CRECOMZR022B00
CRECOMZR023B00
CRECOMZR063B00

Small Rooftop Units
Accessory Vertical EconoMi$er2
Select 3 to 12 1/2 Tons

Installation Instructions

CONTENTS

IMPORTANT: Read these instructions completely before attempting to install the Vertical EconoMi$er2 Accessory.

Table 1 - Package Contents

PACKAGE NO.	QTY	CONTENTS
CRECOMZR022B00, CRECOMZR023B00	1 1 1 18 1	Hood Top and Sides Hood Divider Aluminum Filter Screws EconoMi$er2 Assembly
CRECOMZR063B00	1 1 1 2 1 1	Hood Top and Sides Hood Divider Hood Filter Divider Aluminum Filters Hardware Bag EconoMi$er2 Assembly

Table 2 - Package Usage

UNIT SIZE	PART NUMBER
Small Cabinet, Footprint size: 46 3/4" x 74 3/8"	CRECOMZR022B00
Large Cabinet, Footprint size: 58 1/2" x 88 1/8"	CRECOMZR023B00
Extra-Large Cabinet, Footprint size: 63 3/8" x 115 7/8"	CRECOMZR063B00

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 $\triangle$. 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 EconoMi$er2 system utilizes the latest technology available for integrating the use of free cooling with mechanical cooling for rooftop units.

IMPORTANT: These economizer meet all the economizers requirements as laid out in California's Title 24 mandatory section 120.2 (fault detection and diagnostics).

This system utilizes gear-drive technology with a direct mount spring return actuator that will close upon loss of power. The EconoMi$er2 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.

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	33ZCSENSAT (Required for ComfortLink to meet Title 24)	—	—
Differential Dry Bulb Temperature	Included HH79NZ039	33ZCSENSAT	—	—
Single Enthalpy	Included HH79NZ039	33ZCSENSAT (Required for ComfortLink to meet Title 24)	Required — HH57AC077	—
Differential Enthalpy	Included HH79NZ039	33ZCSENSAT (Required for ComfortLink to meet Title 24)	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

EconoMi$er2 accessories require a 4 to 20 mA actuator signal control. These accessories do not include a controller. The EconoMi$er2 actuator is operated by a 4 to 20 mA signal from an existing field-supplied DDC controller. See Table 3 for sensor usage.

Table 4 - EconoMi$er2 Field-Installed Accessories

DESCRIPTION	PART NUMBER
Small Cabinet Power Exhaust 208-230 v 1 Ph	CRPWREXH030A01
Small Cabinet Power Exhaust 460 v 3Ph	CRPWREXH021A01
Large Cabinet Power Exhaust 208-230 v 1 Ph	CRPWREXH022A01
Large Cabinet Power Exhaust 460 v 3 Ph	CRPWREXH023A01
Extra Large Cabinet Power Exhaust 208-230 v 1 Ph	CRPWREXH080A00
Extra Large Cabinet Power Exhaust 460 v 3 Ph	CRPWREXH081A00
Return Air Dry Bulb	33ZCT55SPT
Outdoor Air Enthalpy Sensor	HH57AC077
Return Air Enthalpy Sensor	HH57AC078
CO_2 Room Sensor	33ZCSENCO2
Aspirator Box for Duct Mount CO_2 Sensor	33ZCASPCO2
Space Temperature and CO_2 Room Sensor with Override	33ZCT55CO2
Space Temperature and CO_2 Room Sensor with Override and Set Point	33ZCT56CO2

ACCESSORIES LIST

The EconoMi$er2 has several field-installed accessories available to

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>
> **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.

