



# Installation Instructions ERV/PRV Downdraft Vent

## READ AND SAVE THESE INSTRUCTIONS

TESTED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI Z 21.1 STANDARD FOR HOUSEHOLD GAS COOKING APPLIANCES, ANSI/UL 858 HOUSEHOLD ELECTRICAL RANGES, CAN/CSA-C22.2 NO. 64 STANDARD FOR HOUSEHOLD ELECTRIC COOKING AND LIQUID HEATING APPLIANCES, AND UL 507 ELECTRIC FANS.

## CONVENTIONS USED IN THESE INSTRUCTIONS



### WARNINGS:

Must be followed carefully to avoid personal injury or damage.



### NOTES:

Contain helpful hints and tips to facilitate the installation.

### IMPORTANT

1. Before beginning installation, please thoroughly read and become familiar with these instructions.
2. Installation and service must be completed by a qualified installer or service agency.
3. Installer: Please leave these Installation Instructions with the owner.
4. Owner: Please keep these instructions for local electrical inspector's use and for future reference.
5. Read the accompanying Use & Care Manual prior to operating this appliance.

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# IMPORTANT SAFETY INSTRUCTIONS

## WARNINGS:

1. Read all instructions before using the appliance.
2. Install or locate this appliance only in accordance with these installation instructions.
3. Use this appliance only for its intended use as described in this manual.
4. Do not operate this appliance if it has a damaged electrical cord or plug, if it is not working properly or if it has been damaged or dropped.
5. This appliance should be serviced only by qualified service personnel. Contact the nearest DACOR Authorized Servicer at (800) 772-7778, or at [www.dacor.com](http://www.dacor.com) for examination, repair or adjustment.
6. Do not cover or block any openings on the appliance.

## WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- a) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- b) Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guidelines and safety standards such

as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.

- c) When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- d) Ducted fans must always be vented outdoors.
- e) To reduce the risk of fire, use only metal duct work to install raised vents.
- f) For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.

## WARNING:

TO REDUCE THE RISK OF FIRE, USE ONLY METAL DUCTWORK.

## CAUTION:

To Reduce the Risk of Fire And Electric Shock, Install This Downdraft Ventilation Unit Only with Remote Blower Models Rated Maximum 8 Amp (total of all interconnected remote blowers).

## GROUNDING INSTRUCTIONS

- This appliance must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This appliance is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet this is properly installed and grounded.

## WARNING:

Improper grounding can result in a risk of electric shock.

- Consult a qualified electrician if the grounding instructions are not completely understood, or if doubt exists as to whether the appliance is properly grounded.
- Do not use an extension cord. If the power supply cord is too short, have a qualified electrician install an outlet near the appliance.

## CAUTION:

To reduce risk of fire and to properly exhaust air, be sure to duct air outside – Do not vent exhaust air into spaces within walls or ceilings or into attics, crawl spaces or garages”

## Verifying the Package Contents

- Use and Care Manual
- Anchoring Legs

## Installation Planning

A qualified technician must complete the installation of this appliance. Proper installation is your responsibility.

## WARNING:

**Failure to disconnect power may result in electrical shock or fire hazard! If the electric service provided does not meet the product specifications, do not proceed with the installation. Call the selling dealer or a licensed electrician.**

## Electrical Power Supply Requirements

It is the owner's responsibility to ensure that the electrical connection of this appliance is performed by a qualified electrician. The electrical installation, including minimum supply wire size and grounding, must be in accordance with the National Electric code ANSI/NFPA 70-2002\* (or latest revision) and local codes and ordinances.

\*A copy of this standard may be obtained from:  
National Fire Protection Association  
1 Batterymarch Park  
Quincy, Massachusetts 02269-9101

The correct 120VAC, 60Hz, 15A circuit must be supplied for this appliance from a separate, grounded, circuit that is protected by a properly sized circuit breaker or time delay fuse.

## Duct Planning

### WARNINGS

1. To reduce the risk of fire and to properly exhaust air, ducted fans must be vented to outside. Do not vent exhaust air into spaces within walls, ceilings, attics, crawl spaces or garages.
2. Improper installation, adjustment, alteration, service, or maintenance can cause personal injury or property damage.
3. To reduce the risk of fire, use only ductwork materials deemed acceptable by state, municipal and local codes.

