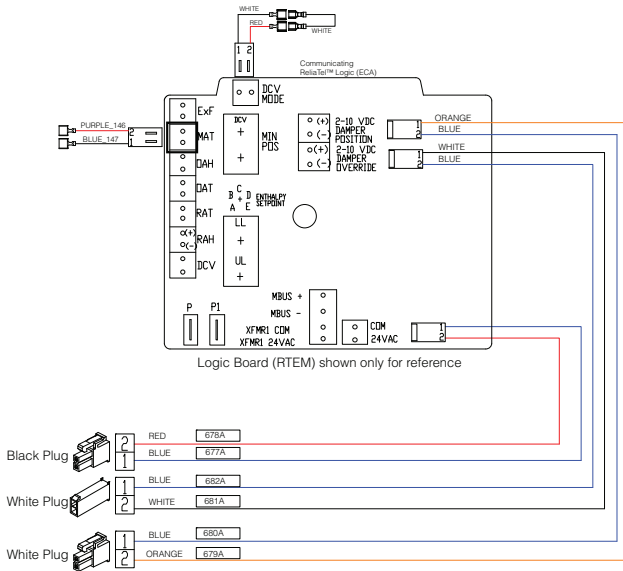
- See [Figure 11](#).
- If options module (RTOM) is not installed, then connect plug 3P4 to 3J4 on the refrigeration module (RTRM) in the control box.

Minimum Position Setting for One Speed Indoor Fan

- Apply power to the unit.
- Place the zone sensor fan selector in the fan **ON** position and the heat/cool selector in the **OFF** position to place the damper in the minimum ventilation position.
- Turn the Min Pos potentiometer (on the rooftop economizer module [RTEM]) clockwise to open or counterclockwise to close. The damper will open to this setting each time the blower circuit is energized. When adjusting minimum position, the damper may move to the new setting in several small steps.

Field Installed Assembly and Installation

Figure 11. RTEM board



Notes:

- Wires from RTU go to plugs: MAT and communication.
 - Harness shown is 6-inch pigtail connecting actuator harness to RTEM board.
4. Wait at least 30 seconds for the damper to settle at the new position.
 5. Replace the filter access panel. The damper will close when the blower circuit is de-energized.

Minimum Position Setting

1. Apply power to the unit
2. Using the Service Test Guide on unit access panel, momentarily jump across the Test 1 and Test 2 terminals on LTB1 one time to start indoor fan.
3. Turn the MIN POS - DCV potentiometer on the RTEM clockwise to open or counter-clockwise to close. The damper will open to this setting for low speed fan operation. When adjusting minimum position, the damper may move to the new setting in several small steps. Wait at least 30 seconds for the damper to settle at the new position. Range of damper for this setting is 0 to 100%.
4. Momentarily jump across the Test 1 and Test 2 terminals on LTB1, to cycle through test modes to Cool 1.
5. Turn the DCV SETPOINT - LL potentiometer on the RTEM clockwise to open or counter-clockwise to close. This will set the minimum damper position at an intermediate point of fan operation. Range of damper for this setting is 0 to 100%.
6. Momentarily jump across the Test 1 and Test 2 terminals on LTB1, to cycle through test modes to Cool 2.

7. Turn the MIN POS - DESIGN potentiometer on the RTEM clockwise to open or counter-clockwise to close. This will set the minimum damper position at maximum fan speed. Range of damper for this setting is 0 to 50%.
8. The economizer minimum damper position for all fan speeds is complete. The RTEM will control minimum damper position along an imaginary line between the 3 damper minimum positions based on fan speed.

Note: The RTEM will limit intermediate minimum damper position to ensure proper ventilation based upon the low fan speed minimum damper position set in [Step 3](#).
9. Replace the filter access panel. The damper will close when the blower circuit is de-energized.

Dry Bulb Settings

Standard economizer dry bulb changeover is field selectable to four outdoor temperatures. See the following table for potentiometer settings. The selection is made on the RTEM.

Table 2. Potentiometer settings

Potentiometer Setting	Dry Bulb
A	73°F (22.8°C)
B	70°F (21.1°C)
C	67°F ^(a) (19.4°C)
D	63°F (17.2°C)
E	55°F (12.8°C)

(a) Factory setting

Control Option	Enable Conditions	Optional Sensors Required
Dry Bulb (standard)	See Table 2	Mixed Air Sensor

Notes

Trane and American Standard create comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or americanstandardair.com.

Trane and American Standard have a policy of continuous product and product data improvement and reserve the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.