

ACCESSORY USAGE GUIDE FOR RGV 210-336 17.5, 20, 25, 27.5 TONS

RGV units with X-Vane Fan are single-packaged electric cooling, gas heating units that are prewired and pre-charged with R-410A HFC refrigerant. The units are factory tested prior to shipment.

X-Vane™ Fan



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



STANDARD FEATURES

- R-410A HFC refrigerant
- IEERs up to 14.5
- Exceeds current DOE, IEER efficiencies while meeting DOE's new stringent 2023 IEER efficiency requirements
- 2023 DOE, ASHRAE 90.1, and IECC - IEER energy compliant
- NEW Direct Drive; X-Vane Fan Indoor fan system uses Vane Axial fan design and electronically commutated motor. Indoor fan motor also delivers multiple fan speed control
- Two stage cooling and heating capacity control
- Rated in accordance with AHRI Standard 340/360
- Designed in accordance with UL Standard 1995
- Gas efficiencies up to 81%
- Induced draft combustion design
- Redundant gas valve, with 2 stages of heating control
- Pre-painted exterior panels and primer-coated interior panels tested at 500 hours salt spray protection
- TXV refrigerant metering device control
- Insulated cabinet
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation, burner control logic and energy saving indoor fan motor delay

- Cooling operating range up to 125°F (52°C), and down to 40°F (4°C)
- Round tube, plate fin evaporator and condenser coil design
- Access panels with easy grip handles and no-strip screw
- Two-inch disposable return air filters on slide out track, many filter upgrades are available
- Unit Control Board facilitates simple safety circuit troubleshooting and control box arrangement
- Dedicated vertical and horizontal airflow models available ordered as factory option. No special kits required.
- Provisions for thru-the-bottom power entry capability
- Single point gas and electric connections
- Thru the base preformed connection points for field supplied connectors
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Scroll compressors with internal line-break overload protection
- 24-volt control circuit protected with resettable circuit breaker
- Permanently lubricated evaporator-fan motor
- Totally enclosed condenser motors with permanently lubricated bearings
- Low pressure and high-pressure switch protection
- Exclusive IGC anti-cycle protection for gas heat operation
- Solid-state electronic direct spark ignition system
- Flame roll-out safety protector
- Liquid line filter drier on each circuit
- Mixed Air Temperature protection switch protects the compressors in low mixed outdoor air conditions

STANDARD WARRANTY

- 10-year heat exchanger parts - Aluminized
- 15-year heat exchanger parts - Stainless Steel
- 5-year compressor parts
- 1-year parts

FACTORY INSTALLED OPTIONS INCLUDE BUT NOT LIMITED TO:

- Stainless steel gas heat exchanger includes tubes, vestibule plate and collector box
- Two position damper option (field-installed only)
- Non fused disconnect and convenience outlet options
- Smoke detector, supply and/or return
- Corrosion resistant options for evaporator and condenser coils
- High static motor options
- Hinged access panels
- Condensate overflow switch
- Hot gas re-heat dehumidification system
- Integrated economizer system, low and ultra low leak versions available
- Enthalpy sensors