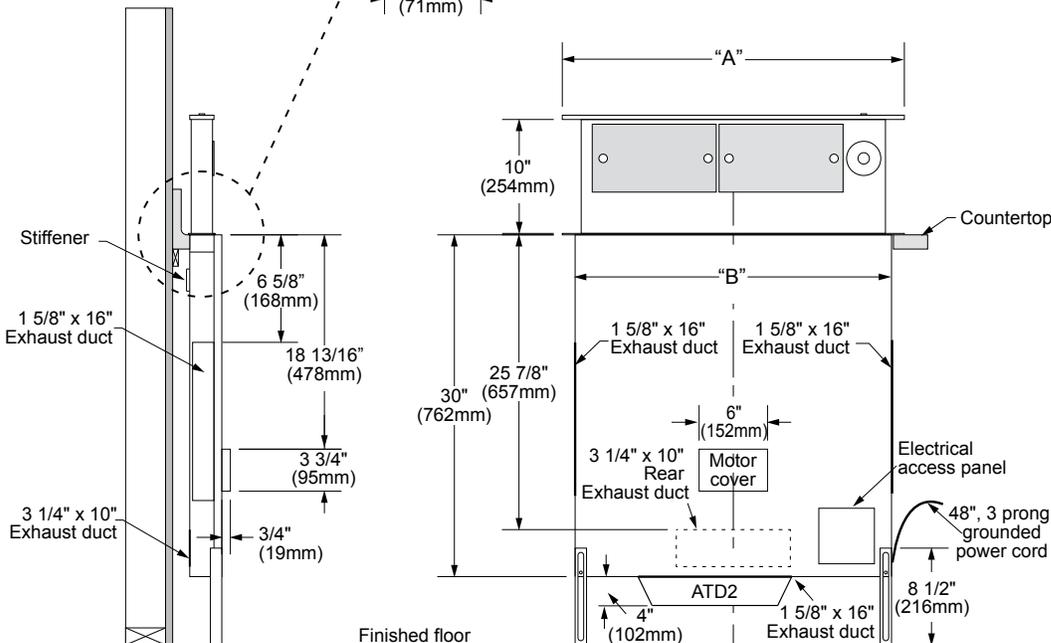
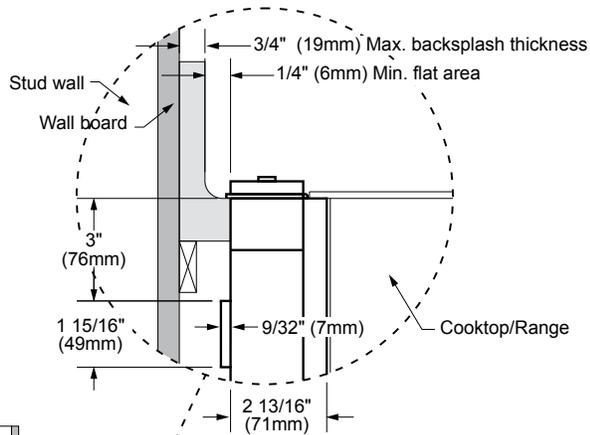
### NOTES:

1. Best performance is achieved by using round duct instead of rectangular, especially when elbows are required.
2. If multiple elbows are needed, ensure that there is a minimum of 24" of straight duct between any two elbows.
3. Avoid "S" or "back to back" configurations caused by adjacent elbows.

## Overall Dimensions

Raised Vent System Specifications			
Raised Vent Model No.	For Use With	For Use with Blower	Duct Size
ERV/PRV30	30" Ranges/Cooktops	REMP3/16	3 1/4"x10", 8" & 10"
ERV/PRV36	36" Cooktops	REMP3/16	3 1/4"x10", 8" & 10"
PRV46	46" Cooktops	REMP3/16	3 1/4"x10", 8" & 10"
ERV48	48" Cooktops	REMP3/16	3 1/4"x10", 8" & 10"

For detailed information on the remote blowers, refer to the Remote Blowers Installation Instructions.



