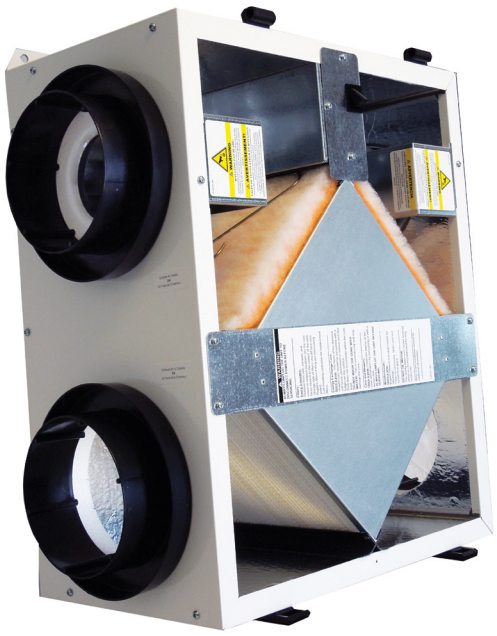
RenewAire
Energy Recovery Ventilation

EV SERIES ERV

Installation, Operation and Maintenance Manual

EV90



EV90 shown

c UL us LISTED DUCTED HEAT RECOVERY VENTILATOR 89S5

2100 HVI CERTIFIED

⚠ WARNING

RISK OF FIRE, ELECTRIC SHOCK, OR INJURY.
OBSERVE ALL CODES AND THE FOLLOWING:

1. Before servicing or cleaning the unit, unplug the line cord. make sure unit is not running before opening its door.
2. This installation manual shows the suggested installation method. Additional measures may be required by local codes and standards.
3. Installation work and electrical wiring must be done by qualified professional(s) in accordance with all applicable codes, standards, and licensing requirements.
4. Any structural alterations necessary for installation must comply with all applicable building, health, and safety code requirements.
5. Connect this unit only to a 120 VAC grounded receptacle protected by a 15 or 20 amp circuit breaker. Do not remove the unit's line cord.
6. Do not install unit or controls where they can be reached from a tub or shower.
7. This unit must be properly ducted to the outdoors.
8. Outside air inlet for this unit must be located away from sources of hazardous air such as auto exhausts.
9. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment that might be installed in the area affected by this equipment. If this unit is exhausting air from a space in which chimney-vented fuel burning equipment is located, take steps to assure that combustion air supply is not affected. Follow the heating equipment manufacturer's requirements of applicable codes and standards.
10. This unit is intended for general ventilating only. Do not use to exhaust hazardous or explosive materials and vapors. Do not connect this unit to range hoods, fume hoods, or collection systems for toxics.
11. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
12. Use the unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.

⚠ WARNING

There is no known safe level of cigarette smoke. Any ventilation system may provide noticeable improvement in spaces where cigarettes are smoked, but it cannot be expected to protect against the severe long-term health hazards of exposure to cigarette smoke.

⚠ CAUTION

1. To avoid motor bearing damage and noise and/or unbalanced impellers, keep drywall spray, construction dust, etc., out of unit.
2. Do not connect power to the units external control terminals: this will damage the unit. The external terminals are for use only with unpowered controls designed for low-voltage operation.

⚠ CAUTION

Provide Adequate Service Access for Maintenance

The unit will require regular filter and core inspections. Install the unit where you can access the core for cleaning and replacing the filters, and where you can get at the wiring for installation and service.

⚠ CAUTION

Do not remove or disable the wiring interconnection between the Overload Relays and the Contactors. Without this inter-connection the motor(s) will not be protected against overload.

⚠ CAUTION

DO NOT WASH THE ENERGY EXCHANGE CORE.

Keep it away from water or fire to avoid damaging it. Always handle the core carefully.

READ AND SAVE THIS MANUAL/LIRE ET CONSERVER CE MANUEL

NOTICE

This manual has space for recording operating settings at time of unit commissioning that must be completed by the installer. See Sections 5.1 and 5.2 of this manual.

Information that is recorded is specific to just one ERV. If additional ERVs are being documented, please make copies of these pages and identify each copy by its unit tag.

UNIT INFORMATION

Record information as shown below. In the unlikely event that factory assistance is ever required, this information will be needed.

Locate the RenewAire unit label, to be found outside of the appliance, near the terminal block. Record the model and serial numbers below.

NOTE: This information is for purposes of identifying the specific air handling appliance. Unit-specific option data can then be obtained, as needed, from the Model Number.

NOTE: This page is to be completed by the installing contractor. The completed document is to be turned over to the owner after start-up.

ERV Model: ☐ EV90

Serial Number: _____

UNIT INFORMATION

RenewAire Energy Recovery Ventilation
201 Raemisch Rd Waunakee, WI 53597 (800) 627.4499
renewairesupport@renewaire.com

c UL us LISTED DUCTED HEAT RECOVERY VENTILATOR 89S5

Model/Modele EV90 **Part Number** 102700_000
Serial Number **E2221417R**
Unit Voltage 120V, 60HZ **Phase/Phasee** 1 Phase/Phasé
MCA 10 **MFS** 15
Motors / Moteurs Qty 2 : 0.03 HP & 0.16 F.L.A.
Qte 2 : 0.03 CV de chaque & 0.16 A.P.C.