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MODEL SERIES	R	G	V	2	4	0	L	D	2	A	0	A	A	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
R = Rooftop														
G = Gas Heat / Electric Cooling Type														
V = R-410A with X-Vane™ Fan Standard Efficiency														
210 = 210,000, 17.5 Tons 240 = 240,000, 20.0 Tons 300 = 300,000, 25.0 Tons 336 = 336,000, 27.5 Tons Nominal Cooling Capacity														
H = 208/230-3-60 L = 460-3-60 S = 575-3-60 Voltage														
D = Low Heat E = Medium Heat F = High Heat S = Low Heat, Stainless Steel Heat Exchanger R = Medium Heat, Stainless Steel Heat Exchanger T = High Heat, Stainless Steel Heat Exchanger Heating Capacity														
2 = Standard/Medium Static X-Vane Fan, Vertical Supply 3 = High Static X-Vane Fan, Vertical Supply 4 = High Static X-Vane Fan and Hot Gas Re-Heat, Vertical Supply 5 = Standard/Medium Static X-Vane Fan and Filter Status Switch, Vertical Supply 6 = High Static X-Vane Fan and Filter Status Switch, Vertical Supply 7 = High Static X-Vane Fan and Filter Status Switch with Hot Gas Re-Heat, Vertical Supply J = High Static X-Vane Fan, Horizontal Supply L = High Static X-Vane Fan and Filter Status Switch, Horizontal Supply M = High Static X-Vane Fan and Hot Gas Re-Heat, Horizontal Supply N = High Static X-Vane Fan and Filter Status Switch with Hot Gas Re-Heat, Horizontal Supply Motor (Indoor Fan)														
A = None B = Low Leak EconoMi\$er® X with Barometric Relief, OA Temp Sensor E = Low Leak EconoMi\$er X with Barometric Relief, + CO ₂ Densor, OA Temp Sensor H = Low Leak EconoMi\$er X with Barometric Relief, Enthalpy Sensor L = Economizer with Barometric Relief + CO ₂ Sensor, Enthalpy Sensor U = Ultra Low Leak Economizer with Barometric Relief, OA Temp Sensor W = Ultra Low Leak Economizer with Barometric Relief, Enthalpy Sensor Outdoor Air Options / Control														
0A = Standard 4B = Non Fused Disconnect Switch AA = Hinged Access Panels AT = Un-Powered Convenience Outlet BB = Powered Convenience Outlet BP = Return Air Smoke Detector BR = Supply Air Smoke Detector CJ = Condensate Overflow Switch Factory Installed Options														
A = Aluminum/Copper Condenser and Evaporator Coil B = Precoat Aluminum/Copper Condenser with Aluminum/Copper Evaporator C = E-Coated Aluminum/Copper Condenser with Aluminum/Copper Evaporator D = E-Coated Aluminum/Copper Condenser and Evaporator E = Copper/Copper Condenser and Aluminum/Copper Evaporator F = Copper/Copper Condenser and Evaporator Condenser / Evaporator Coil Configuration														
A = Economizer controls for field-installed EconoMi\$er IV and all others (except factory-installed EconoMi\$er X) B = Economizer controls for EconoMi\$er X Economizer Control														

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FIELD-INSTALLED ACCESSORIES

ECONOMIZER IV — LOW LEAK CONTROLLER INCLUDED (Only Provides Control For Single Stage Fan Operation) VERTICAL AND HORIZONTAL

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRECOMZR052A00	LOW LEAK Vertical and Horizontal EconoMi\$er IV with solid-state controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors and outdoor air hood. CO ₂ sensor compatible, for use in non-DDC applications.	210-240 Elect. Mech Controls
CRECOMZR053A00	LOW LEAK Vertical and Horizontal EconoMi\$er IV with solid-state controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors and outdoor air hood. CO ₂ sensor compatible, for use in non-DDC applications.	300-336 Elect. Mech Controls

NOTE: EconoMi\$er IV cannot be installed with an EconoMi\$er 2, EconoMi\$er X, Manual Damper or Motorized Damper.

ECONOMIZER IV SENSORS ECONOMIZER SENSOR USAGE CHART — FIELD ACCESSORY ECONOMIZER IV ONLY

DESIRED CONTROL METHOD	ECONOMIZER IV ONLY IF YOU HAVE:
Single Dry Bulb Temperature Control	None: Outside Air-dry bulb sensor is factory-installed
Differential Dry Bulb Temperature Control	CRTEMPSN002A00
Single Enthalpy Control	(1) --HH--57AC-078 (Fast P/N ABX078ENT)
Differential Enthalpy Control	(1) --HH--57AC-078 (Fast P/N ABX078ENT) and (1) CRENTDIF004A00

ECONOMIZER IV — SENSORS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRTEMPSN002A00	Outdoor or Return Dry Bulb Temperature Sensor used with Electro-Mechanical control.	EconoMi\$er IV
--HH--57AC-078 (Fast P/N ABX078ENT)	Accusensor II Enthalpy control upgrade.	EconoMi\$er IV
CRENTDIF004A00	Return Air Enthalpy Sensor used with EconoMi\$er IV and --HH--57AC-078 (Fast P/N ABX078ENT) for differential enthalpy control.	EconoMi\$er IV