ERV / PRV Overall Dimensions  
Side View

ERV / PRV Overall Dimensions  
Front View

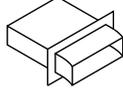
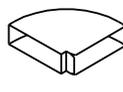
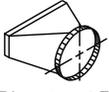
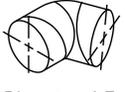
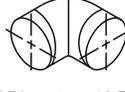
Model	Width "A"	Width "B"
ERV/PRV30	30" (762mm)	27 3/4" (705mm)
ERV/PRV36	36" (914mm)	33 3/8" (848mm)
PRV46	46" (1168mm)	43 3/8" (1102mm)
ERV48	48" (1219mm)	43 3/8" (1102mm)

4. Thermal breaks, such as a short section of non-metallic duct, should be used in areas of extreme cold.
5. A back-draft damper at the duct outlet may also be required.
6. Do not use flexible metal duct.
7. Do not use ductwork that is smaller in cross-sectional area than the recommended size duct.
8. Do not rely on duct tape alone to seal duct joints. Use sheet metal screws as require to support the duct weight.
9. The raised vent and cooking appliance(s) must be removable if service is required.
10. Be certain that the ductwork does not interfere with floor joists or wall studs.
11. It is important to keep a minimum number of turns in the duct run, and to keep the run as short as possible.
12. Do not restrict the air flow by reducing the duct cross-sectional areas when making hard joints or squeezing through a tight area.
13. With concrete slab construction, "box-in" the ductwork to prevent it from collapsing when the wet concrete is poured. Also allow room for electrical conduit.
14. Cross-drafts or air currents caused by adjacent open windows or doors, HVAC outlets, ceiling fans, and recessed ceiling lights reduce vent efficiency.

Higher volumes of air exhausted by the vent system result in better overall removal of smoke and fumes from the kitchen. Longer duct runs and greater numbers of duct transitions reduce air volume, therefore it is **extremely important to keep duct runs as short and straight as possible.**

To ensure that your installation meets this requirement, add the actual straight length of duct to the equivalent straight length of all duct fittings to determine the total equivalent straight length of duct. (Refer to the table above, which shows various common duct fittings with their equivalent straight lengths for various common duct sizes). If this total equivalent straight length is less than or equal to the maximum limits specified, then the installation is proper. Consider the duct size that corresponds to the majority of the duct used in the installation.

Model #	Duct Size	Maximum Equivalent Straight Lengths	
		REMP3	REMP16
ERV/ PRV	8"	50'	60'
	10"	40'	70'
	3 1/4"x10"	40'	60'

3 1/4" x 10" 90° Elbow  15 Feet	3 1/4" x 10" 45° Elbow  7 Feet	3 1/4" x 10" Wall Cap  2 Feet	3 1/4" x 10" 90° Flat Elbow  20 Feet
Transition 3 1/4" x 10" to Round  6" Diameter - 4 Feet 7" Diameter - 4 Feet 8" Diameter - 4 Feet 10" Diameter - 4 Feet	45° Elbow - Round Duct  6" Diameter - 6 Feet 7" Diameter - 5 Feet 8" Diameter - 3 Feet 10" Diameter - 2 Feet	90° Transition 3 1/4" x 10" to 8" Round  25 Feet	90° Elbow - Round Duct  6" Diameter - 12 Feet 7" Diameter - 10 Feet 8" Diameter - 7 Feet 10" Diameter - 5 Feet

Sample problem:

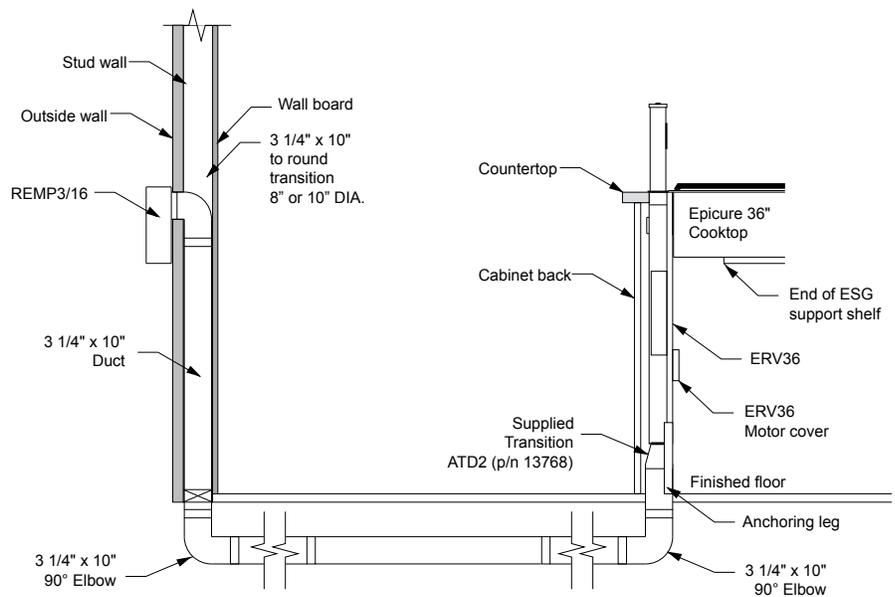
Given a remote system installation having 20 feet of 3 1/4" x 10" rectangular duct, one (1) 90-degree 3 1/4" x 10" elbow, and one (1) 3 1/4" x 10" to 8" or 10" round transition, would this installation be proper?