Motors Thermally Protected/ Moteurs protégés thermiquement
For permanently Connected Units: Use Copper Conductors Only
Pour les appareils branchés en permanence: Utiliser uniquement des conducteurs en cuivre

® 2100 HVI CERTIFIED

HVI CERTIFIED RATINGS Complete ratings at: www.hvi.org Model EV90
Rated Air Flow@ 0.2 in wg (50 Pa) 85 cfm (40 L/s)
Rated Air Flow@ 0.4 in wg (100 Pa) 55 cfm (26 L/s)
Energy Performance and Net Supply Air Flow
85 cfm (40 L/s) at 32°F (0°C) , Power Consumed 41 W
ASRE: 67% SRE: 64% LMT: 0.49
83 cfm (39 L/s) at 95°F (35°C) , Power Consumed 38 W
ATRE: 50% TRE: 48%

⚠WARNING ⚠AVERTISSEMENT

Danger of electric shock. Always disconnect power source before servicing. Do not install in a cooking area or make line-voltage electrical power connections directly between this unit and any appliance.

Danger de chocs électriques. Toujours débrancher la source d'alimentation avant la maintenance ou les réparations. Ne pas installer dans une zone de cuisson ou brancher directement la demande de courant principale de cet appareil sur n'importe quel autre appareil.

Not for Outdoor Use/ N'est pas fait pour une utilisation extérieure.

Label PN: 140088_002

UNIT LABEL (TYPICAL)

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1.0 OVERVIEW

1.1 DEFINITIONS

Energy Exchange System:

Cross flow fixed-plate enthalpic energy exchange core: engineered, proprietary resin-media composite. Moderates both temperature and humidity extremes.

Access Door:

Front panel opens to provide access to filters, blowers, and energy exchanger. Snap latches and hinges provided for easy service.

Insulation:

1" foil-faced EPS foam throughout.

Blower/Motor:

Two high efficiency motorized impeller blowers provide quiet operation.

Warranty:

Ten year limited warranty on energy exchange core; five year limited warranty against defects in material and workmanship on all other components.

NOTE: This unit is an Energy Recovery Ventilator, or ERV. It is commonly referred to throughout this manual as an ERV.

1.2 DESCRIPTION

1.2.1 Purpose of an ERV System

Many modern homes are built airtight for energy efficiency and comfort. The result is that natural air infiltration rates are often too low to provide acceptable indoor air quality. The solution is to use an ERV to remove gaseous pollutants such as odors, winter-time excess humidity, formaldehyde, smoke, radon, vapors from cleaning products, and other chemicals. The removal of dust and other small particles from your home is not the function of an ERV.

1.2.2 When Should You Use Your ERV?

Use your ERV when windows are closed and you need to ventilate. When the outdoor air is warmer or cooler than comfortable, the ERV will allow a quieter, more secure home with the windows closed and will also save energy.

1.2.3 Using an ERV with Air-Conditioning

An ERV works very well with air-conditioning, because its “enthalpy-transfer” energy-exchange core will reduce the amount of moisture in the outside air that is brought in. ERVs are the preferred way to ventilate while air-conditioning because it brings in less moisture than any other ventilation method.

1.2.4 Controlling Excess Humidity During Cold Weather

When the ERV is first turned on at the beginning of the heating season (or when first installed), it will have to run full-time for several days to reduce indoor humidity levels. A properly set dehumidistat will do this automatically. If your control is the proportional timer type (PTL or FM), it should be set to “100%” for several days whenever you have a problem with excess humidity during cold weather.

2.0 UNIT PLACEMENT

2.1 BEFORE YOU BEGIN

Read all instructions before installing the unit. Also review supplemental instructions included with any controls that will be installed. Carefully unpack and inspect the unit for shipping damage. Open the access door and inspect inside the unit. Attach the four duct collars to the unit with the screws provided in the plastic small-parts bag.

2.2 LOCATION OF THE UNIT

Select a location so that:

- The supply air intake vent from the outside is placed a minimum of ten feet from any other contaminated exhaust vent, and is at least 30" long.
- The two ducts to the outside are as short and straight as possible, for the best performance from the system. Shorter duct runs help assure that the system is balanced: the amount of air brought in is equal to the amount of air exhausted.
- The door can be opened to allow cleaning the core and filters. Provide clearance at front of unit for service access to the blowers, filters, and energy exchange core. (24" minimum.)
- The exhaust outlet and supply air inlet on the outside of the building should be at least 10' apart to avoid cross-contamination. The exhaust duct should be about the same length as the supply air duct.
- The exhaust outlet should not dump air into an enclosed space or into any other structure.
- Do not install the exhaust outlet and supply air inlet through the roof. If these are the only available options call RenewAire technical support for help.

NOTE: Ducts inside a building that are connected to the outside must be insulated with a sealed vapor barrier on both the inside and the outside of the insulation.

Insulation must have an R-value of at least R-6, but R-8 is recommended.