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optimize performance. Refer to Table 4 for authorized parts and power exhaust descriptions

INSTALLATION

1. Turn off unit power supply(s) and install lockout tag.
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 EconoMi$er2 hood components are shipped with the EconoMi$er2. 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 EconoMi$er2 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 EconoMi$er2 assembly into the rooftop unit. (See Fig. 6). On small and large cabinets be sure to engage the rear EconoMi$er2 flange under the tabs in the return-air opening of the unit base. (See Fig. 7)
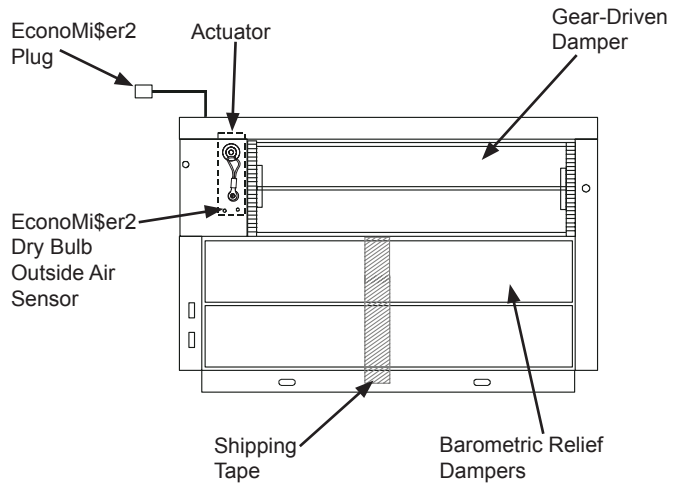

Fig. 1 - EconoMi$er2 Component Locations — (Small Cabinet Economizer Shown)

7. Secure the EconoMi$er2 to unit along side and bottom flanges using the screws provided. (See Fig. 6)
8. Remove the tape securing the relief dampers in place.
9. Remove and save the 12-pin jumper plug from the unit wiring harness (located in the upper left corner of the unit). Insert the EconoMi$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 EconoMi$er2 is removed from the unit. The jumper plug is not needed as long as the EconoMi$er2 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 EconoMi$er2 hood over the EconoMi$er2. 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.

NOTE: When setting high temperature economizer limit in California, see Table below for acceptable regional settings.

Device Type[a]	Climate Zones	Required High Limit (Economizer Off When):
		Description
Fixed Dry Bulb	1, 3, 5, 11-16	Outdoor air temperature exceeds 75°F
	2, 4, 10	Outside air temperature exceeds 73°F
	6, 8, 9	Outdoor air temperature exceeds 71°F
	7	Outdoor air temperature exceeds 69°F
Differential Dry Bulb	1, 3, 5, 11-16	Outdoor air temperature exceeds return air temperature
	2, 4, 10	Outdoor air temperature exceeds return air temperature minus 2°F
	6, 8, 9	Outdoor air temperature exceeds return air temperature minus 4°F
	7	Outdoor air temperature exceeds return air temperature minus 6°F
Fixed Enthalpy[b] + Fixed Dry Bulb	All	Outdoor air enthalpy exceeds 28 Btu/lb of dry air[b] or Outdoor air temperature exceeds 75°F

[a] Only the high limit control devices listed are allowed to be used and at the setpoints listed. Others such as Dew Point, Fixed Enthalpy, Electronic Enthalpy, and Differential Enthalpy Controls, may not be used in any climate zone for compliance with Section 140.4(e)1 unless approval for use is provided by the Energy Commission Executive Director.

[b] At altitudes substantially different than sea level, the Fixed Enthalpy limit value shall be set to the enthalpy value at 75°F and 50% relative humidity. As an example, at approximately 6,000 foot elevation, the fixed enthalpy limit is approximately 30.7 Btu/lb.

Table 5 - California Title 24 Regional High Limit Dry Bulb Temperature Settings
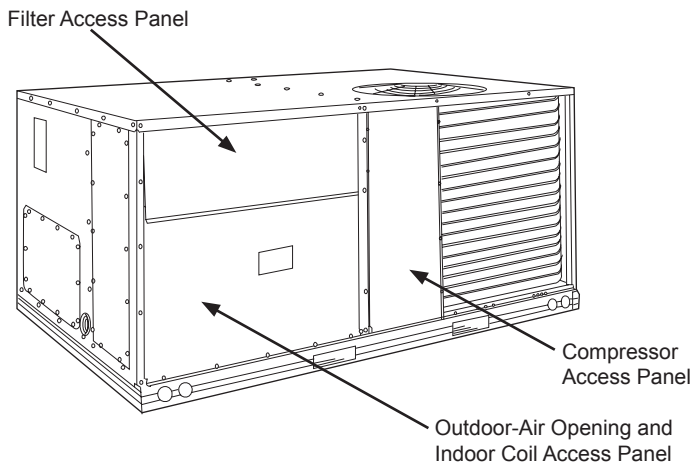*TABLE 140.4-B AIR ECONOMIZER HIGH LIMIT SHUT OFF CONTROL REQUIREMENTS*

