



**INDOOR AIR QUALITY**  
**ERV**  
**ENERGY RECOVERY VENTILATOR**  
**60 HZ**

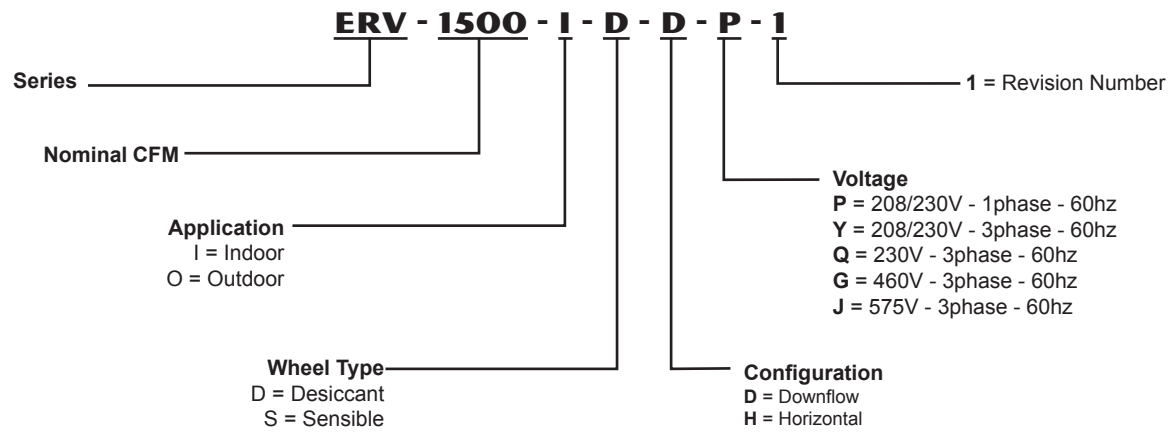
**PRODUCT SPECIFICATIONS**

Bulletin No. 210245  
 March 2010  
 Supersedes April 2009



**Indoor / Outdoor**  
**500 to 10,000 cfm Capacity**

**MODEL NUMBER IDENTIFICATION**



## FEATURES

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### APPROVALS

Energy Recovery Wheel included in unit is rated in accordance with AHRI standard 1060-2005.

Units are approved by CSA (NRTL/C).

### WARRANTY

**Energy recovery wheel assembly - five year** limited warranty.

**All other covered components - one year** limited warranty.

### APPLICATIONS

Designed for applications requiring outdoor air to be utilized in a HVAC system.

Allows fresh air to be brought into the building while recovering up to 88% of the energy being exhausted out of the building.

Reduces energy consumption and the cost of heating and cooling.

Can be applied as a stand-alone unit or in combination with a rooftop package unit. Can be installed inside a building with ducts to outside. See typical indoor application.

NOTE - Contact your local Lennox Commercial Sales Representative for ordering information.

### OPERATION

Energy Recovery Ventilator contains energy recovery wheel designated desiccant or sensible.

Rotating through counter flowing exhaust and supply air streams at 50-60 revolutions per minute, the energy recovery wheel transfers energy from the warmer air stream to the cooler air stream.

Constant flow of recovered energy represents up to 88% of the difference in total energy contained within the two air streams

Both types of wheels recover sensible energy during the heating season and reject sensible energy during the cooling season.

During the heating season, when outdoor air temperatures are below the dew point of the indoor air, sensible energy recovery wheels also recover latent energy through the process of condensation and evaporation.

Desiccant energy recovery wheels recover latent energy during the heating season and reject it during the cooling season through the process of adsorption and desorption.

### RECOVERY WHEEL

Choice of sensible or desiccant wheel type.

Constructed of eight lightweight polymer segments.

Desiccant wheels have a permanently bonded desiccant coating.

Each segment is removable without the use of tools.

Large energy transfer surface arranged to provide laminar air flow through the wheel.

Assembly consists of an integral wheel drive motor with thermal overload protection and drive belt(s).

Wheel rotates between two counter flowing air streams at 50-60 RPM.

Rapid change in air direction helps prevent the build up of dust or dirt on the surface.

Wheel bearings are self aligning and permanently sealed.

Assembly slides in and out of unit for ease of inspection and maintenance.

### INTAKE AND EXHAUST BLOWERS

Forward curved double inlet with ball bearings.

Fans are rated as continuous duty and have variable pitch V-belt drives with adjustable motor mounts.

### CABINET

Units must be ordered with down-flow or horizontal supply and return air openings.

18 gauge steel with baked-on enamel finish.

Seams sealed with weather resistant caulking.

Interior surfaces lined with 1 in. - 3 lb./ft.<sup>3</sup> density insulation.

Perimeter base fully welded construction with 12/14 gauge steel full perimeter base with integral lifting holes.

Access doors are double-skinned and equipped with Nylock hinges, minimum two latches per door and full perimeter automotive grade bulb seal.

Two, 2 in. thick, 30% efficiency disposable supply air filters furnished.

### OPTIONS

#### 22 Gauge Inner Cabinet Liner

Internal 22 gauge galvanized sheet metal liner attached to the inside walls of the unit covering all exposed insulation.

#### One Inch Deflection Isolation Heads

A fabricated one-piece head assembly that installs on top of the standard ERV roof curb. Includes isolation springs, neoprene mounting plates and internal flexible duct connectors (down-flow applications only). Provides vibration reduction for the entire unit.

## FEATURES

### **CABINET (CONTINUED)**

#### **Cliplock Roof Curb - Stand-Alone for ERV only**

Mates to the ERV unit and provides a weather sealed rooftop installation.

A wood nailer strip is secured to the curb sides to facilitate flashing.

Curb has interlocking tabs to fasten together. No tools required.

#### **Return Air Filter Section And Access Door**

Consists of a hinged gasket access door with perimeter seal, latches and 2 in. thick pleated filters.

### **CONTROLS**

#### **OPTIONS**

#### **7-Day Programmable Time Clock**

A unit mounted field programmable timer. Can be set to start / stop the unit at varying times over a 7-day period

#### **CO<sub>2</sub> Control**

24-volt, stand-alone remote wall mount CO<sub>2</sub> sensor determines ventilation requirements.

