

Installation Instructions

Low Leak Economizer - Horizontal Voyager™ Light Commercial

12.5 - 25 Tons

Model Number:

BAYECON701*

BAYECON703*

Used With

T/YSH150

T/YSH180-300, T/YHH150-300, T/
YZH150-210

 **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-including industry replacements for CFCs and HCFCs such as saturated or unsaturated HFCs and HCFCs.

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 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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Inspection

1. Unpack all components of the kit.
2. Check carefully for any shipping damage. If any damage is found it must be reported immediately and a claim made against the transportation company.
3. Visually inspect the components for shipping damage as soon as possible after delivery, before it is stored. Concealed damage must be reported within 15 days.
4. If concealed damage is discovered, stop unpacking the shipment.
5. Do not remove damaged material from the receiving location. Take photos of the damage, if possible. The owner must provide reasonable evidence that the damage did not occur after delivery.
6. Notify the carrier's terminal of damage immediately by phone and by mail. Request an immediate joint inspection of the damage by the carrier and the consignee.
7. Do not attempt to repair any damaged parts until the parts are inspected by the carrier's representative.

Parts List

As the economizer is unpacked, locate the following parts:

- 1 - Outdoor Air Damper Assembly
- 1 - Return Air Damper Assembly
- 1 - Left Hood Triangle
- 1 - Right Hood Triangle
- 1 - Filter Rack
- 1 - Filter End Support
- 1 - Filter
- 1 - Hardware Bag:
 - 50 ft - Gasket, 1/8 X 3/4 Ensolite
 - 1 - Sensor, Thermistor
 - 30 - Screws, #10 X 3/4 Seal Tek,
 - 30 - Screws, #10 X 3/4 Hex with Washer
 - 1 - Grommet, 0.25 ID, Fits 0.437 Dia. Hole
 - 1 - RTU Transformer Harness
 - 1 - Label Schematic
 - 1 - Installation Instructions Guide

Installation

⚠ WARNING

Hazardous Service Procedures!

The procedures recommended in this section of the manual could result in exposure to electrical, mechanical or other potential safety hazards. Always refer to the safety warnings provided throughout this manual concerning these procedures. When possible, disconnect all electrical power including remote disconnect and discharge all energy storing devices such as capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. When necessary to work with live electrical components, have a qualified licensed electrician or other individual who has been trained in handling live electrical components perform these tasks. Failure to follow instructions could result in death or serious injury.

NOTICE

Economizer Damage!

The economizer cardboard container does not include lift openings and is not designed to support the weight of the economizer. The cardboard container must remain with the shipping pallet until it is time to remove the contents for installation. Failure to follow instructions could result in economizer damage.

Important:

- Due to the weight and size of all components involved, it is recommended that two or more qualified field technicians perform all assembly tasks.
- Make sure dampers are open opposite of each other - one full open, the other full closed - before installation.

1.

- T/YHH180-300 and T/YZH150-210 units (refer to [Figure 1, p. 4](#)):
 - Remove and discard panel above return air opening.
 - Remove end panel and retain.
 - Remove first adjacent screw below the bottom duct flange on the right side of the opening at the corner post.
- T/YSH150-300 and T/YHH150 units (refer to [Figure 2, p. 4](#)):
 - Remove first screw above the left hand side corner of the return air opening.
 - Remove the two screws above the right hand side corner of the return air opening.
 - Remove end panel and retain.
 - Remove first adjacent screw below the bottom duct flange on the right side of the opening at the corner post.

