MicroMetl

Installation Instructions
ECD-TC****-NOCTRL STYLE UNITS

CONTENTS

IMPORTANT: Read these instructions completely before attempting to install the Vertical economizer Accessory.

Table 1 - Package Contents

PACKAGE NO.	QTY	CONTENTS
ECD-TC0407-NOCTRL **ECD-TC0814-NOCTRL**	1 1 1 18 1 1	Hood Top and Sides Hood Divider Aluminum Filter Screws Damper Assembly Supply Air Temperature Sensor
ECD-TC16-NOCTRL	1 1 1 2 1 1 1	Hood Top and Sides Hood Divider Hood Filter Divider Aluminum Filters Hardware Bag Damper Assembly Supply Air Temp Sensor

Table 2 - Package Usage

UNIT SIZE	PART NUMBER
Chassis 1-2, 74" x 47"	ECD-TC0407-NOCTRL
Chassis 3-5, 88" x 59"	ECD-TC0814-NOCTRL
Chassis 6-7, 116" x 63"	ECD-TC16-NOCTRL

SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform the basic maintenance functions of replacing filters. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags, and labels attached to the unit, and other safety precautions that may apply. Follow all safety codes. Wear safety glasses and work gloves.

Recognize safety information. This is the safety-alert symbol ⚠ . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies a hazard which could result in personal injury or death. CAUTION is used to identify unsafe practices which may result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

⚠ WARNING

ELECTRICAL SHOCK HAZARD
Failure to follow this warning could cause personal injury and/or death.

Disconnect power supply and install lockout tag before attempting to install the accessory.

GENERAL

The economizer system utilizes the latest technology available for integrating the use of free cooling with mechanical cooling for rooftop units.

This system utilizes gear-drive technology with a direct mount spring return actuator that will close upon loss of power. The economizer system comes standard with an outdoor air temperature sensor. Field-installed CO_2 sensors are available.

Standard barometric relief dampers provide natural building pressurization control. An optional power exhaust system is available for applications requiring even greater exhaust capabilities.

economizer accessories require a 4 to 20 mA actuator signal control. These accessories do not includes the W7212 controller. The economizer actuator is operated by a 4 to 20 mA signal from an existing field-supplied DDC controller. See Table 3 for sensor usage.

Table 3 - Sensor Usage

APPLICATION	OUTDOOR AIR TEMPERATURE SENSOR	RETURN AIR TEMPERATURE SENSOR	OUTDOOR AIR ENTHALPY SENSOR	RETURN AIR ENTHALPY SENSOR
Dry Bulb Temperature	Included HH79NZ039	—	—	—
Differential Dry Bulb Temperature	Included HH79NZ039	Required — 33ZCT55SPT	—	—
Single Enthalpy	Included Not Used	—	Required — HH57AC077	—
Differential Enthalpy	Included Not Used	—	Required — HH57AC077	Required — HH57AC078

NOTES:
1. CO_2 Sensors (Optional)
 . . 33ZCSENCO2 - Room sensor (adjustable). Aspirator box is required for duct mounting of the sensor.
 . . 33ZCASPCO2 - Aspirator box used for duct-mounted CO_2 room sensor.
 . . 33ZCT55CO2 - Space temperature and CO_2 room with override.
 . . 33ZCT56CO2 - Space temperature and CO_2 room sensor with override and setpoint.
2. All unit include the following standard Sensors:
 . . Outdoor-Air Sensor - HH79NZ039
 . . Mixed-Air Sensor

ACCESSORIES LIST

The EconoMi$er2 has several field-installed accessories available to optimize performance. Refer to Table 4 for authorized parts and power exhaust descriptions

Table 4 - EconoMi$er2 Field-Installed Accessories

DESCRIPTION	PART NUMBER
Chassis 1-2 Power Exhaust 208-230 v 1 Ph	PWECH-TC0407-208
Chassis 1-2 Power Exhaust 460 v 3Ph	PWECH-TC0407-460
Chassis 3-5 Power Exhaust 208-230 v 1 Ph	PWECH-TC0814-208
Chassis 3-5 Power Exhaust 460 v 3 Ph	PWECH-TC0814-460
Chasis 6-7 Power Exhaust 208-230 v 1 Ph	PWECH-TC16-208
Chassis 6-7Power Exhaust 460 v 3 Ph	PWECH-TC16-460

INSTALLATION

1. Turn off unit power supply(s) and install lockout tag.

> ### ⚠ WARNING
> **ELECTRICAL SHOCK HAZARD**
> Failure to follow this warning could result in personal injury and/or death.
> Disconnect power supply and install lockout tag before attempting to install accessory.