The preferred mounting location for the unit is on a concrete foundation wall because the foundation wall will isolate any blower vibration.

If the unit is located in a conditioned space, only the OA and EA ducts need to be insulated.

For unconditioned space installations such as an attic or crawl space all four ducts must be insulated and have the application evaluated by a HVAC design professional or RenewAire.

The exhaust air and outdoor air terminations can be combined using RenewAire's concentric vent kit. If a combined termination is used with non-kitchen exhaust, then no minimum separation is required as long as the exhaust air concentration within the intake airflow does not exceed 10% as established by the manufacturer. (ASHRAE 62.2-2019, Section 6.68).

⚠ CAUTION

PROVIDE ADEQUATE SERVICE ACCESS FOR MAINTENANCE

The unit will require regular filter and core inspections. Install the unit where you can access the core for cleaning and replacing the filters, and where you can get at the wiring for installation and service.

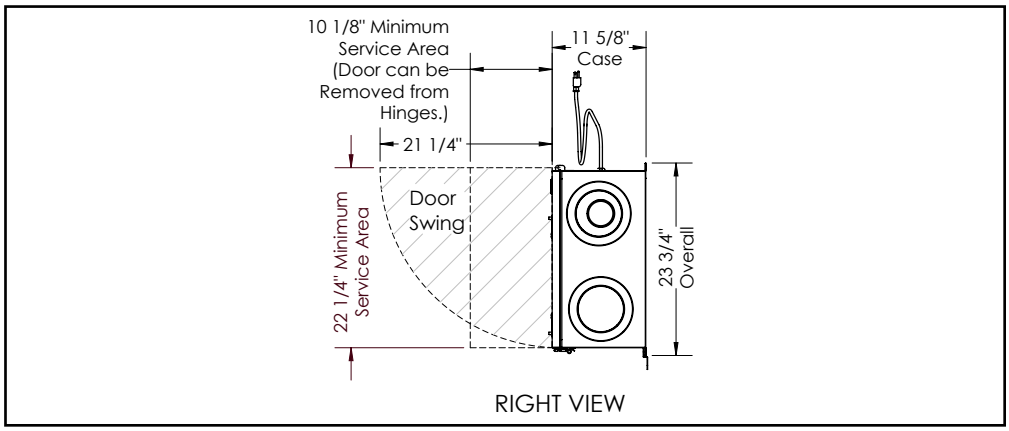

FIGURE 2.2.0 SERVICE CLEARANCES

2.3 DUCT SIZES AND INSULATION

IMPORTANT

It is important to understand and use the equipment airstream terminology as it is used in this manual. The airstreams are defined as:

- Outside Air (OA): Air taken from the external atmosphere and, therefore, not previously circulated through the system.
- Supply Air (SA): Air that is downstream of the enthalpic core and is either supplied to the occupied space or to an additional conditioner.
- Return Air (RA): Air that is returned to a heating or cooling appliance from a conditioned space.
- Exhaust Air (EA): Air that is removed from a heating or cooling appliance and discharged.

The Exhaust Air Duct and the Outside Air Duct connect the unit to the outside. Flexible insulated duct is typically used.

2.3.1 Duct Sizes

Exhaust Air & Outside Air (EA & OA):
- 6" round insulated duct, 8" round insulated duct may be used to maintain maximum airflow.

Supply Air & Return Air (SA & RA):
- 6" round or 8" oval rigid un-insulated.

2.4 DUCTWORK APPLICATIONS

- For houses without ducted heating or cooling systems—See Figure 2.4.1.
  In most houses one or two supply air grilles in a central part of the house provide effective distribution of the supply air into the home, particularly when the stale exhaust air is picked up at several points. Because the supply air is not fully conditioned, the supply air supply grilles should be located in a traffic area like a hallway or stairway rather than in a sitting area. If you want to get supply air into specific rooms with high occupancy, you can split up the supply air supply.
- For houses with ducted heating or cooling systems—See Figures 2.4.0, 2.4.2, and 2.4.3.
  Most units are installed with the supply air duct connected directly to a return duct for the main heating and cooling system. Be careful to connect the supply air duct at least three feet from the return plenum to minimize suction from the furnace blower. A connection closer to the furnace may result in unbalanced flow and associated problems.
- For installations that collect stale air from specific rooms in the home—See Figures 2.4.0 and 2.4.1.
  Locate stale air return grilles (RA) in rooms where moisture and odors are generated: bathrooms, the kitchen, and perhaps other areas where contaminants are generated such as in the home workshop. Return grilles in these other areas may be dampered so that they can be shut off when not in use. A central location such as a hallway is also acceptable but will not clear humidity and odors from baths and kitchens as rapidly. Locate stale air return grilles (RA) near the ceiling on inside walls. Stale air returns are usually easiest to install in interior partitions.
- Stale Air Return Grille Sizes:
  - Bathroom: 4" x 10" or 6" x 10"—40 to 60 sq. in.
  - Kitchen: 6" x 10"—60 sq. in.
- Can an ERV be used to ventilate bathrooms?
  A RenewAire ERV can be used as a central exhaust system in place of bathroom exhaust fans. Tie a grille in each bathroom directly back to the ERV—see Figure 2.4.0. A successful installation should provide at least 50 CFM of exhaust per moisture producing bathroom. When used for bathroom exhaust, the EV90 should be used for only one bathroom. Install a control in the bathroom ventilated by the ERV.
- For houses where radon is a concern.
  The first line of defense against radon should always be techniques that prevent the entry of radon into the home, such as under-slab suction, vented perimeter drainage, and crack sealing. However, if moderate levels of radon continue to be present, it is important that the unit slightly pressurize the basement, not de-pressurize the basement. Installation of this unit for radon mitigation is beyond the scope of this manual. Consult a radon mitigation professional.