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ECONOMIZER X — ULTRA LOW LEAK, CONTROLLER INCLUDED

VERTICAL AND HORIZONTAL

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRECOMZR074A01	ULTRA LOW LEAK - Vertical and Horizontal EconoMi\$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO ₂ sensor compatible, for use in electromechanical controls only. Also includes return, outside air, and relief air damper leakage that meets Title 24 section 140.4 and ASHRAE 90.1 requirements. Controller meets California Title 24 Fault Detection and Diagnostic (FDD) requirements. Also meets AMCA Class 1A economizer damper test standards and labeling.	210-240 Elect. Mech Controls
CRECOMZR075A01	ULTRA LOW LEAK - Vertical and Horizontal EconoMi\$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO ₂ sensor compatible, for use in electromechanical controls only. Also includes return, outside air, and relief air damper leakage that meets Title 24 section 140.4 and ASHRAE 90.1 requirements. Controller meets California Title 24 Fault Detection and Diagnostic (FDD) requirements. Also meets AMCA Class 1A economizer damper test standards and labeling.	300-336 Elect. Mech Controls

NOTES:

1. EconoMi\$er X cannot be installed with an EconoMi\$er IV, Manual Damper or Motorized Damper.
2. Can only be used on electrical mechanical units with 2 stage cooling and 2 speed fan control.
3. For Low Leak models, contact your local MicroMetl account manager 1-800-884-4662.

OTHER THAN ICP FIELD-SUPPLIED ECONOMIZERS WITH W7220 CONTROLLER - REQUIRED

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRECOHRN001A00	Due to the X-Vane Axial Fan Unit Control Board, any other field furnished economizer that uses the W7220 controller will require this wiring harness to properly adapt and function. Item is required for unit and economizer match up. ICP furnished economizers do not require this part.	210-336

NOTE: Required on all units with 'A' in the 14th digit and using other than ICP field accessory economizer.

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ECONOMIZER X SENSORS ECONOMIZER SENSOR USAGE CHART – FIELD / FACTORY ECONOMIZER X ONLY

DESIRED CONTROL METHOD	ECONOMIZER X IF YOU HAVE:		
	FIELD INSTALLED DRY BULB ACCESSORY ECONOMIZER X	FACTORY INSTALLED DRY BULB SENSOR ECONOMIZER X	FACTORY INSTALLED ENTHALPY SENSOR ECONOMIZER X
Single Dry Bulb Temperature Control	None: Outside Air-dry bulb sensor is factory-installed	None: Outside Air-dry bulb sensor is factory-installed	None: Outside Air-dry bulb sensor is factory-installed
Differential Dry Bulb Temperature Control	(1) --HH--57AC-081 (Fast P/N 1185124)	(1) --HH--57AC-081 (Fast P/N 1185124)	N/A
Single Enthalpy Control	(1) --HH--57AC-081 (Fast P/N 1185124)	(1) --HH--57AC-081 (Fast P/N 1185124)	None: Outside Air Enthalpy sensor is factory-installed
Differential Enthalpy Control	(2) --HH--57AC-081 (Fast P/N 1185124)	(1) --HH--57AC-081 (Fast P/N 1185124)	(1) --HH--57AC-081 (EconoMi\$er X) (Fast P/N 1185124)

NOTE: OAT (Dry Bulb Sensor) and SAT sensors included with EconoMi\$er X.

ECONOMIZER X SENSORS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
--HH--57AC-081 (Fast P/N 1185124)	Enthalpy Control for W7220 Controller only. (One required for single enthalpy, two required for different enthalpy.)	EconoMi\$er X

BAROMETRIC RELIEF HOOD

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRBARHOD001A00	Barometric Hood - For horizontal economizer applications where relief damper is installed in duct work. This kit provides the needed protection.	All Horizontal Econo

POWER EXHAUST ACCESSORIES VERTICAL AND HORIZONTAL

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRPWREXH068A00	Power Exhaust - Multi-centrifugal fan design. Includes hood. Works on both vertical and horizontal duct configuration models.	210 - 336 208/230-3-60 Vertical or Horizontal Duct Configuration
CRPWREXH069A00	Power Exhaust - Multi-centrifugal fan design. Includes hood. Works on both vertical and horizontal duct configuration models.	210-336 460-3-60 Vertical or Horizontal Duct Configuration
CRPWREXH070A00	Power Exhaust - Multi-centrifugal fan design. Includes hood. Works on both vertical and horizontal duct configuration models.	210-336 575-3-60 Vertical or Horizontal Duct Configuration

NOTES:

1. When power exhaust is used on horizontal applications, it must be field mounted to the side of the return duct.
2. Power exhausts can be used with both EconoMi\$er IV, or EconoMi\$er X. In either case, the power exhaust is controlled by the EconoMi\$er IV, X controller.