2. Remove the existing unit filter access panel. Raise the panel and swing the bottom outward. The panel is now disengaged from the track and can be removed. (See Fig. 2.)

3. Remove the indoor coil access panel and discard. (See Fig. 2.)

4. The box with the economizer hood components is shipped with the economizer. Remove hood from packaging. The hood top and sides are shipped factory assembled.

NOTE: If the power exhaust accessory is to be installed on the unit, the hood shipped with the economizer will not be used and may be discarded. Save the aluminum filter for use in the power exhaust hood assembly.

5. Insert the hood divider between the hood sides. (See Fig. 3) Secure hood divider with 2 screws (provided) on each hood side. Screws should go through the hood sides into the divider. The hood divider is also used as the bottom filter rack for the aluminum filter. On hood for extra large cabinet install filter divider. (See Fig. 4.)

6. Slide the damper assembly into the rooftop unit. (See Fig. 6). On small and large cabinets be sure to engage the rear economizer flange under the tabs in the return-air opening of the unit base. (See Fig. 7)

7. Secure the economizer to unit along side and bottom flanges using the screws provided. (See Fig. 6)

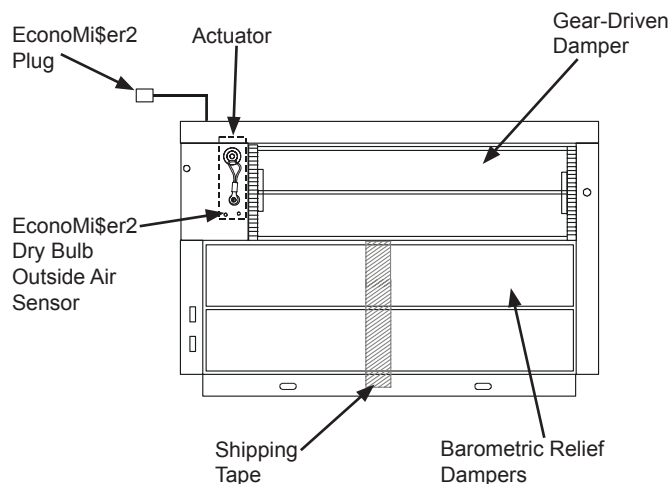8. Remove the tape securing the relief dampers in place.

Fig. 1 - EconoMi$er2 Component Locations —
(2 to 6 Ton Shown)

9. Remove and save the 12-pin jumper plug from the unit wiring harness (located in the upper left corner of the unit). Insert the EconoMi$er2 plug into the unit wiring harness. Refer to Fig. 8 for wiring diagram.

NOTE: The 12-pin jumper plug should be saved for future use, in the event that the economizer is removed from the unit. The jumper plug is not needed as long as the economizer is installed.

10. While everything is open install and wire any other accessories and/or sensors as applicable and convenient, per their installation instructions. Some accessories require that unit ducting already be installed.

NOTE: If also installing a power exhaust accessory, skip step 12 and follow the power exhaust instructions instead.

11. Install the economizer hood over the economizer. Use screws provided. (See Fig. 8.)

12. Check all wiring for safety then reapply power to the unit. Verify correct operation and setting of the accessory(s) per the Configuration and Operations sections of the instruction.

13. Replace the filter access panel. Slide top of panel into track and lift. Push bottom of panel into place.

14. Install the economizer hood filter(s) by opening the filter clips which are located underneath the hood top. Insert the aluminum filter(s) into the bottom filter rack (hood divider). Push the filter into position past the open filter clips. Close the filter clips to lock the filter into place. (See Fig. 5.)