Figure 1. Remove panels and screws (T/YHH180-300 and T/YZH150-210 units)

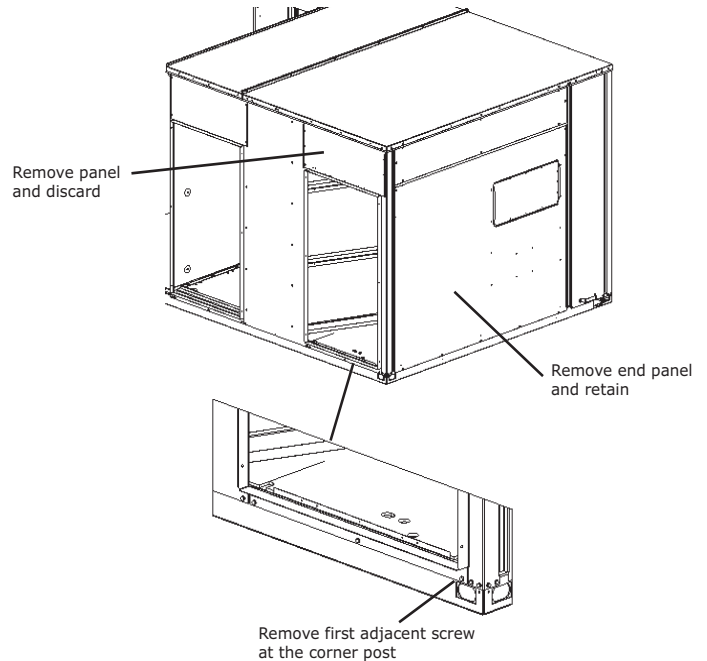
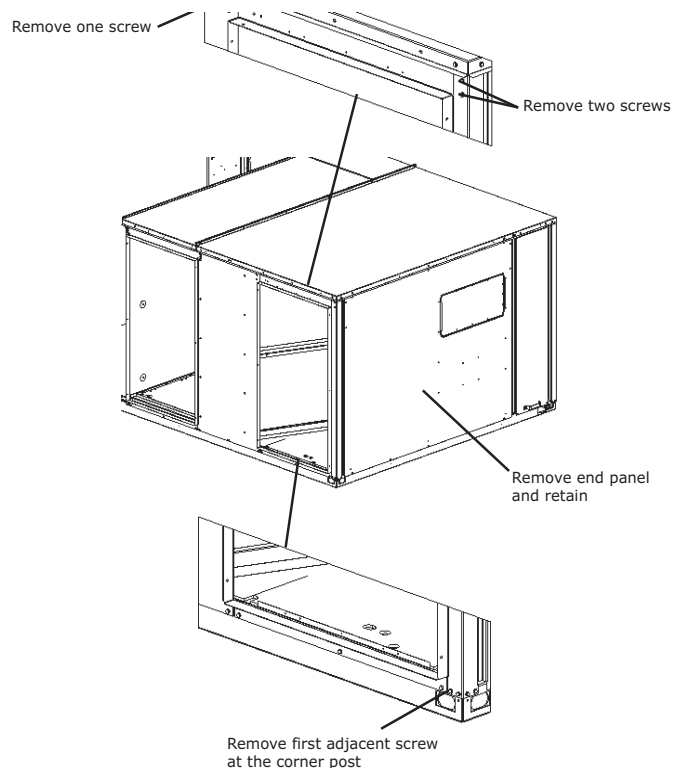


Figure 2. Remove panels and screws (T/YSH150-300 and T/YHH150 units)

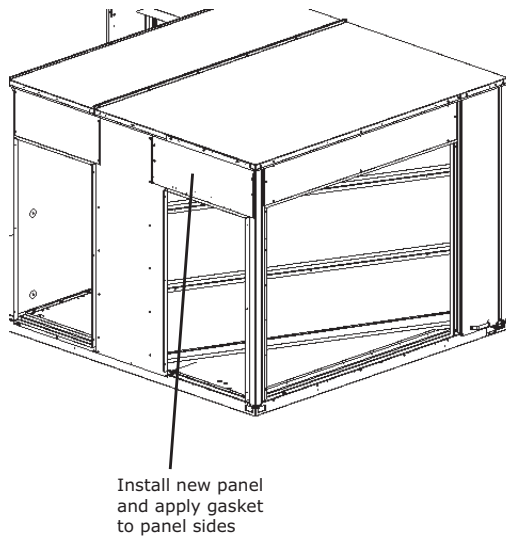


2. T/YHH180-300 and T/YZH150-210 units only (refer to [Figure 3, p. 5](#)):
 - a. Install new panel above return air opening.
 - b. Apply gasket to panel sides.