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OUTDOOR AIR DAMPER ACCESSORIES MANUAL OUTDOOR AIR DAMPERS — VERTICAL OR HORIZONTAL

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRMANDPR009A00	25% Open Manual Outdoor Air Damper Package	210-240
CRMANDPR010A00	25% Open Manual Outdoor Air Damper Package	300-336

NOTES:

1. Manual and Motorized 2-position dampers are not compatible with a power exhaust module.
2. Manual dampers include hood assembly, bird screen, adjustable damper blade (to allow up to the rated outdoor air %, and bottom panel.
3. Application consideration needs to be given to the use of two-position damper on these models due to the varying fan speed of the X-Vane Vane Axial Fan System and fixed outdoor air capability of these devices.

TWO POSITION MOTORIZED OUTDOOR AIR DAMPERS VERTICAL OR HORIZONTAL

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRTWOPOS012A00	Two-Position Motorized Outdoor Air Damper. Spring return damper closes when unit is off. Includes damper, hood, and all hardware.	210-240
CRTWOPOS013A00	Two-Position Motorized Outdoor Air Damper. Spring return damper closes when unit is off. Includes damper, hood, and all hardware.	300-336

NOTES:

1. Motorized dampers include bottom panel and adjustable damper to allow up to the rated outdoor air %.
2. Motorized dampers will close on loss of power to the rooftop unit.
3. Manual and motorized 2-position dampers are not compatible with a power exhaust module.
4. Application consideration needs to be given to the use of two-position damper on these models due to the varying fan speed of the X-Vane Vane Axial Fan System and fixed outdoor air capability of these devices.

ROOF CURB ACCESSORIES STANDARD ROOF CURBS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRRFCURB045A00	14-inch (356 mm) Tall Roof Curb. Complies with NRCA standards. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	210
CRRFCURB046A00	24-inch (607 mm) Roof Curb. Complies with NRCA standards. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	210
CRRFCURB047A00	14-inch (356 mm) Tall Roof Curb. Complies with NRCA standards. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	240-300
CRRFCURB048A00	24-inch (607 mm) Roof Curb. Complies with NRCA standards. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	240-300
CRRFCURB049A00	14-inch Roof Curb. Complies with NRCA standards. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	336
CRRFCURB050A00	24-inch Roof Curb. Complies with NRCA standards. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	336

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LOUVERED HAIL GUARDS — CONDENSER COIL

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRLVHLGD042A00	Louvered Condenser Coil Hail Guard – Includes louvered panel(s) to protect condenser coil from damage and vandalism.	210
CRLVHLGD052A00	Louvered Condenser Coil Hail Guard – Includes louvered panel(s) to protect condenser coil from damage and vandalism.	240
CRLVHLGD053A00	Louvered Condenser Coil Hail Guard – Includes louvered panel(s) to protect condenser coil from damage and vandalism.	300
CRLVHLGD054A00	Louvered Condenser Coil Hail Guard – Includes louvered panel(s) to protect condenser coil from damage and vandalism.	336

PROPANE & HIGH ALTITUDE PROPANE KITS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRLPKIT9001A00	Propane conversion kit. Contains the necessary spuds and parts to convert rooftop to Propane at altitudes between 0 ft and 2,000 ft.	All Sizes
CRLPELEV005A00	High altitude propane conversion kit. Contains the necessary spuds and parts to convert rooftop to Propane at altitudes between 2,001 ft and 10,000 ft.	All Sizes

NATURAL GAS HIGH ALTITUDE KITS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRNGELEV001A00	High altitude, natural gas conversion kit. Contains the necessary spuds and parts to convert rooftop to altitudes between 3,000 ft and 10,000 ft.	All Sizes

HEATING UPGRADE KITS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRFLUEDS006A00	Flue Discharge Deflector – Directs flue gas exhaust 90 degrees upward from current discharge. Designed to allow tighter distances between unit and combustible surfaces. 24 inch height. AGA certified.	All Sizes

4-in. FILTER TRACK UPGRADE KIT

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRFLTTRK001A00	4 Inch Field Conversion Kit - Converts the unit standard 2 inch filter tracks to 4 inch filter tracks. All hardware and instructions are included in the kit.	All Sizes