15. To adjust economizer minimum position and other settings, refer to instructions provided with specific Economizer DDC Controller.
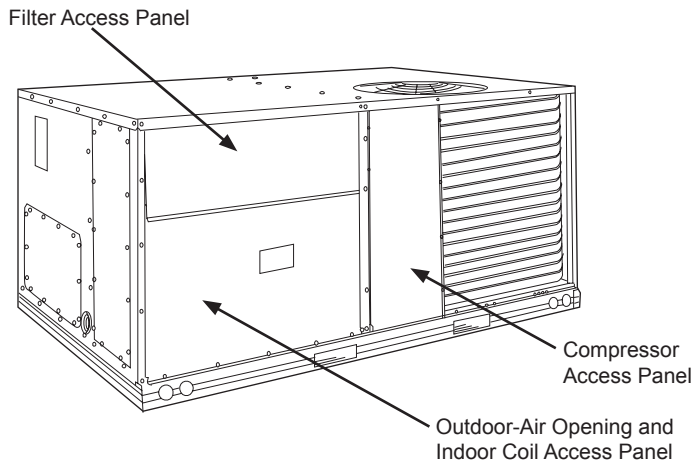
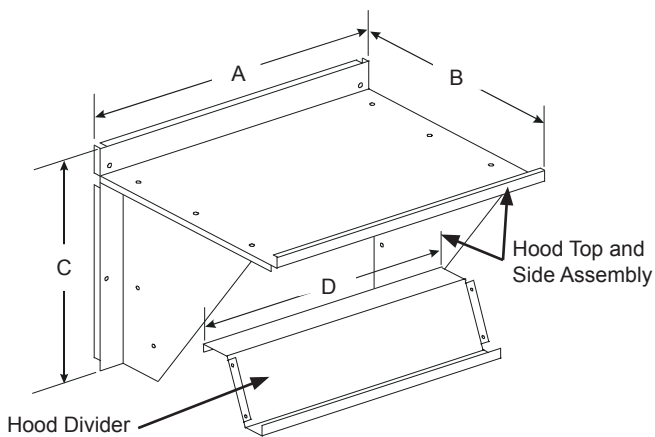**Fig. 2 - Typical Access Panel Locations**

Fig. 3 - Hood Assembly

ECONOMIZER P/N	A	B	C	D	SHIP WT.
ECD-TC0407-NOCTRL	33.37"	17.43"	19.05"	29.5"	55 lb
ECD-TC0814-NOCTRL	40.37"	22.28"	24.48"	36.27"	80lb
ECD-TC16-NOCTRL	52.92"	27.03"	33.41"	49.92"	98lb