Solution:

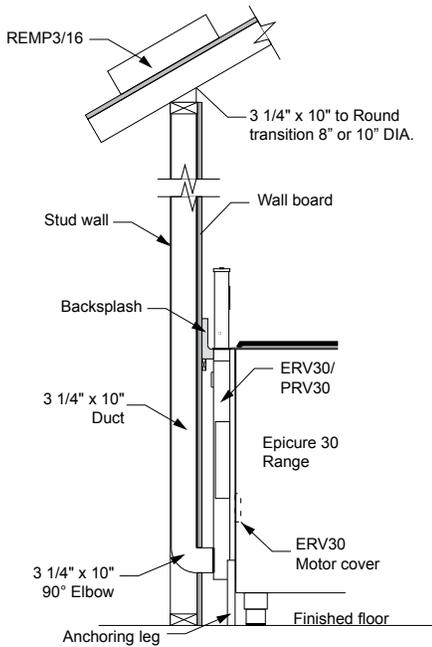
1. Add the total length of straight duct: 20' (of 3 1/4" x 10") = 20'.
2. Using Table above, determine the equivalent straight length of all duct fittings: 90-degree 3 1/4" x 10" elbow = 15'. 3 1/4" x 10" to 8" or 10" round transition = 4'.

3. Add (1) and (2) to determine the total equivalent straight length of the complete duct system: 20' + 15' + 4' = 39' total equivalent straight duct length.
4. For the remote system with 3 1/4" x 10" duct, the maximum allowable total equivalent straight length of duct is 40 feet. Thus, this proposed installation is proper.

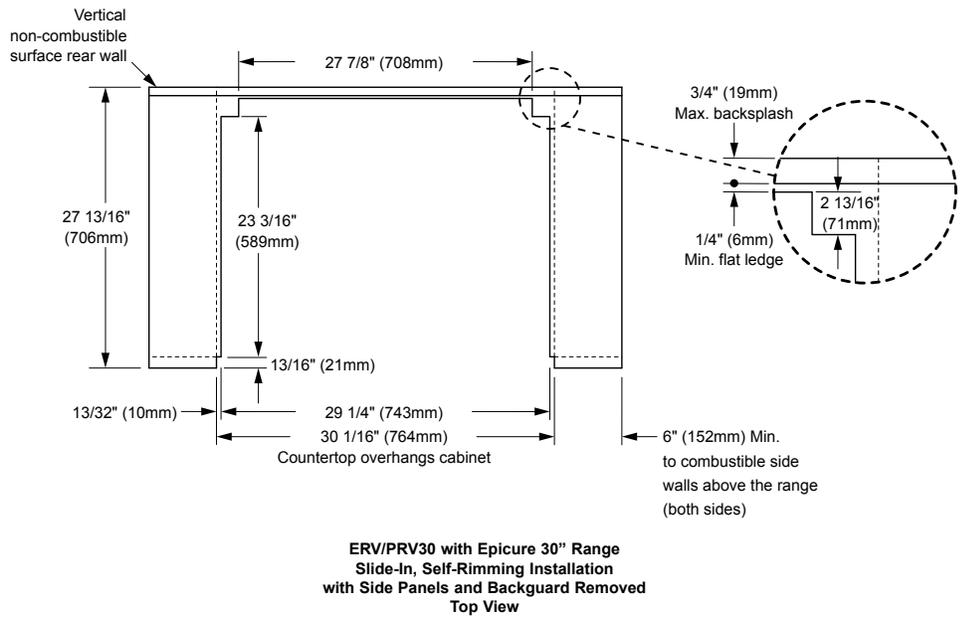
After determining that your proposed ductwork meets the maximum duct length requirement, proceed with the location planning.