See Figures 2.4.0 through 2.4.3 for examples of some common installation approaches.

NOTE: ERV blower may be operated separate from furnace blower.

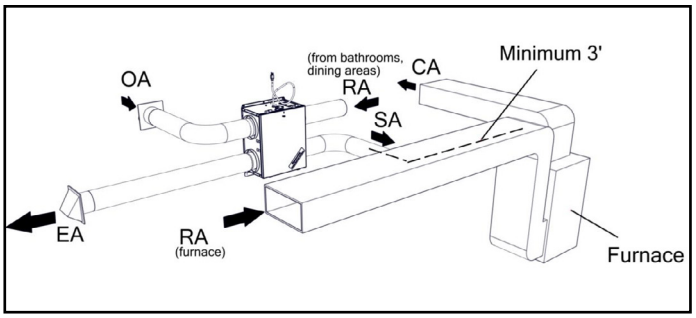

FIGURE 2.4.0 SEPARATE ROOM AIR PICK-UP—SUPPLY AIR TO FURNACE RETURN AIR TRUNKLINE

NOTE: ERV blower may be operated separate from furnace blower.
*Use caution to introduce SA at low velocity and where good mixing will occur to minimize discomfort from drafts.

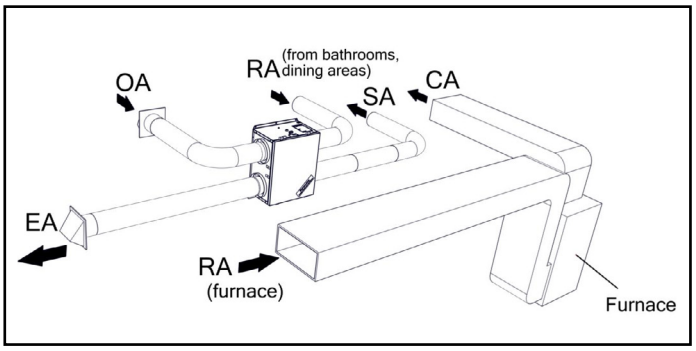

FIGURE 2.4.1 SEPARATE RETURN AIR AND SUPPLY AIR SUPPLY

NOTE: The furnace blower must be operated any time the ERV is operated. Use furnace fan “on” continuous low speed or optional FM control to cycle furnace fan on ERV.

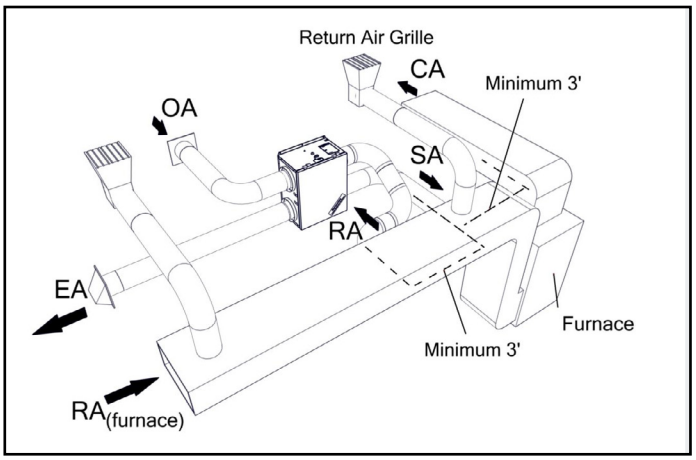

FIGURE 2.4.2 FURNACE RETURN AIR BACK INTO RETURN AIR

NOTE: ERV blower may be operated separate from furnace blower.