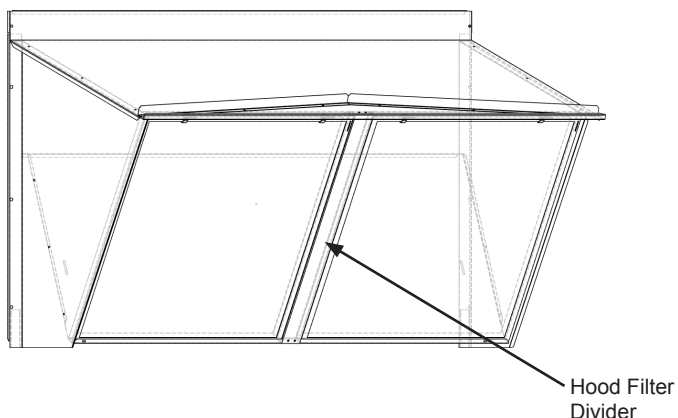**NOTE:** The ECD-TC16-NOCTRL hood has 2 aluminum filters and a hood filter divider that installs between the filters.
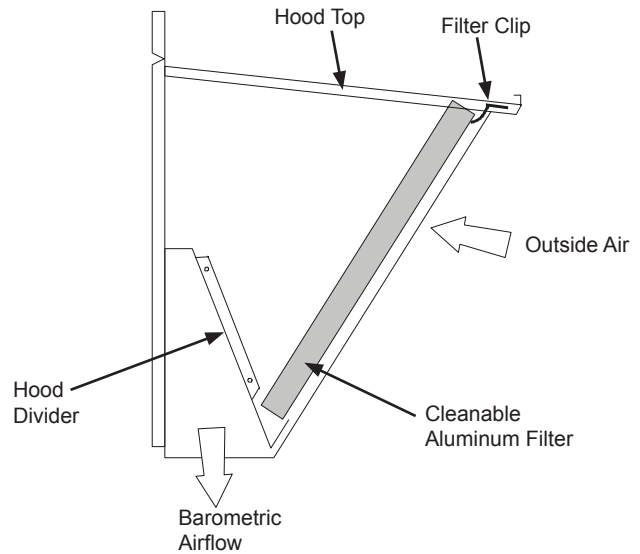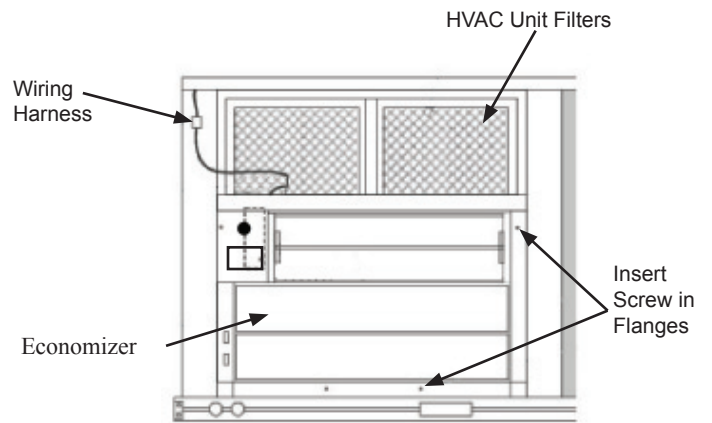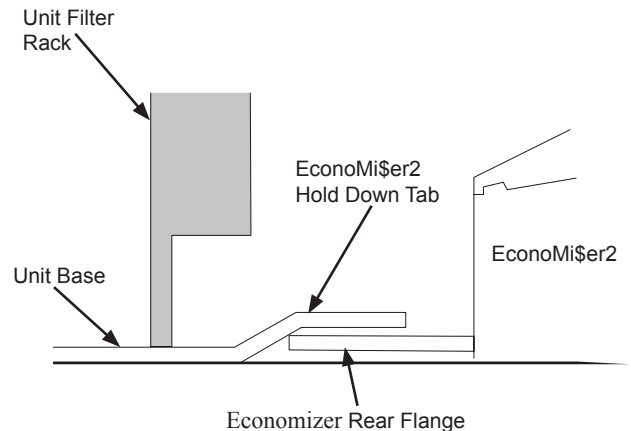

Fig. 4 - Hood for Extra Large Cabinet

Fig. 5 - Filter Installation

Fig. 6 - EconoMi$er2 Installed in HVAC Unit (3 to 6 Ton Shown)