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CONTROLS ACCESSORIES

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRPHASE3001A02	Phase Monitor Control - Provides phase loss/phase reversal protection.	20/230-3-60 460-3-60
CRPHASE3002A00	Phase Monitor Control - Provides phase loss/phase reversal protection.	575-3-60
CRSTATUS005A00	Fan/Filter Status Switches - Indicator light not included.	Std. Controls
CRCONVOUT01A00	20 Amp non (unit) powered convenience outlet kit is to provide a flexible installation method that will allow code compliance for height requirements of the GFCI outlet from finished roof surface on the range of roof-top and split system products as well as the capability to relocate the outlet into a more convenient location if necessary.	All Sizes
CRTIMEGD001A00	Time Guard II — Automatically prevents the compressor from restarting for at least 4 minutes and 45 seconds after shutdown of the compressor.	Std. Controls
CRSDTEST001A00	Smoke detector remote test/reset/alarm indicator kit.	All Sizes
P201-4701	Transformer 75VA120/240/460-24	All Sizes
CRSMKSEN002A01	Smoke Detector Control Module - Controller that can control either return and/or supply smoke detectors. One required per unit.	All Sizes
CRSMKKIT002A01	Smoke Detector - Sensor with sampling tube and exhaust tube. Can be used in return or supply air. One required for use with return or supply, two required if both return air and supply air detection is required. Brackets included for both vertical and horizontal configurations.	All Sizes
CRSDHNSB001A00	Horn/Strobe Annunciator with clear colored lens, 24V AC/DC works with listed factory or field-installed smoke detectors. NOTE: A field-supplied 24V transformer is also required for each application. P201-4701 is recommended and can be purchased through Fast Parts.	All Sizes
CRWINSTR001A00	Winter Start Package - Contains time delay relay for timed bypass of low-pressure switch on startup. (One required per refrigerant circuit.) NOTE: If mechanical cooling is below 40°F ambient it is necessary, consider additional low-ambient control measures (for example, economizer or low ambient controls).	All Sizes

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LOW AMBIENT ACCESSORY USAGE AND PARTS

UNITS	VOLTAGE	MOTOR	OTHER CONTROL NEEDED	CAPACITOR	TRANSFORMER KIT	LOW AMBIENT CONTROLLER
210-336	208/230-3-60	(1) HC40GE233	(1) CRWINSTR001A00	Keep Factory Installed	N/A	(1) CRLAMBKT002A00
	460-3-60	(2) HC40GE463	(1) CRWINSTR001A00	Replace with (1) HC93CA013	N/A	(1) CRLAMBKT002A00
	575-3-60	(2) HC40GE463	(1) CRWINSTR001A00	Replace with (1) HC93CA013	(1) CRTRXKIT003A00	(1) CRLAMBKT002A00

NOTE: The Capacitor Straps in the unit can be reused. If needed part numbers are as follows: HC93CA013 uses 50DK507522.

LEGEND

N/A — Not Applicable

() — Quantity Required

LOW AMBIENT CONTROLS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
CRLAMBKT002A00	Low Ambient Solid-State Variable Speed Motor Controller enables cooling down to 0°F by varying the speed on the condenser fan.	Refer to Low Ambient Usage Table Above
HC40GE233	Low Ambient Compatible Condenser Fan Motor	Refer to Low Ambient Usage Table Above
CRTRXKIT003A00	Transformer Kit: Used in conjunction with the above low ambient controls. It converts 575-v to a 460-v condenser motor.	Refer to Low Ambient Usage Table Above
HC40GE463	Low Ambient Compatible Condenser Fan Motor	Refer to Low Ambient Usage Table Above
HC93CA013	Dual MFD 10 + 10	575-v Models

NOTES:

1. Fast Parts List Price - Subject to change on a quarterly basis and should be verified with Fast Parts prior to quoting.
2. One CRWINSTR001A00 required per refrigerant circuit.
3. Units equipped with hot gas re-heat includes head pressure controls. For a hot gas re-heat unit to achieve low ambient cooling operation down to -20°F, only one CRWINSTR001A00 per circuit is required.

THERMOSTAT OPTIONS

ORDERING NUMBER	DESCRIPTION	APPLICATION USAGE
--HL--38MG-029	Humidistat - Wall Mounted	Hot Gas Re-Heat