Filter Access Panel

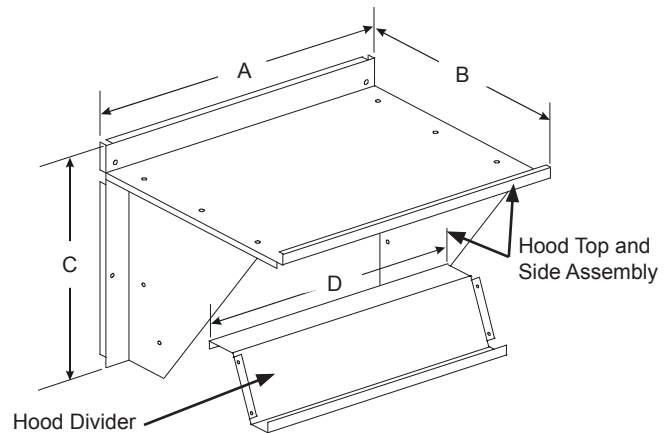Compressor Access Panel

Outdoor-Air Opening and Indoor Coil Access Panel

Fig. 2 - Typical Access Panel Locations

Hood Top and Side Assembly

Hood Divider

Fig. 3 - Hood Assembly

ECONOMIZER P/N	A	B	C	D	SHIP WT.
CRECOMZR022B00	33.37"	17.43"	19.05"	29.5"	55 lb
CRECOMZR023B00	40.37"	22.28"	24.48"	36.27"	80lb
CRECOMZR063B00	52.92"	27.03"	33.41"	49.92"	98lb

NOTE: The CRECOMZR063B00 hood has 2 aluminum filters and a hood filter divider that installs between the filters.
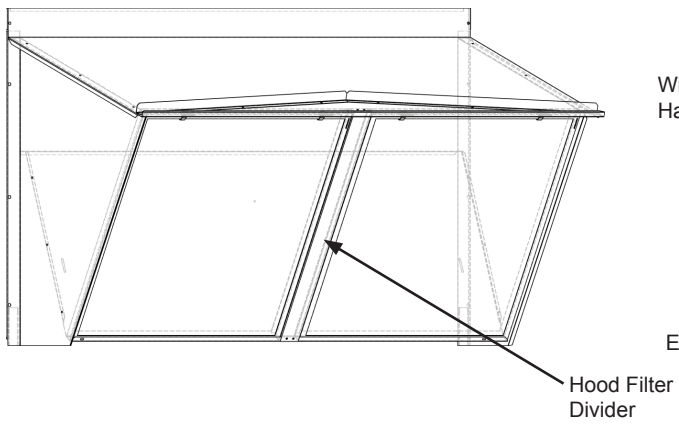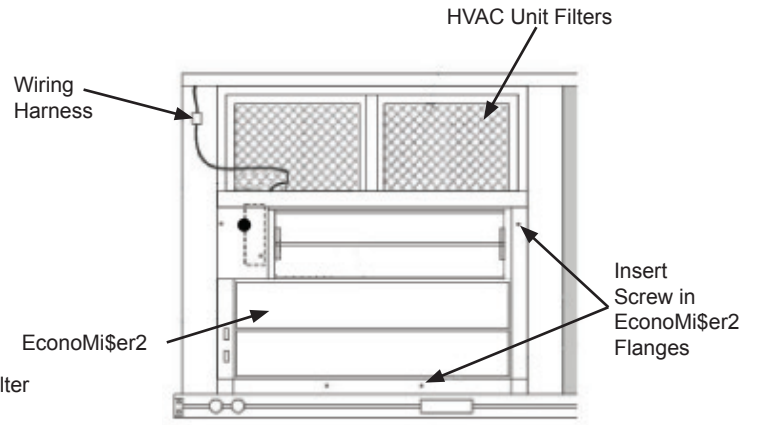
Fig. 4 - Hood for Extra Large Cabinet