Fig. 7 - Rear Economizer Flange Installation (Small and Large Cabinet)
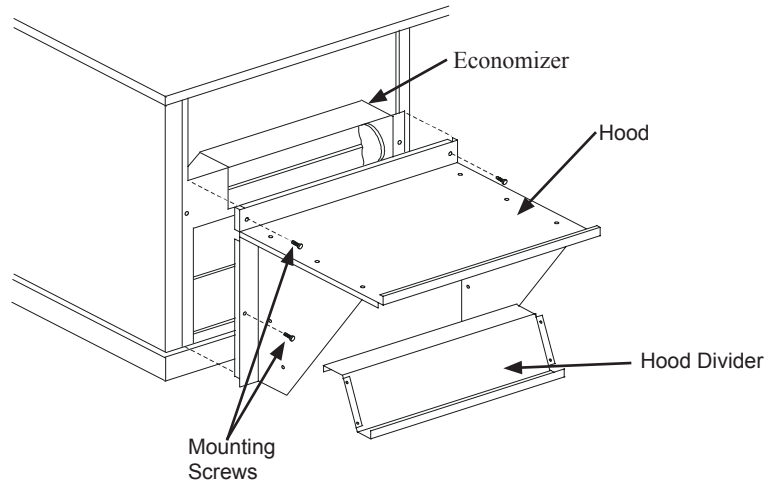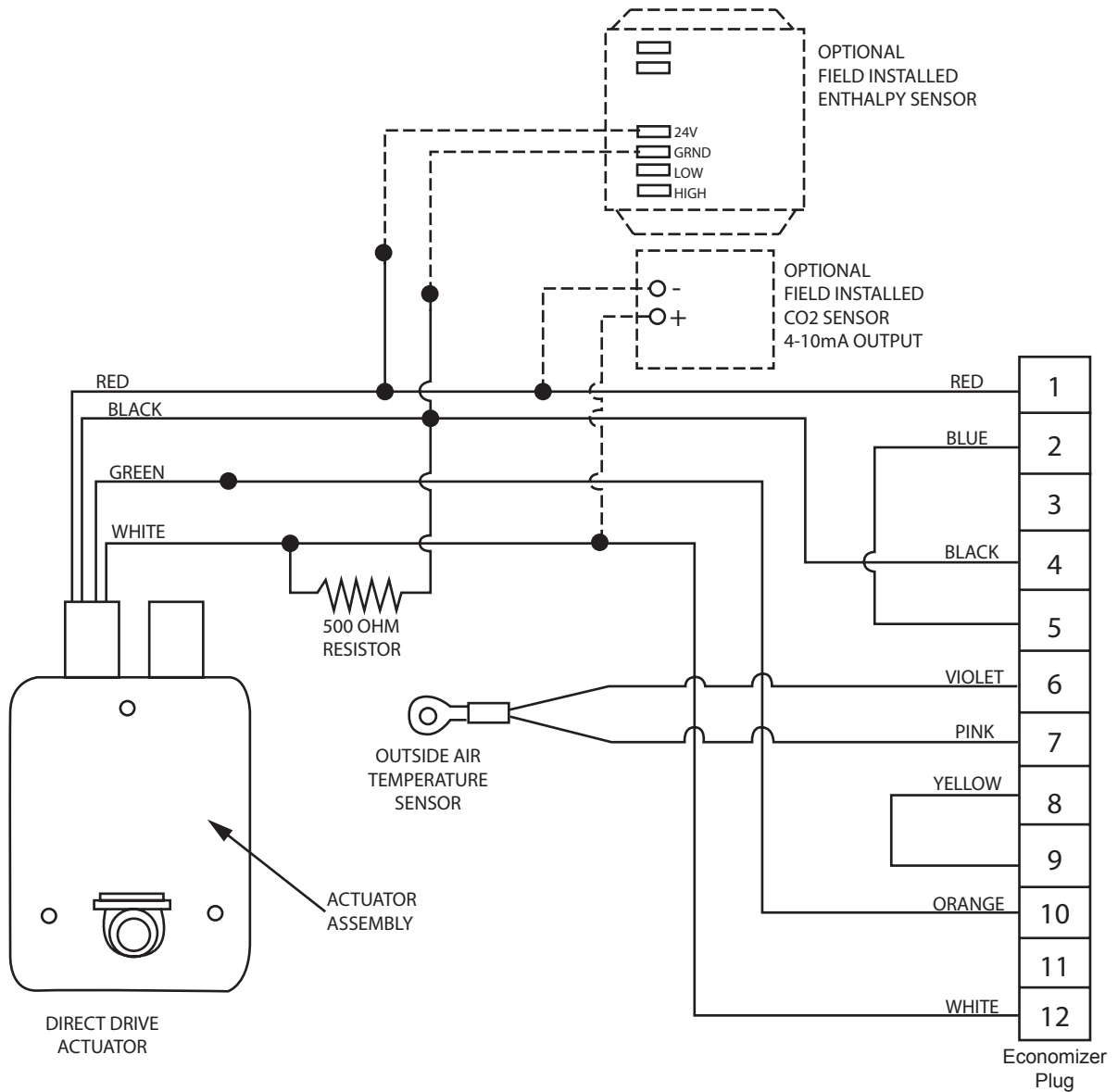