ERV Raised Floor Island Installation



**ERV/PRV Against Wall Installation with REMP3/16 on the Roof**



**ERV/PRV30 with Epicure 30\"/>**

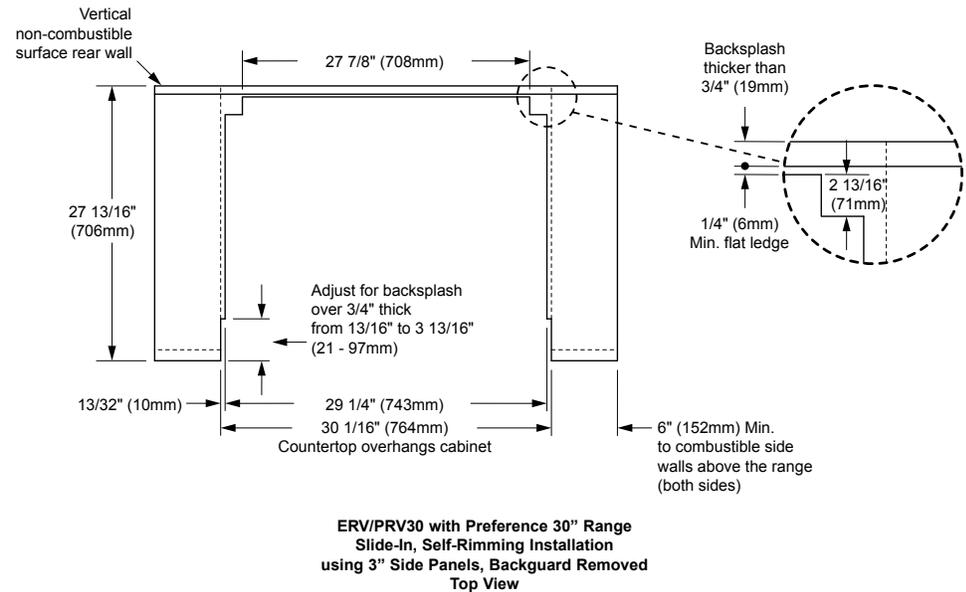
### Countertop and Cabinet Preparation

#### **⚠ WARNINGS:**

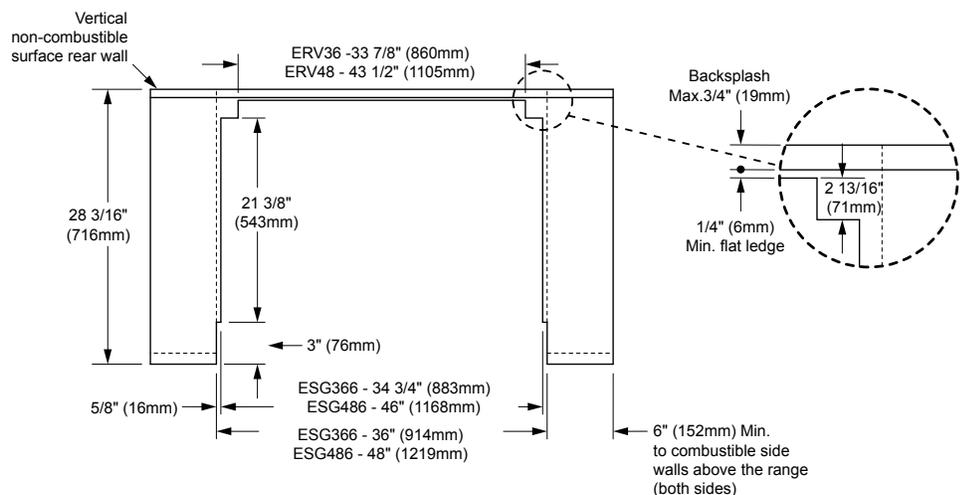
- 1. To reduce the risk of personal injury caused by reaching over a hot appliance, cabinet storage space located directly above the cooktop should be avoided.**
- 2. Do not store combustible materials or items adversely affected by heat in cabinet areas above the appliance.**
- 3. Follow the instructions regarding minimum safe clearances and installation location. Failure to do so may result in a fire or safety hazard.**

Plan the installation so that all required minimum clearances between the cooktop, overhead cabinets and adjacent vertical walls are provided. Refer to the cooktop/range installation instructions for the minimum dimensions specific to the particular appliance being installed.

The DACOR Raised Vent System is designed to remove the contaminants and by-products that result when cooking with gas or electric appliances. The vent system consists of the vent intake along with a remote blower. The raised vent downdraft systems are compatible for use with select DACOR cooktops and ranges, therefore, these instructions offer specific guidelines for mounting the raised vents behind DACOR cooktops and ranges.