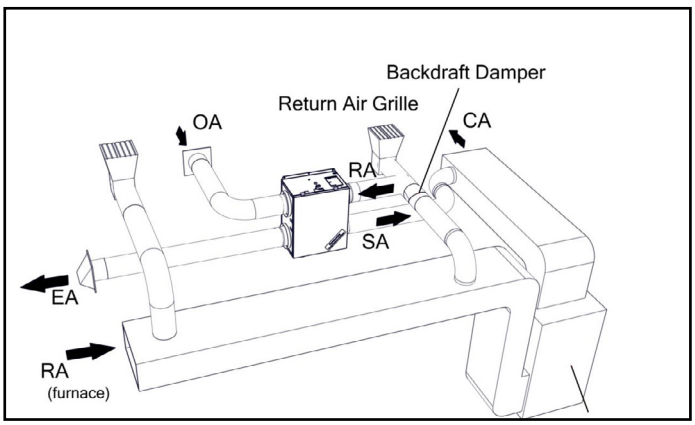

FIGURE 2.4.3 FURNACE RETURN AIR BACK INTO SUPPLY AIR

3.0 INSTALLATION

3.1 MOUNTING THE UNIT

- **UNIT MAY BE INSTALLED IN ANY ORIENTATION**
  Orient the unit for the simplest duct layout and connections.
- **MOUNT THE EV90 ON A CONCRETE FOUNDATION WALL**
  Mount hanging bracket to the wall with appropriate concrete anchors. Use pre-cut foam tape from small parts bag. Remove backing and apply two pieces of foam tape equally spaced along the unit's mounting flange to be held by the hanging bracket. Apply the other two pieces of foam over two holes that will be used for fastening, on the other flange. The tape should be applied in a "U" shape to cushion both the front and back of the integral flanges. Lift unit and slide unit flange into the hanging bracket. Using metal flat washers, fasten flange opposite hanging bracket to structure. Safety screws should similarly be installed passing through the hanging bracket and flange. Make sure the screws, which you must supply, are properly selected for the loads and substrate involved.
- **SUSPENDING THE EV90 FROM FLOOR JOISTS OR TRUSSES**
  The unit may be screwed directly to joists or trusses using the hanging bracket and integral flange. Mount as described for mounting to concrete foundation wall.

NOTE: The door is equipped with slide-off hinges. For the homeowner's convenience it is helpful to orient the unit so that the door does not drop off when it is unlatched.

NOTE: The hole layout on the integral mounting flanges and the hanging bracket are spaced for 16" on-center framing patterns.

⚠ CAUTION

Risk of injury when lifting unit and installing it overhead. Get a helper and wear eye protection.

3.2 ELECTRICAL CONNECTIONS

RenewAire offers the EV90 with a line cord for connection to an electrical outlet. If an EV90 with a line cord is installed and the installer desires to convert to field power wiring, should local codes permit, the line cord can be removed from the terminal block inside the electrical box. To do this, remove the unit electrical box, disconnect the line cord, replace with equivalent power wires and re-install the electrical box.

NOTE: Disconnection means: Most electrical codes require that the unit be disconnected for service. Depending on local codes, an electrical outlet for EV90 may satisfy this requirement.

3.3 INSTALLING OUTSIDE AIR AND EXHAUST AIR DUCTS

Ducts connecting the unit to the outside must be well-insulated. Vapor barrier is required on both inside and outside of the insulation.

Band or tape inner duct liner to inner flange of appropriate collar. Drive a sheet metal screw through liner to secure duct spiral wire to collar. Straighten insulation, and slide outer duct jacket onto the outer flange of the duct collar. Secure with band or tape.

The inlets and outlets should be screened against insects and vermin and shielded from the weather to prevent the entry of rain or snow.

⚠ CAUTION

The vapor barrier should be continuous and sealed against air and moisture leakage! If not, condensation or ice may form in cold weather on the duct surface or in its insulation.

⚠ CAUTION

Do not place any stale air returns in garages.

⚠ CAUTION

Do not connect Dryers to unit. Do not connect Range Hoods to the unit.

NOTE: Seal all duct collars on a unit to minimize air leakage.

3.4 INSTALLING RETURN AIR DUCTS

All the stale air returns are connected by ducts to the unit. Generally, empty stud cavities are used for returns as is often done with cold air returns for the furnace, using standard duct boots to connect to six inch pipe at the bottom or top of the wall cavity. Always be sure to seal all joints with duct sealant or tape. Some local codes may require metal ducting all the way from the boots to the stale air grilles. Use rigid ducts to allow the air to move freely and easily through the ducts. See chart under Exhaust and Outside Air Ducts to size your ductwork.

If duct runs are very long (over 30' of flex duct for 90 CFM) or have excessive bends or elbows or if maximum air flow rates are required, eight inch insulated flexible duct should be used. The outer flange of the duct collar can be used for both the inner and outer jacket of the flexible duct. Care must be taken to ensure that the duct is securely fastened and sealed to the duct collar.

DO NOT USE MORE FLEX DUCT THAN NECESSARY!
Flex duct is much more resistant to airflow than rigid duct; longer runs of flex duct will reduce the ventilation performance of your system. Stretch flex duct and avoid sharp bends.

⚠ CAUTION

Install Supply Air Inlet Away From Sources of Contaminants.

- Do not locate the supply air inlet where vehicles may be serviced or left idling.
- The supply air inlet should be at least 10' away from any exhaust such as dryer vents, chimneys, furnace and water heater exhausts, or other sources of contamination or carbon monoxide.
- Install 12" above ground level.
- Never locate the supply air inlet inside a structure.

3.5 CONTROLS

⚠ WARNING

DANGER OF ELECTRICAL SHOCK WHEN SERVICING AN INSTALLED UNIT.

Always unplug unit before connecting or servicing controls.

For an installation in which the ERV should run continuously in order to provide the required ventilation rate for the home, no controls are needed. However, in most installations, control over the unit operation is desired and this is best provided by an optional RenewAire Percentage Timer Control (PTL or FM).