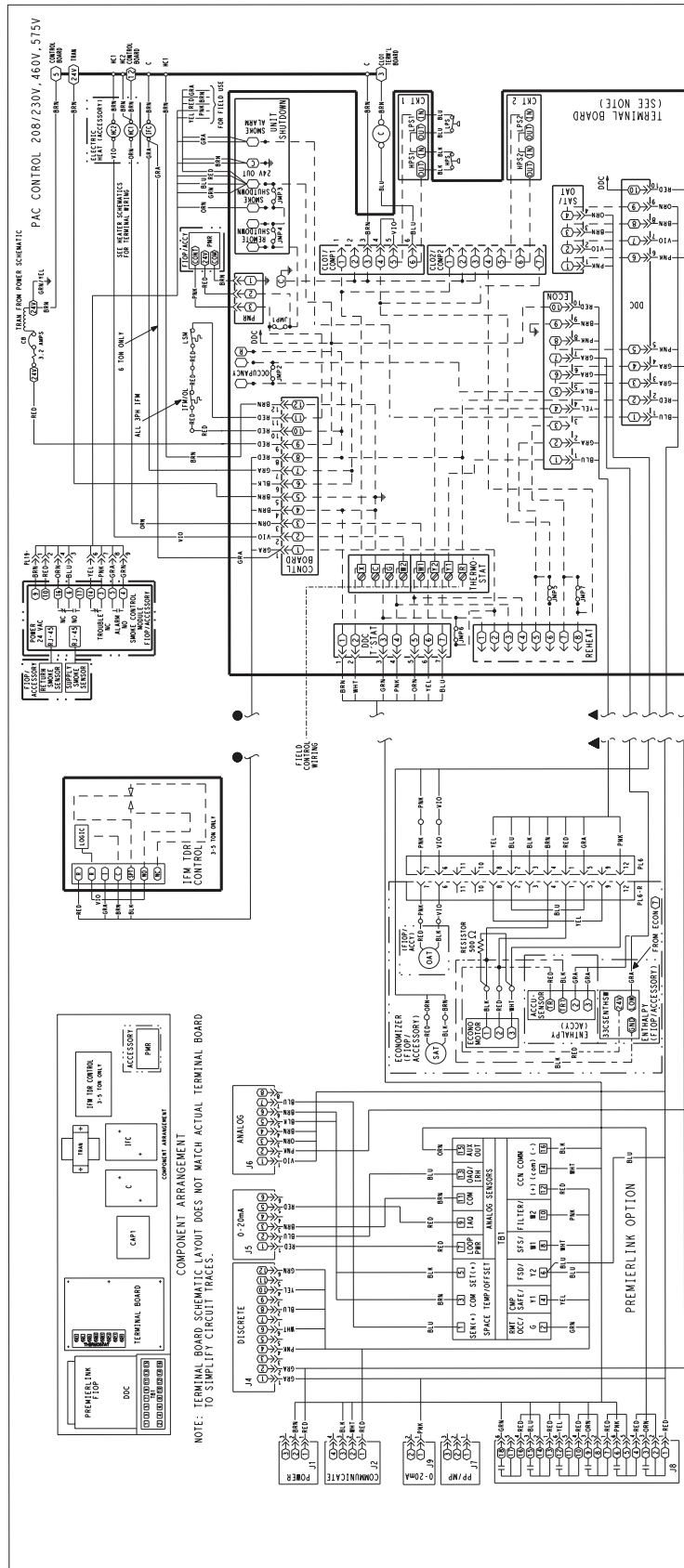
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Fig. 8 - Economizer Hood Installation