#### **Dirty Filter Pressure Differential Switch(es)**

Switch is internally mounted in the unit. Field adjustable to provide indication on either filter bank that filters require servicing. Integrated with a third-party building automation system. Optional Remote Panel with Status Indicator light is also available.

#### **Energy Recovery Wheel Rotation Sensor**

24-volt unit mounted sensor/relay system shuts down the unit if the energy wheel drive belt breaks. Optional Remote Panel with Status Indicator light is also available.

#### **Firestat**

Remote duct mount temperature control shuts down unit on supply air temperature rise.

#### **Frost Controls**

Frost formation on the wheel will result in reduction or blockage of air flow through the wheel.

Frost formation is a result of indoor relative humidity and temperature versus outdoor temperature.

See table below.

Indoor Relative Humidity			Frost Threshold Temperature
65°F	70°F	75°F	
22%	20%	18%	0°F
33%	30%	27%	5°F
45%	40%	35%	10°F
55%	50%	45%	15°F

Three types of controls are available to prevent frost; Preheat, Recirculation or Exhaust Only.

#### **Preheat Frost Control (Electric Heat - Three Phase Only)**

For continuous operation below frost threshold, electric resistance heater preheats intake air prior to the energy recovery wheel.

SCR and thermostat controlled. SCR controls the power to the electric heater to allow the output to more closely match the frost threshold temperature.

#### **Selection:**

Determine frost threshold temperature.

Determine coldest anticipated outdoor operating temperature.

Determine the CFM (L/s).

Determine Δ T.

Δ T = frost threshold temperature - coldest anticipated outdoor operating temperature

$$\text{Required kW} = \frac{1.08 \times \text{CFM} \times \Delta T}{3414} \text{ or } \frac{4.12 \times \text{L/s} \times \Delta T}{3414}$$

#### **Recirculation Frost Control**

Unit equipped with an internal 2-position motorized damper allowing the system return air to bypass the normal exhaust process and be reintroduced into the building during the timed exhaust cycle. During this cycle, the fresh air damper is closed, the exhaust fan is off, the energy recovery wheel continues to turn, the supply fan continues to run.

#### **Exhaust Only Frost Control**

For continuous mechanical defrost, a pressure switch control senses frost build up on the wheel.

Shuts down the intake air blower and closes the outdoor air damper, allowing the exhaust to defrost the wheel.

**NOTE - All Frost Control options require Optional Motorized Intake Damper Assembly with Hood.**

#### **Outdoor Air Ambient Control For Free Cooling**

Two fresh air ambient temperature controls can be factory installed to de-energize the energy recovery wheel above 55°F and below 75°F. Both temperature controls are field adjustable to suit design conditions. This option prevents unnecessary heating of supply air through energy recovery during these outdoor temperatures.

#### **Outdoor Air Enthalpy Control For Free Cooling**

Fresh air temperature control and logic controller with enthalpy sensor. Fresh air temperature control energizes the energy recovery wheel below 55°F. The enthalpy control senses the enthalpy of the fresh air (air temperature plus relative humidity) and energizes the energy recovery wheel above the setpoint which is actually a range of fresh air temperature-humidity combinations. The enthalpy control has four field adjustable settings to suit design conditions.

Example: Setting "A" is approximately 63°F, 80% relative humidity, to 82°F, 10% relative humidity.

## FEATURES

### CONTROLS (CONTINUED)

#### Remote On / Off Switch

24-volt selector switch, mounting box with cover to manually start / stop the unit from a remote location. Optional Remote Panel with Status Indicator light is also available.

#### Remote Panel With Dirty Filter or System On/Off or Wheel Rotation Status Indicator Lights

A 24-volt indicator light, mounting box with cover for indication of Dirty Filter or System On/Off or Wheel Rotation Status (user defined).

#### Smoke Detector

Remote duct mounted ionizing smoke detector.

#### Stand-Alone DDC Micro-Processor Control

Unit mounted Honeywell® Excel 15 Stand-Alone Controller that can be used to monitor and control the unit.

System includes discharge air and humidity sensors mounted in the supply and return openings, and a wall mount command display module. (Not for Premium rooftop units equipped with Prodigy unit controller.)

### OPTIONS

#### Variable Air Volume (VAV) Speed Control (For Stand-Alone Applications)

Both exhaust and supply blowers equipped with VFD (Variable Frequency drives) to vary the speed of the fans based on a signal from a building automation system or remote mounted CO<sub>2</sub> control (not integrated with the premium rooftop units with a Prodigy unit controller). Controller not included.

### ELECTRICAL

#### OPTIONS

#### Non Fused Disconnect Switch

Accessible from outside of the unit.

Available in indoor or outdoor (weather-proof) models.

### VENTILATION

#### OPTIONS

#### Gravity Exhaust Damper Assembly with Hood

Low leakage parallel blade dampers open when blowers are running.

Hood mounts to the cabinet over the exhaust opening for outdoor applications.

Constructed of 18 gauge satin coat steel with baked on powder coat enamel finish.

Complete with bird screen.

#### Motorized Exhaust Damper Assembly with Hood

Low leakage parallel blade dampers open when blowers are running.

Linkage driven by 24 volt, two position motor, powered on during system start-up.

Hood mounts to the cabinet over the exhaust opening for outdoor applications.

Constructed of 18 gauge satin coat steel with baked on powder coat enamel finish.

Complete with bird screen.

#### Motorized Intake Damper Assembly with Hood

Low leakage parallel blade dampers open when blowers are running.

Linkage driven by 24 volt, two position motor, powered on during system start-up.

Hood mounts to the cabinet over the intake opening for outdoor applications.

Constructed of 18 gauge satin coat steel with baked on powder coat enamel finish.

Complete with 1/2 in. cleanable polyurethane foam filters.