Percentage timers (PTL or FM controls for EV90) may be located anywhere that is convenient. A typical location for either control is next to the home's thermostat. Percentage timers operate the ERV to provide regular background ventilation of the home.

EV90 installations that pull stale air from specific rooms, such as bathrooms, should have optional RenewAire Push-button Lighted (PBL) Controls in those rooms. The secondary operating controls allow the system to be turned on from various locations in the house.

3.5.1 Installing Controls

The EV90 is offered with a control board for connection to external controls.

- Optional Controls:
  RenewAire offers a variety of controls specifically designed to work with the EV90. These include: PTL (a two wire percentage timer), FM (a six wire percentage timer that will interconnect with the furnace blower), and PBL (point of use push button control). Other controls that throw an unpowered switch may also be used.
- Typical Control Schematic:
  Various wiring designs can be used to properly control the unit and meet safety and code concerns. Consult your electrician for an electrical design to meet your needs.

The schematic below (Figure 3.5.0) shows a typical control system: a PTL percentage timer plus two PBL push-button controls.

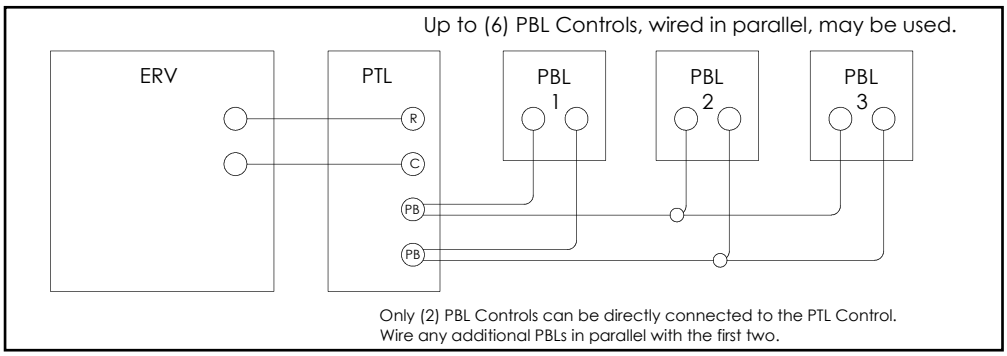

FIGURE 3.5.0 TYPICAL CONTROL SCHEMATIC

See installation manuals for the control(s) you select for wiring diagrams and specific instructions.

- If **NOT** connecting controls to the EV90:
  Make a jumper out of a short piece of wire. Connect the jumper wire to the screw connections of the terminal strip on the outside of the unit. ERV runs full-time once its power cord is plugged in.

4.0 OPERATION

4.1 STARTING UP THE UNIT

- Inspect your installation to be sure all duct work is correctly installed and sealed, that filters are in place, and controls (if any) are connected.
- Shut and latch the door to the unit.
- Provide 115 VAC to the unit. It may start immediately.
- Use control, if any, to turn on the unit. Check operation of the control(s).
- Check that the unit's safety interlock switch turns off the unit when the door is opened.

4.2 VERIFYING UNIT PERFORMANCE

4.2.1 Airflow

Airflow should be occurring in both airstreams. Sometimes the easiest place to confirm that air is moving is at the external wall caps. If exact airflow is critical, it may be desirable to permanently install flow measuring stations and manometers. These can also be used to determine when filters should be cleaned or changed.

4.2.2 Use Static Taps to Measure Airflow Rates

See Differential Static Across Core tables in Section 4.4.

NOTE: The unit is considered balanced if the difference between the two airflows is not more than 10 CFM.

4.2.3 Use Damper to Balance Airflow to Desired Rates, if necessary

The ERV's blower motors are well suited for volume control by dampers on the inlet of the unit. One balancing damper is provided in the unit parts tray.

After measuring the airflow of the unit, the sliding damper may be used to balance airflow if desired. Place the damper between the duct collar and the unit for the inlet of the airstream recording higher flow.

NOTE: Install the damper so that it slides in the space between the duct.

Slowly move the damper further into the duct until the desired airflow is recorded. Secure the damper in place using 1/8" tek screws (provided).

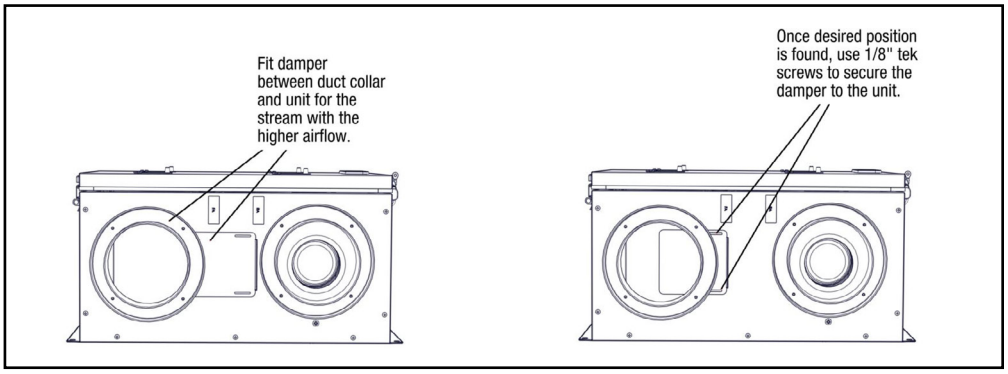

FIGURE 4.2.0 DAMPER INSTALLATION

NOTE: Drilling through the case while the unit is running may cause metal shards to be drawn into the unit.