Note: Although the installation kit for T/YSH180-300 and T/YHH150 units comes with a new panel, it is not needed and can be discarded.

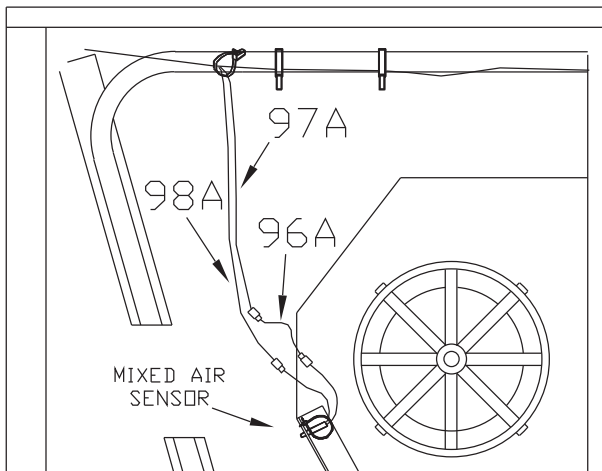
Note: Use sheet metal screws where mating holes are provided, otherwise use tek screws.

Figure 3. Install new panel



3. Install the rubber grommet, provided with the sensor, into the hole on the fan assembly channel, as illustrated in [Figure 4, p. 5](#).
4. Insert the Mixed Air Temperature sensor through the grommet, approximately one half (1/2) inch, with the end pointing toward the coil. See [Figure 4, p. 5](#).

Figure 4. Install MAT sensor

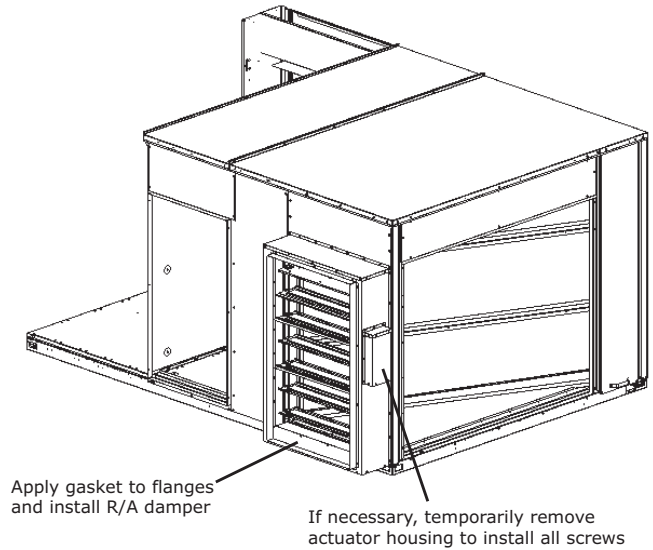


5. Apply gasket on return air opening flanges, and install return air damper. See [Figure 5, p. 5](#).

Note: The actuator housing may need to be removed temporarily in order to install all the screws for the R/A damper.

Note: Use sheet metal screws where mating holes are provided, otherwise use tek screws.

Figure 5. Install R/A damper



6. Set outside air damper in unit. Do not screw in place at this time. See [Figure 6, p. 6](#).
 - a. Route RTU wire harness and connect to RTEM module. Seal bushing with caulk.

NOTICE

Module Damage!

Failure to seal the bushing with caulk will allow in water penetration to the RTEM which will result in module failure.

- b. Connect wire harness on top of O/A damper to R/A damper actuator.