**NOTE - Required with Optional Frost Controls.**

## SPECIFICATIONS

Model No.		ERV-1500	ERV-2300	ERV-3000	ERV-4500	ERV-6000	ERV-7500	ERV-10000
Performance	Air Volume Capacity - cfm	500-1500	1500-2300	1500-3600	3000-5000	4500-6000	6000-7500	7500-10,000
	Effectiveness	81-88%	70-76%	81-83%	71-76%	70-75%	70-73%	70-74%
Drive Wheel	Motor - hp	1/6	1/6	1/6	1/6	1/4	1/4	1/4
		See Electrical Data for Blower Motor Information.						
Intake and Exhaust Blowers	Blower wheel nominal diameter x width - in.	10 x 10	10 x 10	12 x 12	12 x 12	18 x 18	18 x 18	18 x 18
Filters	Number	2	2	2	2	6	6	6
Pleated / Disposable	Size - in.	18 x 20 x 2	18 x 20 x 2	24 x 24 x 2	24 x 24 x 2	20 x 20 x 2	20 x 20 x 2	20 x 20 x 2
Weight Data - lbs.	Shipping weight basic unit	930	930	1500	1500	2550	3090	3300
	Net weight basic unit	890	890	1450	1450	2400	2940	3150

## OPTIONAL ACCESSORIES

Model No.			ERV-1500	ERV-2300	ERV-3000	ERV-4500	ERV-6000	ERV-7500	ERV-10000	
<b>Cabinet</b>	Gravity Exhaust Dampers with hood		X	X	X	X	X	X	X	
	Intake Hood		---	---	---	---	X	X	X	
	Number and size of filters - in.		---	---	---	---	(2) 50-1/4 x 20 x 1/2	(2) 59-1/4 x 20 x 1/2		
	Motorized Exhaust Dampers with Hood		X	X	X	X	X	X	X	
	Motorized Intake Dampers with Hood		X	X	X	X	X	X	X	
	Number and size of filters - in.		(1) 21 x 17-1/2 x 1/2		(1) 67 x 28 x 1/2		(2) 50-1/4 x 20 x 1/2			
	Inner Cabinet Liner (22 ga.)		X	X	X	X	X	X	X	
	Return Air Filter Section and Access Door		X	X	X	X	X	X	X	
	Number and size of filters - in.		(2) 18 x 18 x 2	(2) 18 x 20 x 2	(2) 24 x 24 x 2		(6) 20 x 20 x 2			
<b>Cliplock Roof Curb - Stand-alone for ERV only</b>			RMF-1500/2300		RMF-3000/4500		RMF-6000/7500/10000			
<b>Deflection Isolation Heads (for Roof Curb)</b>			X	X	X	X	X	X	X	
<b>Controls</b>	7-Day Programmable Time-Clock		X	X	X	X	X	X	X	
	CO <sub>2</sub> Control (wall mount)		X	X	X	X	X	X	X	
	Dirty Filter Switches		X	X	X	X	X	X	X	
	Firestat (duct mount)		X	X	X	X	X	X	X	
	Outdoor Ambient Control for Free Cooling		X	X	X	X	X	X	X	
	Outdoor Enthalpy Control for Free Cooling		X	X	X	X	X	X	X	
	Recovery Wheel Rotation Sensor		X	X	X	X	X	X	X	
	Remote On / Off Switch		X	X	X	X	X	X	X	
	Remote Panel		X	X	X	X	X	X	X	
	Smoke detector (duct mount)		X	X	X	X	X	X	X	
	Stand-Alone DDC Micro-Processor Control		X	X	X	X	X	X	X	
	Variable Air Volume (VAV) Speed Control (For Stand-Alone Non-Prodigy Applications)		X	X	X	X	X	X	X	
	<b>Disconnect Switch</b>	Non-Fused	Indoor applications	X	X	X	X	X	X	X
Outdoor applications (Weather-proofed)			X	X	X	X	X	X	X	
With Electric Pre-heat		Indoor Applications	208V-3ph	X	X	X	X	X	X	X
			230V-3ph	X	X	X	X	X	X	X
			460V-3ph	X	X	X	X	X	X	X
			575V-3ph	X	X	X	X	X	X	X
Outdoor Applications (Weather-proofed)		208V-3ph	X	X	X	X	X	X	X	
		230V-3ph	X	X	X	X	X	X	X	
		460V-3ph	X	X	X	X	X	X	X	
		575V-3ph	X	X	X	X	X	X	X	
<b>Frost Controls</b>	Exhaust Only		X	X	X	X	X	X	X	
	Recirculation		X	X	X	X	X	X	X	
	Electric Preheat	208V-3ph	X	X	X	X	X	X	X	
		230V-3ph	X	X	X	X	X	X	X	
		460V-3ph	X	X	X	X	X	X	X	
		575V-3ph	X	X	X	X	X	X	X	

NOTE - Contact your local Lennox Commercial Sales Representative for ordering information.

<sup>1</sup> All Frost Control options require Optional Motorized Intake Damper Assembly with Hood.

X - Field Installed.