4.3 MEASURING AIRFLOW

4.3.1 Equipment Required

- A magnehelic gauge or other device capable of measuring 0–1.0 in. water of differential pressure.
- 2 pieces of natural rubber latex tubing, 1/8" ID, 1/16" Wall works the best.

NOTE: Be sure to remove cap from pressure port before inserting tubing. Insure tubing is well seated in pressure ports.

4.4 MEASURING CROSS CORE STATIC PRESSURE

The individual differential static pressures (DP) are measured using the installed pressure ports located in the front of the units core access doors.

Do not relocate pressure ports.

- To read SCFM of Supply Air (SA) install the “high” pressure side (+) of your measuring device to the Outside Air (OA) port and the “low” pressure side (-) to the Supply Air (SA) port.
- To read SCFM of Room Air (RA) install the “high” pressure side (+) of your measuring device to the Room Air (RA) port and the “low” pressure side (-) to the Exhaust Air (EA) port.
- If gauge drops below zero, reverse tubing connections.
- Use the reading displayed on your measurement device to cross reference the CFM output using the conversion chart.

NOTE: The tubing should extend in the pressure port approx. 1".

⚠ CAUTION

Make sure clean filters are installed before balancing airflow. Dirty or clogged filters reduce airflow through the unit.

NOTE: Be sure to replace cap into pressure port when airflow measuring is completed.

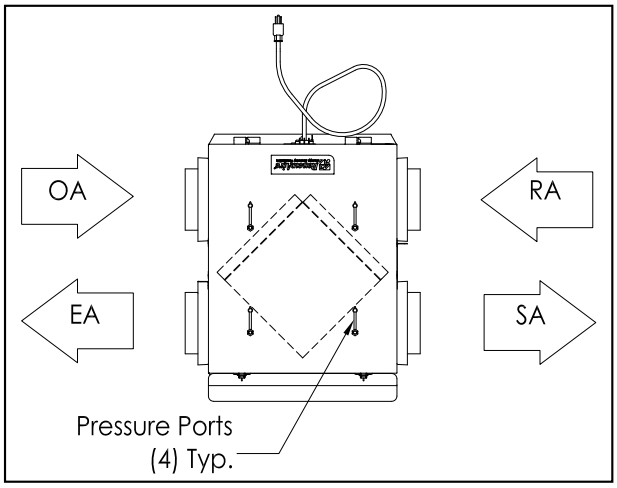

FIGURE 4.4.0 AIRFLOW DIAGRAM

NOTE: For best performance the airflow rate for both the Supply Air and the Exhaust Air should be roughly equal (“balanced”). In some facilities a slight positive or negative pressure in the building is desired. RenewAire ERVs can generally operate with a flow imbalance of up to 20% without significant loss in energy recovery efficiency.

DIFFERENTIAL STATIC ACROSS CORE DSP VS. CFM					
EV90		DSP	0.10	0.20	0.30
	Supply Air (SA)	CFM	42	84	127
	Room Air (RA)	CFM	42	84	127

⚠ CAUTION

Make sure clean filters are installed before balancing air flow. Dirty or clogged filters reduce airflow through the unit.

⚠ CAUTION

The proper airflow range for this model is 40-110 CFM.

⚠ WARNING

RISK OF FIRE, ELECTRIC SHOCK, OR INJURY.

- Before servicing or cleaning the unit, unplug the line cord.
- Make sure unit is not running before opening its door. Blower wheels are sharp and can cut.
- Do not disable the interlock switch: it is there for your safety.

⚠ CAUTION

DO NOT WASH THE ENERGY EXCHANGE CORE.

Keep it away from water or fire to avoid damaging it. Always handle the core carefully.

NOTE: The filters should be replaced after they have been cleaned several times.

NOTE: Filters must be used or the face of the energy exchange core will become blocked by dust and reduce unit efficacy. The filters supplied in the unit are usually able to keep the energy exchange core clean for many months. Finer filters can be used but must be cleaned more often.

5.0 MAINTENANCE

Keep your ERV performing at its best by cleaning it as described below.

5.1 TO CLEAN THE ENERGY EXCHANGE ELEMENT

1. Remove the filters (see below).
2. Vacuum the exposed faces of the energy exchange core with a soft brush attachment.
3. After servicing the filters, re-install them (see below).
4. Vacuum out dust from the rest of the unit case. Dust collects only on the entering faces of the energy exchange core. The interior of the energy exchange core stays clean even if the core faces are dust covered. The core flutes move the air in a laminar airflow such that particulate deposition is maintained at virtually nill.

5.2 INSPECT AND CHANGE THE FILTERS REGULARLY

Service filters every three months when the unit is in regular use or as needed to keep them reasonably clean.