**ERV/PRV30 with Preference 30\"/>**



**ERV with Epicure Cooktops Top View**

Dacor Model No.	Cutout "A"	Cutout "B"
CER304	28 1/2"	27 1/2"
CER365	34 1/2"	33 1/2"
ETT304	28 1/2"	27 1/2"
ETT365	34 1/2"	33 1/2"
SGM304	27 1/2"	27 7/8"
SGM364	33 3/4"	33 3/4"
SGM365	33 3/4"	33 3/4"
SGM466	44 1/2"	43 1/2"
SGM464GG	44 1/2"	43 1/2"

## Connecting the Exhaust Duct

### NOTE:

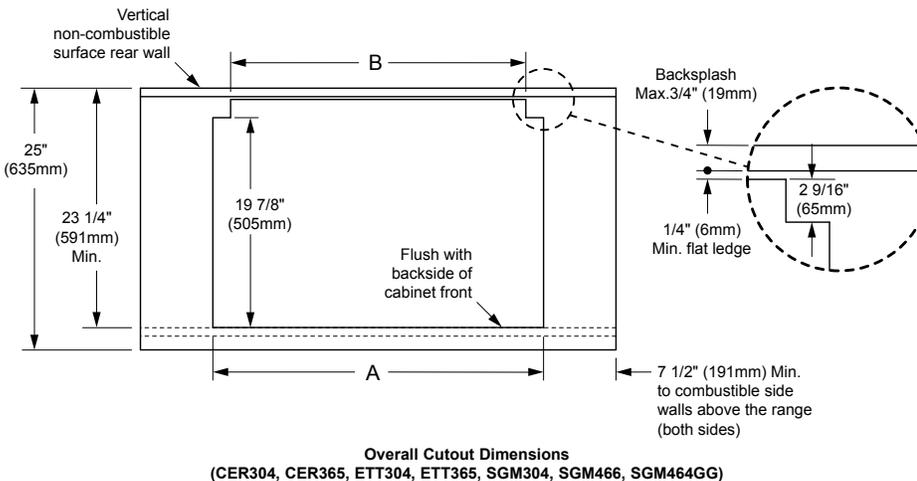
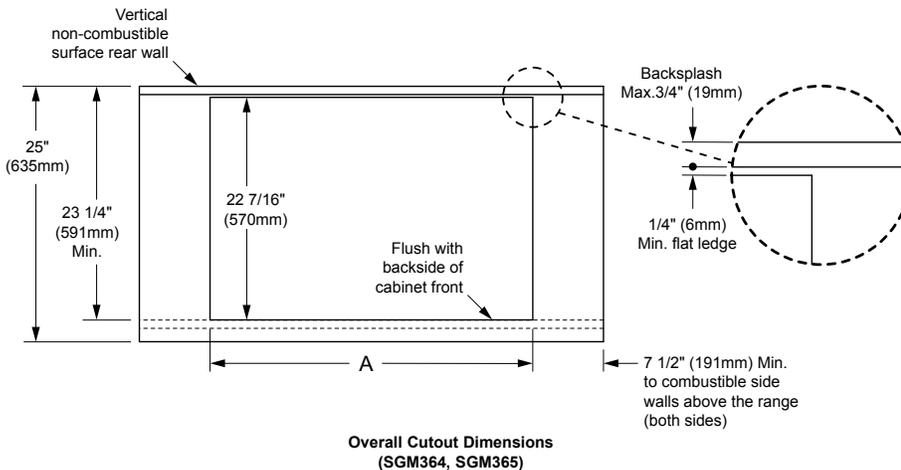
Use duct tape to seal the connection between the blower outlet and duct. Support the duct weight as necessary to ensure sealed joints.

For the side or bottom knockouts use the supplied transition (ATD2-P/N 13768). For the rear knockout attach a 3 1/4" x 10" duct.

## Electrical Connection

### WARNINGS:

1. Ensure that the power supply is disconnected before proceeding.
2. Verify that the power supply matches the ratings found on the appliance data plate before proceeding.
3. The complete appliance must be properly grounded at all times when electrical power is applied.
4. Do not ground the appliance with the neutral (white) house supply wire. A separate ground wire must be utilized.
5. If aluminum house supply wiring is used, splice the appliance copper wires to the aluminum house wiring with special connectors designed and agency-certified for this purpose. Follow the connector manufacturer's recommended procedure carefully. Improper connection can result in a fire hazard.
6. Failure to complete electrical connections properly may result in a damaged or non-functional system. Follow the wiring diagrams carefully to ensure a proper installation.