Installation

Figure 6. Set O/A damper in unit and connect wire harnesses

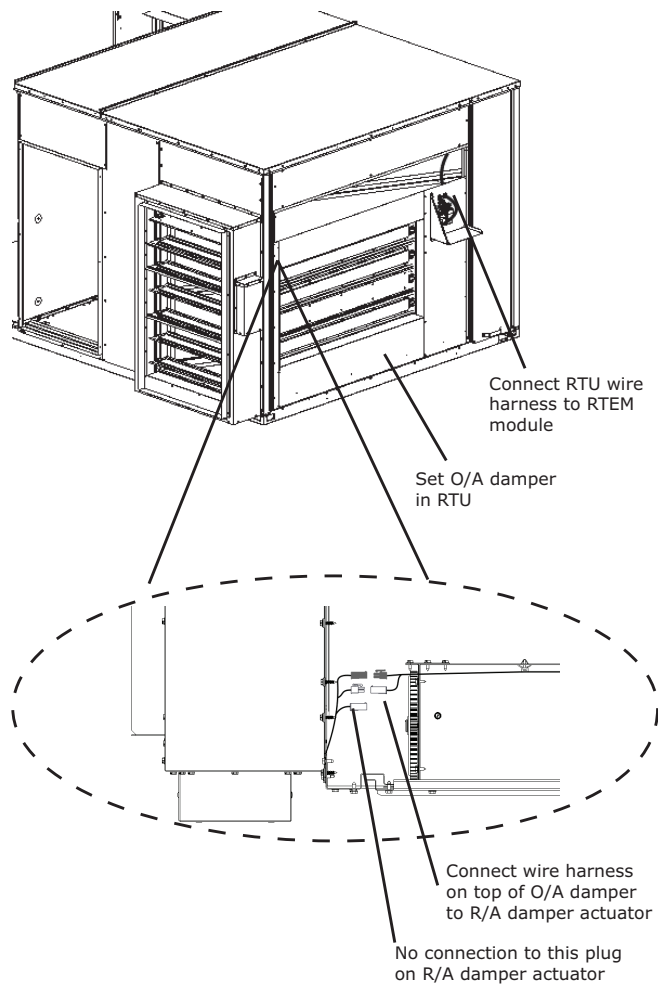
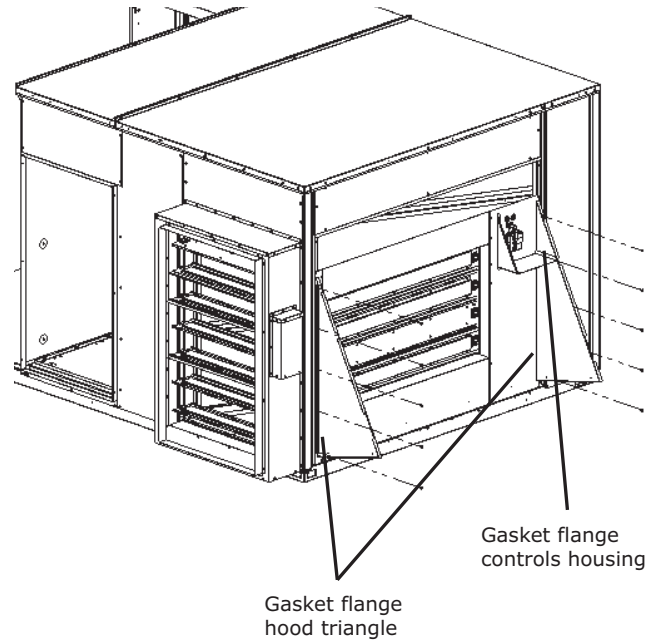