**ELECTRICAL DATA - 60HZ - 1 PHASE**
**ERV-1500-2300-3000**

Model No.			ERV-1500				ERV-2300				ERV-3000			
<b>Intake and Exhaust Blower Motor</b>	<sup>1</sup> Motor Output hp (per motor)	Nom.	0.5	0.8	1.0	1.5	0.5	0.8	1.0	1.5	0.5	0.8	1.0	1.5
		Max.	0.6	0.9	1.3	1.7	0.6	0.9	1.3	1.7	0.6	0.9	1.3	1.7
	Full load amps per motor (total)	208V	4.3 (8.6)	5.8 (11.6)	5.3 (10.6)	8.1 (16.2)	4.3 (8.6)	5.8 (11.6)	5.3 (10.6)	8.1 (16.2)	4.3 (8.6)	5.8 (11.6)	5.3 (10.6)	8.1 (16.2)
		230V	3.9 (7.8)	5.2 (10.4)	4.8 (9.6)	7.3 (14.6)	3.9 (7.8)	5.2 (10.4)	4.8 (9.6)	7.3 (14.6)	3.9 (7.8)	5.2 (10.4)	4.8 (9.6)	7.3 (14.6)
	Locked rotor amps per motor (total)	208V	24.3 (48.6)	36.5 (73.0)	42.0 (84.0)	49.9 (99.8)	24.3 (48.6)	36.5 (73.0)	42.0 (84.0)	49.9 (99.8)	24.3 (48.6)	36.5 (73.0)	42.0 (84.0)	49.9 (99.8)
		230V	22.0 (44.0)	33.0 (66.0)	38.0 (76.0)	45.0 (90.0)	22.0 (44.0)	33.0 (66.0)	38.0 (76.0)	45.0 (90.0)	22.0 (44.0)	33.0 (66.0)	38.0 (76.0)	45.0 (90.0)
<sup>2</sup> Wheel Drive Motor	Full load amps		1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	2.80	2.80	2.80	2.80
	Locked rotor amps		2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	6.80	6.80	6.80	6.80
<b>Recommended Maximum Overcurrent Protection (amps)</b>	208V		15	20	15	25	15	20	15	25	15	20	20	25
	230V		15	15	15	20	15	15	15	25	15	20	15	25
<sup>3</sup> Minimum Circuit Ampacity	208V		12.30	15.90	14.80	21.80	12.30	15.90	14.80	21.80	14.30	17.90	16.80	23.80
	230V		11.30	14.50	13.50	19.80	11.30	14.50	13.50	19.80	13.30	16.50	15.50	21.80

<sup>1</sup> Maximum usable output of motors furnished by Lennox are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

<sup>2</sup> Drive motor operates at 208V-1ph, step-down transformer is factory installed for 230V, 460V and 575V models.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

NOTE - Extremes of operating range are plus and minus 10 % of line voltage.

NOTE - Where current does not exceed 100 amps, HACR type circuit breaker may be used in place of fuse (U.S. only).

**ELECTRICAL DATA - 60HZ - 3 PHASE**

**ERV-1500-2300**

Model No.			ERV-1500					ERV-2300					
<b>Intake and Exhaust Blower Motor</b>	<sup>1</sup> Motor Output hp (per motor)	Nom.	0.5	0.8	1.0	1.5	2.0	0.5	0.8	1.0	1.5	2.0	3.0
		Max.	0.6	0.9	1.3	1.8	2.3	0.6	0.9	1.3	1.8	2.3	3.5
	Full load amps per motor (total)	208V	2.7 (5.4)	3.3 (6.6)	4.8 (9.6)	6.2 (12.4)	7.3 (14.6)	2.7 (5.4)	3.3 (6.6)	4.8 (9.6)	6.2 (12.4)	7.3 (14.6)	9.7 (19.4)
		230V	2.4 (4.8)	3.0 (6.0)	4.4 (8.8)	5.6 (11.2)	6.6 (13.2)	2.4 (4.8)	3.0 (6.0)	4.4 (8.8)	5.6 (11.2)	6.6 (13.2)	8.8 (17.6)
		460V	1.2 (2.4)	1.5 (3.0)	2.2 (4.4)	2.8 (5.6)	3.3 (6.6)	1.2 (2.4)	1.5 (3.0)	2.2 (4.4)	2.8 (5.6)	3.3 (6.6)	4.4 (8.8)
		575V	0.9 (1.8)	1.1 (2.2)	1.8 (3.6)	2.2 (4.4)	2.6 (5.2)	0.9 (1.8)	1.1 (2.2)	1.8 (3.6)	2.2 (4.4)	2.6 (5.2)	3.5 (7.0)
	Locked rotor amps per motor (total)	208V	12.8 (25.6)	18.9 (37.8)	25.3 (50.6)	33.0 (66.0)	38.5 (77.0)	12.8 (25.6)	18.9 (37.8)	25.3 (50.6)	33.0 (66.0)	38.5 (77.0)	66.0 (132.0)
		230V	11.6 (23.2)	17.2 (34.4)	23.0 (46.0)	30.0 (60.0)	35.0 (70.0)	11.6 (23.2)	17.2 (34.4)	23.0 (46.0)	30.0 (60.0)	35.0 (70.0)	60.0 (120.0)
		460V	5.8 (11.6)	8.6 (17.2)	11.5 (23.0)	15.0 (30.0)	17.5 (35.0)	5.8 (11.6)	8.6 (17.2)	11.5 (23.0)	15.0 (30.0)	17.5 (35.0)	30.0 (60.0)
		575V	4.8 (9.6)	6.7 (13.4)	9.2 (18.4)	12.0 (24.0)	14.0 (28.0)	4.8 (9.6)	6.7 (13.4)	9.2 (18.4)	12.0 (24.0)	14.0 (28.0)	24.0 (48.0)
<sup>2</sup> Wheel Drive Motor	Full load amps	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
	Locked rotor amps	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	
<b>Recommended Maximum Overcurrent Protection (amps)</b>	208V	15	15	15	20	20	15	15	15	20	20	30	
	230V	15	15	15	15	20	15	15	15	20	20	25	
	460V	15	15	15	15	15	15	15	15	15	15	15	
	575V	15	15	15	15	15	15	15	15	15	15	15	
<b>Recommended Maximum Overcurrent Protection (amps) With Optional Electric Preheat</b>	Electric Heat kW	12	12	12	12	12	12	12	12	12	12	12	
	208V	50	50	60	60	60	45	50	60	60	60	70	
	230V	45	45	50	50	50	45	45	50	50	60	60	
	460V	20	25	25	25	30	20	25	25	30	30	30	
	575V	20	20	20	20	25	20	20	20	25	25	25	
<sup>3</sup> Minimum Circuit Ampacity	208V	8.1	9.8	13.5	17.0	19.8	8.1	9.8	13.5	17.0	19.8	25.8	
	230V	7.5	9.0	12.5	15.5	18.0	7.5	9.0	12.5	15.5	18.0	23.5	
	460V	4.5	5.3	7.0	8.5	9.8	4.5	5.3	7.0	8.5	9.8	12.5	
	575V	3.0	3.0	5.1	6.3	7.3	3.8	4.3	5.9	7.0	8.0	10.3	
<b>Minimum Circuit Ampacity With Optional Electric Preheat</b>	208V	49.8	51.4	55.1	58.6	61.4	49.8	51.4	55.1	58.6	61.4	67.4	
	230V	45.1	46.6	50.1	53.1	55.6	45.2	46.7	50.2	53.2	55.7	61.2	
	460V	23.4	24.1	25.9	27.4	28.6	23.4	24.1	25.8	27.3	28.5	31.3	
	575V	18.8	19.3	21.1	22.1	23.1	18.8	19.3	21.1	22.1	23.1	25.3	

<sup>1</sup> Maximum usable output of motors furnished by Lennox are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

<sup>2</sup> Drive motor operates at 208V-1ph, step-down transformer is factory installed for 230V, 460V and 575V models.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

NOTE - Extremes of operating range are plus and minus 10 % of line voltage.