### NOTE:

Verify that the raised vent and blower being installed are a matched pair before beginning the installation.

For installation of the raised vent system, provide an opening in the countertop as shown in the Countertop Preparation Section. Position the cutout so all required minimum clearances are met. Make certain that the minimum flat countertop area meets or exceeds the combined overall width and overall depth, as shown.

## Installing the ERV/PRV

### NOTE:

The vent must be installed in a vertical orientation. Do not mount the vent on a slant or angle.

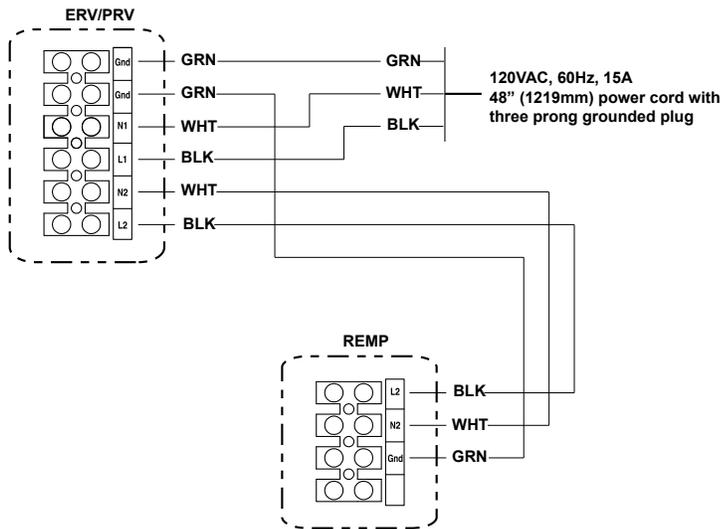
Remove the knockout from the plenum by cutting the tape and metal cross overs to remove the insert.

Loosely attach the anchoring legs to the left and right sides of the plenum using the hex nuts provided. Place the vent into the rear of the countertop cutout. Adjust the anchoring leg height so that the end caps are gently resting on the counter, then tighten the hex nuts. Secure the anchoring legs to the cabinet/floor with the screws provided.

Both vent systems require a properly grounded, 120 VAC, 60 Hz., 15 Amp electrical service. Max. full line load is 8 amps. Always use a dedicated circuit. Do not use the same circuit that the cooktop is using.

### NOTE:

The power cord is to be routed beneath the appliance and routed away from heat generated by the cooktop.



Wiring of ERV/PRV with REMP

Make all electrical connections between the vent and blowers, then connect power to the vent as per the wiring diagrams. Use wire nuts provided and electrical tape to secure all wiring connections at the blowers.

### Cooktop/Range Installation

#### WARNING:

1. The cooktops and ranges have very different installation requirement. Please make sure you read the Installation Instructions for the accompanying cooktop/range thoroughly before continuing the installation process.
2. After the cooktop/range has been installed ensure that the top cap on the vent intake does not catch on the back edge of the cooktop/range when the intake is lowered. If interference does occur, adjust the position of the cooktop/range by moving it against the front edge of the countertop cutout, then re-secure the cooktop/range to the countertop. Also, ensure that the vent anchoring legs have been properly secured to the cabinet base using the screws provided in the instructions envelope. Failure to eliminate interference may result in permanent damage to the vent.

### Verifying the Operation

#### WARNINGS:

1. If the vent system is not operational after completion of the installation, do not attempt to repair it. See the Problem Solving Section of the Use & Care Manual, then call a qualified service technician if the system is still not functional.
2. Always disconnect the appliances from the electrical power when servicing them.
3. Install the two (2) front filters prior to operating the vent. Refer to the Use & Care Manual for instructions regarding filter installation.
  - Press the top cap up/down switch once to raise the ERV/PRV to its operating position.
  - In the up position, turn the variable speed control switch in both directions to verify that the blower is operating correctly.
  - Turn the variable speed control switch counter-clockwise to hi-speed and clockwise to low speed.
  - Press the top cap up/down switch once to lower the ERV/PRV pinnacle.

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**Specifications contained within are subject to change without notice.  
No liability is assumed by DACOR for changes in specifications.**

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Corporate Phone: (800) 793-0093