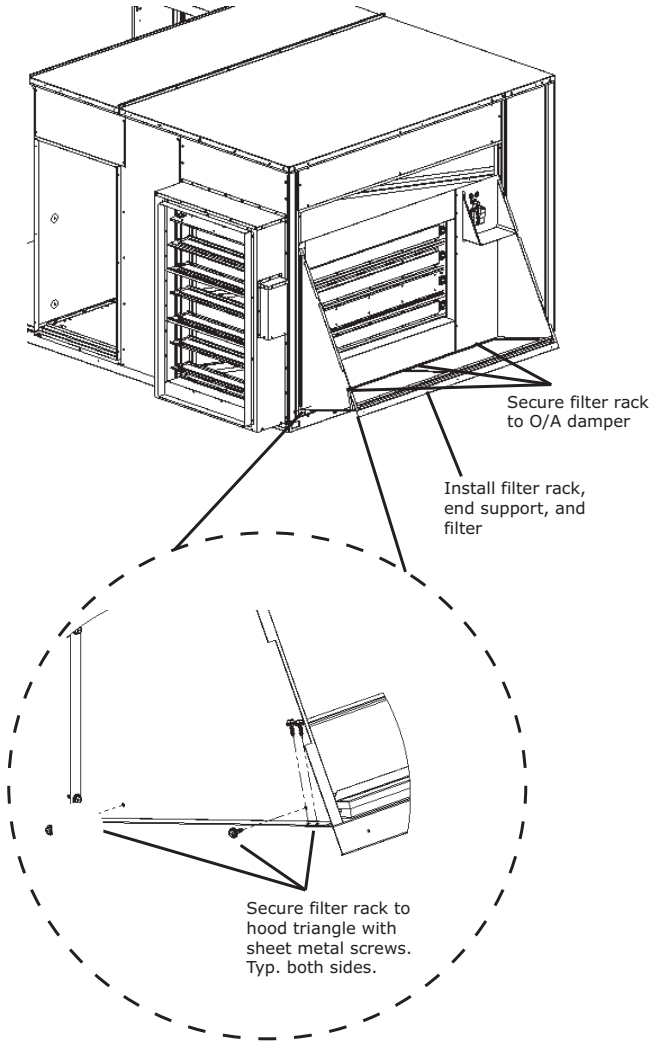
Figure 7. Install gaskets and hood triangles



7. Apply gaskets to O/A damper flanges and control housing. See [Figure 7, p. 6](#).
8. Secure left and right hood triangles to O/A damper and RTU corner posts using 5 sheet metal screws for each triangle. See [Figure 7, p. 6](#).

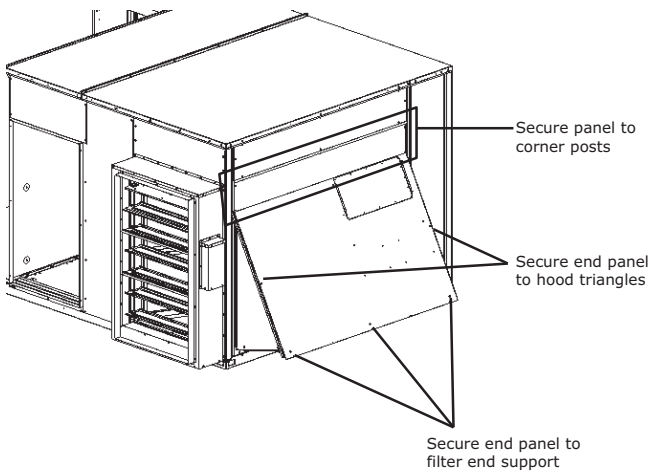
9. Secure filter rack to O/A damper using sheet metal screws. See [Figure 8, p. 7](#).
10. Secure end supports to hood triangles using sheet metal screws. See [Figure 8, p. 7](#).
11. Install filters on filter rack. See [Figure 8, p. 7](#).

Figure 8. Install filter rack, end supports, and filters



12. Secure end panel to hood triangles and filter end support. See [Figure 9, p. 7](#).

Figure 9. Install unit end panel



Wiring Connections

⚠ WARNING

Hazardous Voltage w/Capacitors!

Disconnect all electric power, including remote disconnects and discharge all motor start/run capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. Verify with an appropriate voltmeter that all capacitors have discharged. Failure to disconnect power and discharge capacitors before servicing could result in death or serious injury.

1. Locate wiring harness 4385-7769-0100 in the main unit control box and replace it with supplied harness 4385-7699-0200. 4385-7769-0100 is connected to J2 of the RTOM and PPM50 located on the far left hand side of the low voltage section.
2. Connect the single wire W155 of 4385-7769-0200 to 24VAC on TNS3 transformer located in the high voltage section of the control box.

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