NOTE - Where current does not exceed 100 amps, HACR type circuit breaker may be used in place of fuse (U.S. only).

**ELECTRICAL DATA - 60HZ - 3 PHASE**

**ERV-3000-4500**

Model No.			ERV-3000					ERV-4500				
<b>Intake and Exhaust Blower Motor</b>	<sup>1</sup> Motor Output hp (per motor)	Nom.	0.5	0.8	1.0	1.5	2.0	3.0	1.5	2.0	3.0	5.0
		Max.	0.6	0.9	1.3	1.8	2.3	3.5	1.8	2.3	3.5	5.8
	Full load amps per motor (total)	208V	2.7 (5.4)	3.3 (6.6)	4.8 (9.6)	6.2 (12.4)	7.3 (14.6)	9.7 (19.4)	6.2 (12.4)	7.3 (14.6)	9.7 (19.4)	14.5 (29.0)
		230V	2.4 (4.8)	3.0 (6.0)	4.4 (8.8)	5.6 (11.2)	6.6 (13.2)	8.8 (17.6)	5.6 (11.2)	6.6 (13.2)	8.8 (17.6)	13.2 (26.4)
		460V	1.2 (2.4)	1.5 (3.0)	2.2 (4.4)	2.8 (5.6)	3.3 (6.6)	4.4 (8.8)	2.8 (5.6)	3.3 (6.6)	4.4 (8.8)	6.6 (13.2)
		575V	0.9 (1.8)	1.1 (2.2)	1.8 (3.6)	2.2 (4.4)	2.6 (5.2)	3.5 (7.0)	2.2 (4.4)	2.6 (5.2)	3.5 (7.0)	5.3 (10.6)
	Locked rotor amps per motor (total)	208V	12.8 (25.6)	18.9 (37.8)	25.3 (50.6)	33.0 (66.0)	38.5 (77.0)	66.0 (132.0)	33.0 (66.0)	38.5 (77.0)	66.0 (132.0)	101.2 (202.4)
		230V	11.6 (23.2)	17.2 (34.4)	23.0 (46.0)	30.0 (60.0)	35.0 (70.0)	60.0 (120.0)	30.0 (60.0)	35.0 (70.0)	60.0 (120.0)	92.0 (184.0)
		460V	5.8 (11.6)	8.6 (17.2)	11.5 (23.0)	15.0 (30.0)	17.5 (35.0)	30.0 (60.0)	15.0 (30.0)	17.5 (35.0)	30.0 (60.0)	46.0 (92.0)
		575V	4.8 (9.6)	6.7 (13.4)	9.2 (18.4)	12.0 (24.0)	14.0 (28.0)	24.0 (48.0)	12.0 (24.0)	14.0 (28.0)	24.0 (48.0)	32.0 (64.0)
<sup>2</sup> Wheel Drive Motor	Full load amps	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	
	Locked rotor amps	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	
<b>Recommended Maximum Overcurrent Protection (amps)</b>	208V	15	15	15	20	20	30	20	25	30	45	
	230V	15	15	15	20	20	25	20	20	30	45	
	460V	15	15	15	15	15	15	15	15	15	20	
	575V	15	15	15	15	15	15	15	15	15	20	
<b>Recommended Maximum Overcurrent Protection (amps) With Optional Electric Preheat</b>	Electric Heat kW	15	15	15	15	15	15	20	20	20	20	
	208V	60	60	60	70	70	80	80	90	90	110	
	230V	50	50	60	60	70	70	80	80	90	110	
	460V	30	30	35	35	35	40	40	40	45	50	
	575V	25	25	25	30	30	30	30	35	35	40	
<sup>3</sup> Minimum Circuit Ampacity	208V	10.1	11.8	15.5	19.0	21.8	27.8	19.0	21.8	27.8	39.8	
	230V	9.5	11.0	14.5	17.5	20.0	25.5	17.5	20.0	25.5	36.5	
	460V	6.5	7.3	9.0	10.5	11.8	14.5	9.7	11.00	13.9	19.2	
	575V	5.8	6.2	7.9	9.0	10.0	12.3	7.9	8.7	10.9	15.4	
<b>Minimum Circuit Ampacity With Optional Electric Preheat</b>	208V	62.2	63.9	67.6	71.1	73.9	79.9	88.4	91.1	97.1	109.1	
	230V	56.6	58.1	61.6	64.6	67.1	72.6	80.3	82.8	88.3	99.3	
	460V	30.1	30.8	32.6	34.1	35.3	38.1	41.9	43.2	45.9	51.4	
	575V	24.6	25.1	26.7	27.8	28.8	31.1	34.1	35.1	37.4	41.9	

<sup>1</sup> Maximum usable output of motors furnished by Lennox are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

<sup>2</sup> Drive motor operates at 208V-1ph, step-down transformer is factory installed for 230V, 460V and 575V models.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

NOTE - Extremes of operating range are plus and minus 10 % of line voltage.

NOTE - Where current does not exceed 100 amps, HACR type circuit breaker may be used in place of fuse (U.S. only).