Hood Filter Divider

HVAC Unit Filters

Wiring Harness

EconoMi$er2

Insert Screw in EconoMi$er2 Flanges

Fig. 6 - EconoMi$er2 Installed in HVAC Unit (Small Cabinet Economizer Shown)

Hood Top

Filter Clip

Outside Air

Hood Divider

Cleanable Aluminum Filter

Barometric Airflow

Fig. 5 - Filter Installation

Unit Filter Rack

EconoMi$er2 Hold Down Tab

EconoMi$er2

Unit Base

EconoMi$er2 Rear Flange

Fig. 7 - Rear EconoMi$er2 Flange Installation (Small and Large Cabinet)

EconoMi$er2

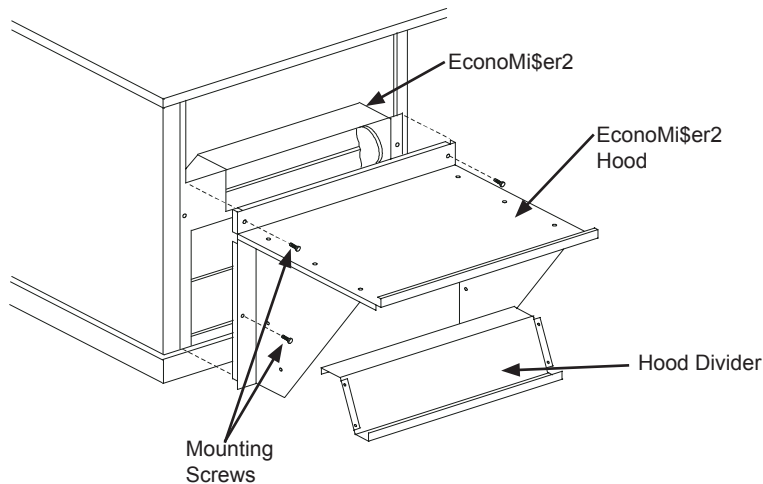EconoMi$er2 Hood

Hood Divider

Mounting Screws

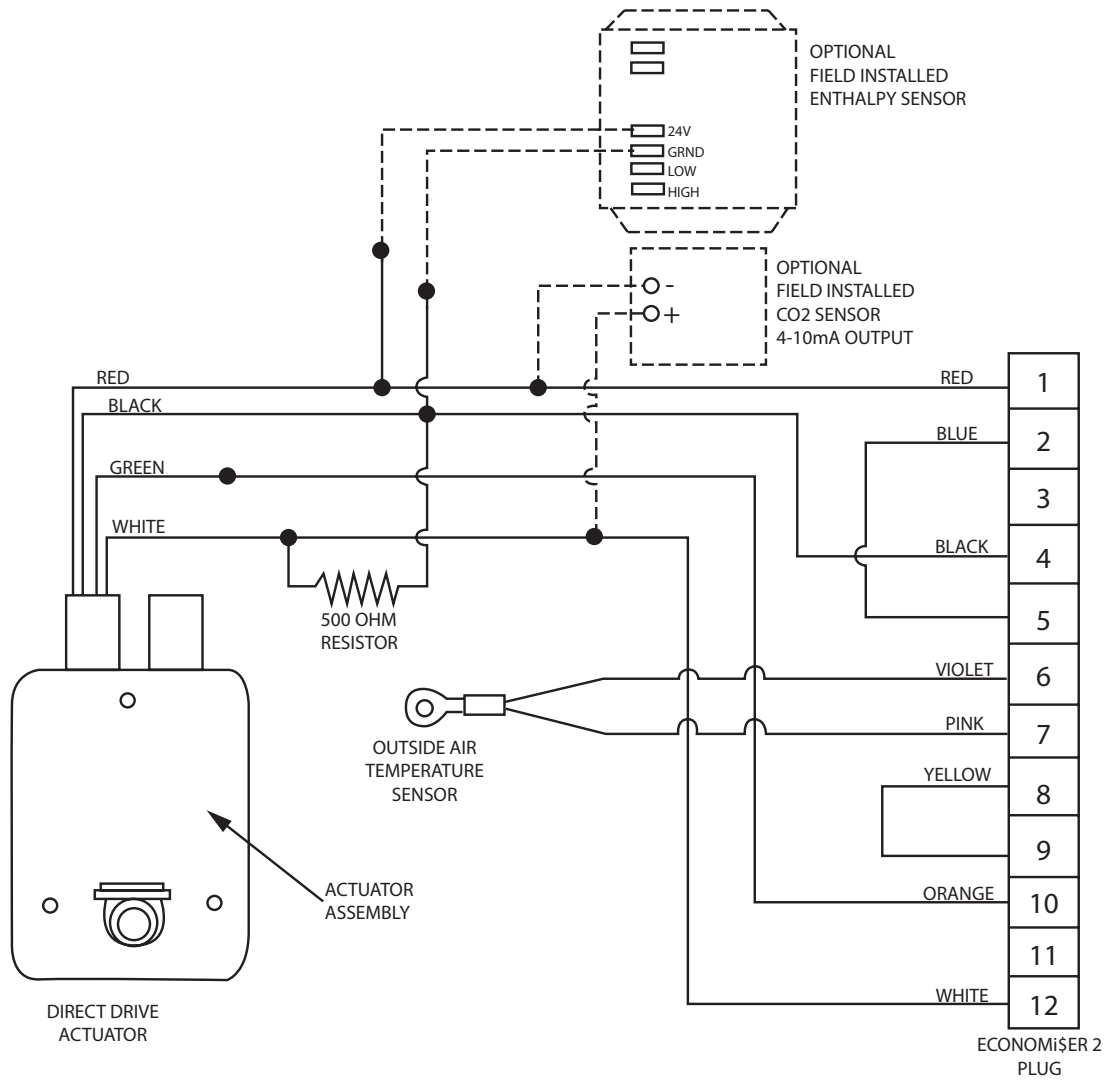**Fig. 8 - EconoMi$er2 Hood Installation**

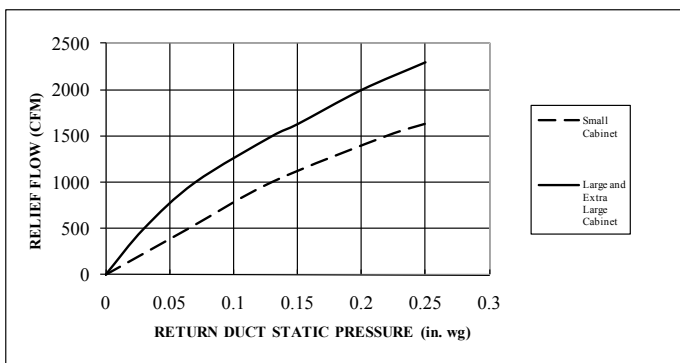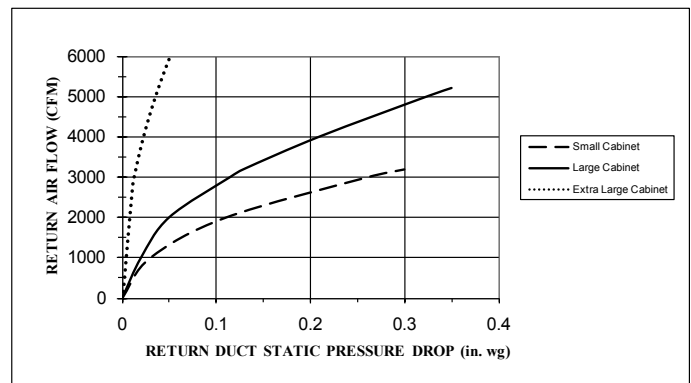**Fig. 9 - EconoMi$er2 Wiring**

Fig. 10 - Barometric Relief Flow Capacity

Fig. 11 - Return Air Pressure Drop

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