1. Release latches and carefully swing access door open. Remove the door by sliding to one side.
2. Remove filter clips.
3. Pull the filters out.
4. Vacuum with a hose attachment.
5. Re-install filters and filter clips, see Section 5.5 Service Parts. Orange side of filter should face the core.
6. Re-install door, and fasten latches.

The primary contact for replacement filters for your RenewAire unit is the installing contractor. As an alternative, you may wish to produce your own filters. Please follow these instructions:

Filters may be cut from a sheet or roll of ¾"–1" firm, spun polyester filter “hog hair” media or material, similar to the existing filter in the residential unit.

The size of each filter (2 required per unit) is as follows:

EV90 9 ½" x 10 ½"

Call your HVAC contractor or RenewAire for further information.

5.3 MOTOR MAINTENANCE

The blower/motor package needs no lubrication:
Vacuum clean the blower wheels at the same time you clean the face of the energy exchange core. Confirm blower wheel is not rubbing against the blower inlet or housing by rotating wheel manually.

5.4 GENERAL CLEANING AND INSPECTION

Perform general cleaning and visual inspection when changing filters.

1. Remove paper, leaves, etc. from inlet and outlet screens.
2. Inspect for insect nests.

5.5 SERVICE PARTS

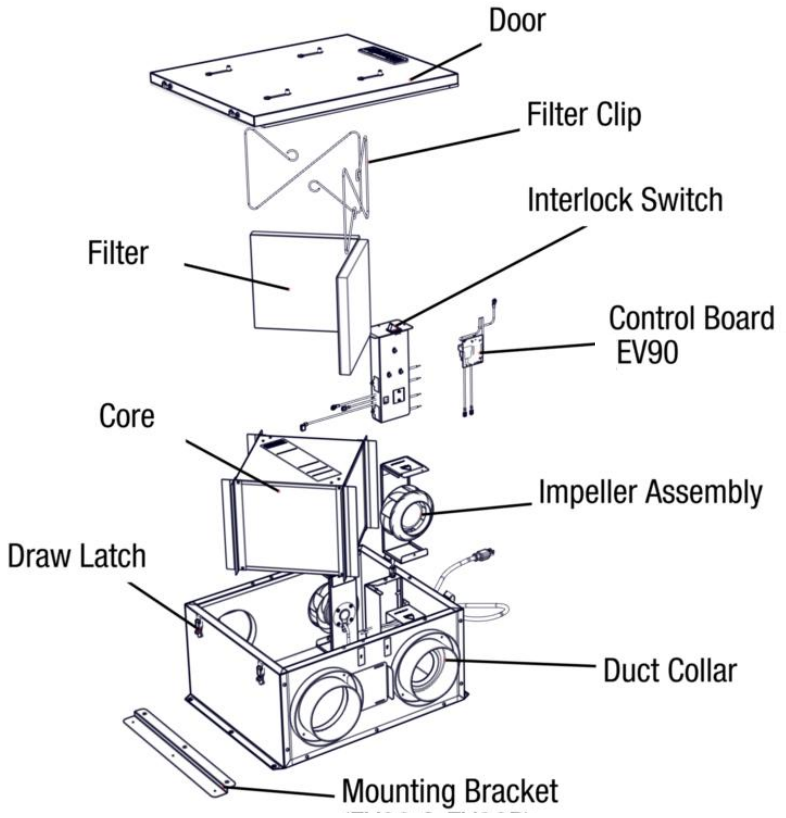

FIGURE 5.5.0 SERVICE PARTS

6.0 FACTORY ASSISTANCE

In the unlikely event that you need assistance from the factory for a specific issue, make sure that you have the information called for in the Unit Information page in the front of this manual. The person you speak with at the factory will need that information to properly identify the unit.

To contact RenewAire Customer Service:

Call 800-627-4499

Email: RenewAireSupport@RenewAire.com

About RenewAire

For over 40 years, **RenewAire has been a pioneer in enhancing indoor air quality (IAQ)** in commercial and residential buildings of every size. This is achieved while maximizing sustainability through our fifth-generation, static-plate, enthalpic-core **Energy Recovery Ventilators (ERVs) that optimize energy efficiency**, lower capital costs via load reduction and decrease operational expenses by minimizing equipment needs, resulting in significant energy savings. Our ERVs are competitively priced, simple to install, easy to use and maintain and have a quick payback. They also enjoy the industry's best warranty with the lowest claims due to long-term reliability derived from innovative design practices, expert workmanship and **Quick Response Manufacturing (QRM)**.

As the pioneer of static-plate core technology in North America, RenewAire is the largest ERV producer in the USA. We're **committed to sustainable manufacturing** and lessening our environmental footprint, and to that end our Waunakee, WI plant is 100% powered by wind turbines. The facility is also one of the few buildings worldwide to be LEED and Green Globes certified, as well as having achieved ENERGY STAR Building status. In 2010, RenewAire joined the Soler & Palau (S&P) Ventilation Group in order to provide direct access to the latest in energy-efficient air-moving technologies. For more information, visit: renewaire.com

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Soler&Palau Ventilation Group
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Family of Brands

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