**ELECTRICAL DATA - 60HZ - 3 PHASE**

**ERV-6000-7500-10000**

Model No.		ERV-6000				ERV-7500			ERV-10000			
<b>Intake and Exhaust Blower Motor</b>	<sup>1</sup> Motor Output hp (per motor)	Nom.	1.5	2.0	3.0	5.0	3.0	5.0	7.5	5.0	7.5	10.0
		Max.	1.8	2.3	3.5	5.8	3.5	5.8	8.6	5.8	8.6	11.5
	Full load amps per motor (total)	208V	4.9 (9.8)	6.5 (13.0)	8.8 (17.6)	13.8 (27.6)	8.8 (17.6)	13.8 (27.6)	20.5 (41.0)	13.8 (27.6)	20.5 (41.0)	27.5 (55.0)
		230V	4.4 (8.8)	5.9 (11.8)	8.0 (16.0)	12.5 (25.0)	8.0 (16.0)	12.5 (25.0)	18.6 (37.2)	12.5 (25.0)	18.6 (37.2)	25.0 (50.0)
		460V	2.2 (4.4)	3.0 (6.0)	4.0 (8.0)	6.3 (12.6)	4.0 (8.0)	6.3 (12.6)	9.3 (18.6)	6.3 (12.6)	9.3 (18.6)	12.5 (25.0)
		575V	1.8 (3.6)	2.4 (4.8)	3.2 (6.4)	5.0 (10.0)	3.2 (6.4)	5.0 (10.0)	7.5 (15.0)	5.0 (10.0)	7.5 (15.0)	10.0 (20.0)
	Locked rotor amps per motor (total)	208V	37.4 (74.8)	50.6 (101.2)	70.4 (140.8)	101.2 (202.4)	70.4 (140.8)	101.2 (202.4)	136.4 (272.8)	101.5 (203.0)	136.4 (272.8)	178.2 (356.4)
		230V	34.0 (68.0)	46.0 (92.0)	64.0 (128.0)	92.0 (184.0)	64.0 (128.0)	92.0 (184.0)	124.0 (248.0)	92.0 (184.0)	124.0 (248.0)	162.0 (324.0)
		460V	17.0 (34.0)	23.0 (46.0)	32.0 (64.0)	46.0 (92.0)	32.0 (64.0)	46.0 (92.0)	62.0 (124.0)	46.0 (92.0)	62.0 (124.0)	81.0 (162.0)
		575V	13.6 (27.2)	18.0 (36.0)	25.4 (50.8)	37.0 (74.0)	25.6 (51.2)	37.0 (74.0)	50.0 (100.0)	37.0 (74.0)	50.0 (100.0)	65.0 (130.0)
<sup>2</sup> Wheel Drive Motor	Full load amps	208V	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
		230V	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
		460V	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
		575V	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
	Locked rotor amps	208V	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
		230V	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
		460V	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64
		575V	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>Recommended Maximum Overcurrent Protection (amps)</b>	208V	20	30	40	50	40	50	70	50	70	100	
	230V	20	25	30	50	30	50	70	50	70	90	
	460V	10	15	15	25	15	25	35	25	35	45	
	575V	10	10	15	20	15	20	30	20	30	35	
<b>Recommended Maximum Overcurrent Protection (amps) With Optional Electric Preheat</b>	Electric Heat kW	30	30	30	30	40	40	40	50	50	50	
	208V	125	125	150	150	175	200	200	225	250	250	
	230V	110	125	125	150	150	175	200	200	225	250	
	460V	60	60	60	70	75	85	90	100	110	125	
	575V	45	50	50	55	70	65	75	80	85	90	
<sup>3</sup> Minimum Circuit Ampacity	208V	15.1	19.1	24.9	37.4	24.9	37.4	54.2	37.4	54.2	71.7	
	230V	14.1	17.9	23.1	34.4	23.1	34.4	49.6	34.4	49.6	65.6	
	460V	7.0	9.0	11.5	17.3	11.5	17.3	24.8	17.3	24.8	32.8	
	575V	6.3	7.8	9.8	14.3	9.8	14.3	20.5	14.3	20.5	26.8	
<b>Minimum Circuit Ampacity With Optional Electric Preheat</b>	208V	119.4	123.0	129.1	141.6	163.6	176.2	192.9	211.2	227.9	245.4	
	230V	108.4	112.2	117.4	128.6	148.1	159.4	174.6	191.5	206.8	222.8	
	460V	54.1	56.1	58.6	64.4	74.4	80.1	87.6	95.8	103.3	111.3	
	575V	44.0	45.5	47.5	52.0	60.0	64.5	70.8	77.1	83.4	89.6	

<sup>1</sup> Maximum usable output of motors furnished by Lennox are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

<sup>2</sup> Drive motor operates at 208V-1ph, step-down transformer is factory installed for 230V, 460V and 575V models.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

NOTE - Extremes of operating range are plus and minus 10 % of line voltage.

NOTE - Where current does not exceed 100 amps, HACR type circuit breaker may be used in place of fuse (U.S. only).

**DRIVE KIT SELECTION****ERV-1500-2300-3000-4500**

Using Total Air Volume and System External Static Pressure needed for unit requirements, determine from blower performance table blower speed and blower motor hp required.