OPTIONAL FIELD INSTALLED ENTHALPY SENSOR

24V
GRND
LOW
HIGH

OPTIONAL FIELD INSTALLED CO2 SENSOR 4-10mA OUTPUT

−
+

RED
BLACK
GREEN
WHITE

RED   1
BLUE   2
           3
BLACK   4
           5
VIOLET   6
PINK   7
YELLOW   8
           9
ORANGE   10
           11
WHITE   12

500 OHM RESISTOR

OUTSIDE AIR TEMPERATURE SENSOR

ACTUATOR ASSEMBLY

DIRECT DRIVE ACTUATOR

Economizer Plug

Fig. 9 - Economizer Wiring

Fig. 12 - Connection to PremierLink™ Electric Heating / Cooling Controls

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Fig. 13 - Connection to PremierLink™ Gas Heat / Electric Cooling Controls

7

Fig. 14 - Connection to RTU-MP Electric Heating / Cooling Controls

8

Fig. 15 - Connection to RTU-MP Gas Heat / Electric Cooling Controls
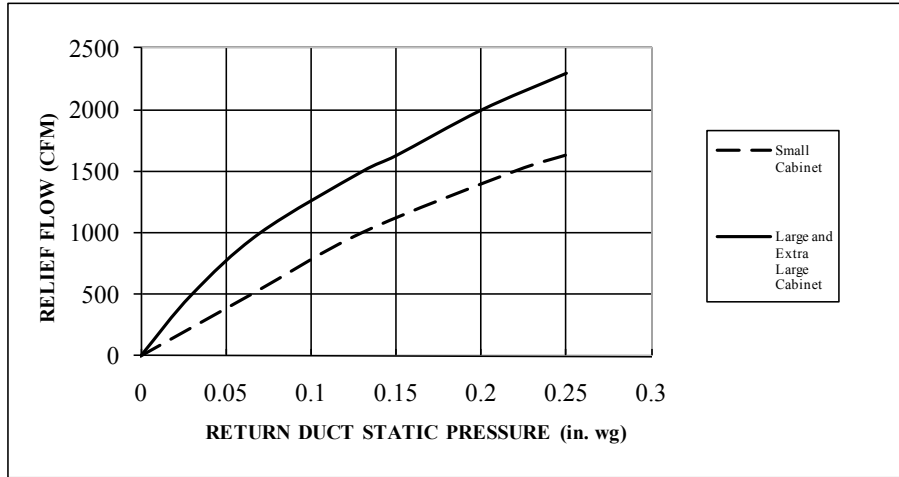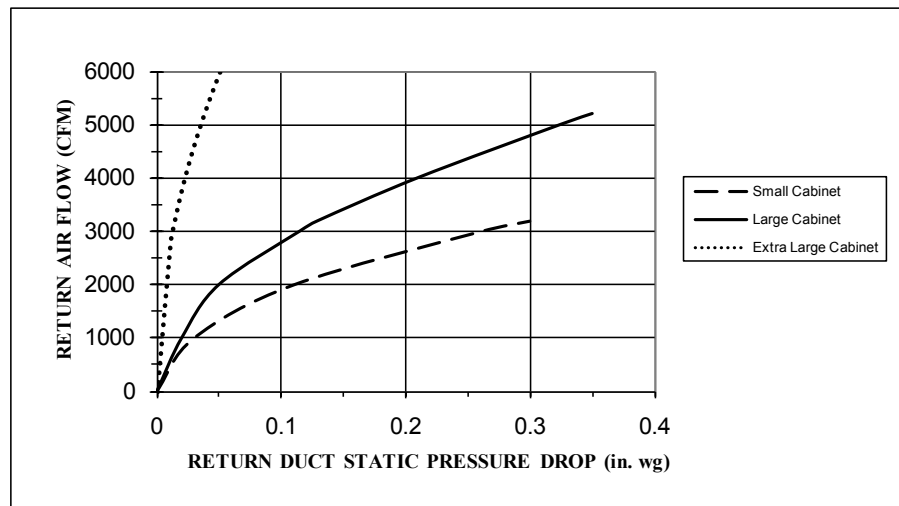
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Fig. 10 - Barometric Relief Flow Capacity

Fig. 11 - Return Air Pressure Drop

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

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