Voltage	Nominal Motor Output - hp	<sup>1</sup> Max. Usable Motor Output - hp	Usage	Shipping Weight - lbs.
<b>208V-60hz-1 ph</b>	0.50	0.63	ERV-1500, ERV-2300, ERV-3000	96
	0.75	0.94	ERV-1500, ERV-2300, ERV-3000	96
	1	1.25	ERV-1500, ERV-2300, ERV-3000	96
	1.50	1.72	ERV-1500, ERV-2300, ERV-3000	140
<b>230V-60hz-1 ph</b>	0.50	0.63	ERV-1500, ERV-2300, ERV-3000	96
	0.75	0.94	ERV-1500, ERV-2300, ERV-3000	96
	1	1.25	ERV-1500, ERV-2300, ERV-3000	96
	1.50	1.72	ERV-1500, ERV-2300, ERV-3000	140
<b>208V-60hz-3 ph</b>	0.50	0.63	ERV-1500, ERV-2300, ERV-3000	96
	0.75	0.94	ERV-1500, ERV-2300, ERV-3000	96
	1	1.25	ERV-1500, ERV-2300, ERV-3000, ERV-4500	96
	1.50	1.72	ERV-1500, ERV-2300, ERV-3000, ERV-4500	140
	2	2.30	ERV-2300, ERV-3000, ERV-4500	140
	3	3.45	ERV-2300, ERV-3000, ERV-4500	180
	5	5.75	ERV-4500	180
<b>460V-60hz-3 ph</b>	0.50	0.63	ERV-1500, ERV-2300, ERV-3000	96
	0.75	0.94	ERV-1500, ERV-2300, ERV-3000	96
	1	1.25	ERV-1500, ERV-2300, ERV-3000, ERV-4500	96
	1.50	1.72	ERV-1500, ERV-2300, ERV-3000, ERV-4500	140
	2	2.30	ERV-2300, ERV-3000, ERV-4500	140
	3	3.45	ERV-2300, ERV-3000, ERV-4500	180
	5	5.75	ERV-4500	180
<b>575V-60hz-3 ph</b>	0.50	0.63	ERV-1500, ERV-2300, ERV-3000	96
	0.75	0.94	ERV-1500, ERV-2300, ERV-3000	96
	1	1.25	ERV-1500, ERV-2300, ERV-3000, ERV-4500	96
	1.50	1.72	ERV-1500, ERV-2300, ERV-3000, ERV-4500	140
	2	2.30	ERV-2300, ERV-3000, ERV-4500	140
	3	3.45	ERV-2300, ERV-3000, ERV-4500	180
	5	5.75	ERV-4500	180

NOTE - Contact your local Lennox Commercial Sales Representative for ordering information.

<sup>1</sup> Maximum usable output of motors furnished by Lennox are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

**DRIVE KIT SELECTION****ERV-6000-7500-10000**

Using Total Air Volume and System External Static Pressure needed for unit requirements, determine from blower performance table blower speed and blower motor hp required.

Voltage	Nominal Motor Output - hp	<sup>1</sup> Max. Usable Motor Output - hp	Usage	Shipping Weight - lbs.
<b>208V-60hz-3 ph</b>	1.50	1.72	ERV - 6000	140
	2	2.30	ERV - 6000	140
	3	3.45	ERV - 6000 , ERV - 7500	180
	5	5.75	ERV - 6000 , ERV - 7500, ERV - 10000	180
	7.50	8.63	ERV - 7500, ERV - 10000	295
	10	11.50	ERV - 7500, ERV - 10000	375
<b>230V-60hz-3 ph</b>	1.50	1.72	ERV - 6000	140
	2	2.30	ERV - 6000	140
	3	3.45	ERV - 6000 , ERV - 7500	180
	5	5.75	ERV - 6000 , ERV - 7500, ERV - 10000	180
	7.50	8.63	ERV - 7500, ERV - 10000	295
	10	11.50	ERV - 7500, ERV - 10000	375
<b>460V-60hz-3 ph</b>	1.50	1.72	ERV - 6000	140
	2	2.30	ERV - 6000	140
	3	3.45	ERV - 6000 , ERV - 7500	180
	5	5.75	ERV - 6000 , ERV - 7500, ERV - 10000	180
	7.50	8.63	ERV - 7500, ERV - 10000	295
	10	11.50	ERV - 7500, ERV - 10000	375
<b>575V-60hz-3 ph</b>	1.50	1.72	ERV - 6000	140
	2	2.30	ERV - 6000	140
	3	3.45	ERV - 6000 , ERV - 7500	180
	5	5.75	ERV - 6000 , ERV - 7500, ERV - 10000	180
	7.50	8.63	ERV - 7500, ERV - 10000	295
	10	11.50	ERV - 7500, ERV - 10000	375

NOTE - Contact your local Lennox Commercial Sales Representative for ordering information.

<sup>1</sup> Maximum usable output of motors furnished by Lennox are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

**BLOWER DATA****ERV-1500**

Energy Recovery Wheel Effectiveness	Air Volume cfm	STATIC PRESSURE EXTERNAL TO UNIT - Inches Water Gauge															
		0.10		0.30		0.50		0.70		0.90		1.10		1.30		1.50	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
88%	500	730	0.10	840	0.15	935	0.20	1020	0.25	1095	0.35	1165	0.40	1265	0.50	1325	0.55
88%	600	795	0.15	900	0.20	990	0.25	1075	0.35	1175	0.45	1220	0.45	1255	0.55	1345	0.60
87%	700	850	0.20	850	0.25	1040	0.30	1120	0.40	1190	0.45	1260	0.55	1325	0.60	1385	0.70
86%	800	595	0.25	990	0.30	1080	0.40	1155	0.45	1230	0.55	1300	0.60	1360	0.70	1420	0.80
85%	900	950	0.30	1045	0.40	1130	0.45	1205	0.55	1275	0.60	1345	0.70	1405	0.80	1465	0.90
85%	1000	1000	0.40	1095	0.45	1175	0.55	1290	0.60	1320	0.70	1355	0.80	1450	0.90	1510	1.00
83%	1200	1085	0.55	1170	0.55	1250	0.75	1325	0.85	1395	0.90	1460	1.00	1520	1.10	1580	1.20
82%	1400	1155	0.70	1240	0.80	1320	0.95	1395	1.05	1460	1.15	1525	1.25	1585	1.40	1640	1.50
81%	1500	1210	0.85	1295	1.00	1370	1.10	1440	1.20	1510	1.30	1570	1.45	1630	1.55	1690	1.70

NOTE - All data is measured external to the unit with air filters in place.

**BLOWER DATA****ERV-2300**

Energy Recovery Wheel Effectiveness	Air Volume cfm	STATIC PRESSURE EXTERNAL TO UNIT - Inches Water Gauge															
		0.10		0.30		0.50		0.70		0.90		1.10		1.30		1.50	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
76%	1500	945	0.50	1060	0.65	1160	0.75	1250	0.90	1330	1.00	1405	1.15	1475	1.25	1540	1.40
75%	1700	985	0.60	1095	0.75	1195	0.90	1285	1.05	1370	1.20	1445	1.35	1510	1.50	1580	1.60
73%	1900	1040	0.75	1120	0.90	1225	1.05	1320	1.25	1400	1.40	1480	1.55	1550	1.70	1615	1.90
72%	2100	1085	0.95	1160	1.05	1230	1.15	1325	1.35	1415	1.55	1495	1.75	1565	1.95	1635	2.10
70%	2300	1130	1.15	1200	1.25	1270	1.40	1335	1.50	1415	1.70	1500	1.90	1575	2.10	1650	2.35

NOTE - All data is measured external to the unit with air filters in place.

**BLOWER DATA****ERV-3000**

Energy Recovery Wheel Effectiveness	Air Volume cfm	STATIC PRESSURE EXTERNAL TO UNIT - Inches Water Gauge															
		0.10		0.30		0.50		0.70		0.90		1.10		1.30		1.50	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
83%	1500	750	0.35	845	0.40	930	0.50	1020	0.65	1105	0.75	1180	0.90	1250	1.00	1315	1.15
86%	1750	790	0.45	880	0.55	960	0.65	1040	0.75	1110	0.85	1195	1.00	1265	1.15	1335	1.30
85%	2000	835	0.55	915	0.65	995	0.75	1065	0.90	1135	1.00	1200	1.15	1285	1.25	1335	1.45
84%	2250	875	0.70	950	0.80	1025	0.95	1095	1.05	1160	1.20	1225	1.30	1285	1.45	1345	1.80
83%	2500	915	0.90	990	1.00	1055	1.10	1120	1.25	1185	1.40	1245	1.50	1305	1.65	1360	1.80
82%	2750	955	1.10	1025	1.20	1090	1.35	1150	1.45	1210	1.60	1270	1.75	1325	1.90	1380	2.05
81%	3000	1000	1.30	1065	1.45	1125	1.60	1180	1.70	1240	1.85	1295	2.00	1350	2.20	1405	2.35
76%	3200	1130	1.75	1190	1.90	1245	2.05	1295	2.20	1350	2.35	1400	2.50	1450	2.70	1500	2.85
75%	3400	1155	1.95	1210	2.10	1260	2.25	1315	2.40	1365	2.60	1415	2.75	1465	2.90	1510	3.10
72%	3600	1175	2.15	1225	2.35	1280	2.50	1330	2.65	1380	2.85	1425	3.00	1475	3.15	1520	3.35
70%	7500	685	3.60	725	3.90	760	4.25	800	4.55	835	4.85	870	5.15	910	5.45	945	5.75

NOTE - All data is measured external to the unit with air filters in place.

**BLOWER DATA****ERV-4500**

Energy Recovery Wheel Effectiveness	Air Volume cfm	STATIC PRESSURE EXTERNAL TO UNIT - Inches Water Gauge															
		0.10		0.30		0.50		0.70		0.90		1.10		1.30		1.50	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
76%	3000	895	1.10	985	1.25	1030	1.35	1090	1.50	1150	1.55	1210	1.80	1265	1.95	1320	2.10
75%	3250	935	1.35	1000	1.50	1065	1.80	1125	1.75	1180	1.90	1235	2.05	1290	2.20	1340	2.35
74%	3500	970	1.55	1030	1.70	1090	1.90	1090	1.90	1205	2.20	1255	2.35	1310	2.50	1400	2.65
73%	3750	1000	1.80	1080	2.00	1120	2.15	1175	2.30	1225	2.50	1280	2.65	1330	2.80	1375	3.00
73%	4000	1040	2.10	1095	2.30	1150	2.50	1200	2.65	1255	2.85	1305	3.00	1355	3.15	1400	3.35
72%	4250	1075	2.45	1130	2.60	1180	2.80	1235	3.00	1280	3.20	1330	3.40	1380	3.55	1425	3.75
71%	4500	1110	2.80	1180	3.00	1210	3.15	1260	3.35	1310	3.60	1355	3.80	1400	4.00	1445	4.20
71%	4600	1128	2.95	1133	2.95	1252	3.44	1300	3.65	1346	3.85	1392	4.05	1436	4.30	---	---
70%	4800	1172	3.35	1221	3.55	1269	3.75	1316	3.95	1362	4.20	1406	4.40	---	---	---	---
70%	5000	1192	3.65	1240	3.85	1287	4.10	1332	4.30	1377	4.50	1421	4.75	---	---	---	---
70%	10,000	765	6.40	795	6.80	820	7.25	850	7.65	880	8.10	910	8.50	940	8.90	965	9.35

NOTE - All data is measured external to the unit with air filters in place.

**BLOWER DATA****ERV-6000**

Energy Recovery Wheel Effectiveness	Air Volume cfm	STATIC PRESSURE EXTERNAL TO UNIT - Inches Water Gauge															
		0.10		0.30		0.50		0.70		0.90		1.10		1.30		1.50	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
75%	4500	550	1.20	610	1.35	680	1.70	740	2.05	795	2.40	845	2.70	890	3.00	930	3.35
73%	5000	585	1.55	635	1.70	695	2.00	760	2.40	815	2.75	865	3.10	910	3.45	950	3.80
72%	5500	620	1.95	670	2.15	720	2.35	775	2.70	830	3.15	880	3.55	930	3.95	970	4.35
70%	6000	650	2.40	695	2.65	740	2.85	785	3.10	840	3.45	890	3.90	940	4.35	985	4.80

NOTE - All data is measured external to the unit with air filters in place.

**BLOWER DATA****ERV-7500**

Energy Recovery Wheel Effectiveness	Air Volume cfm	STATIC PRESSURE EXTERNAL TO UNIT - Inches Water Gauge															
		0.10		0.30		0.50		0.70		0.90		1.10		1.30		1.50	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
73%	6000	600	2.15	650	2.40	695	2.65	740	2.85	785	3.10	840	3.45	890	3.90	940	4.35
72%	6500	635	2.60	680	2.90	720	3.15	765	3.40	805	3.65	845	3.90	895	4.25	945	4.75
71%	7000	660	3.10	700	3.35	740	3.65	780	3.95	820	4.25	860	4.50	895	4.75	935	5.00
70%	7500	685	3.60	725	3.90	760	4.25	800	4.55	835	4.85	870	5.15	910	5.45	945	5.75

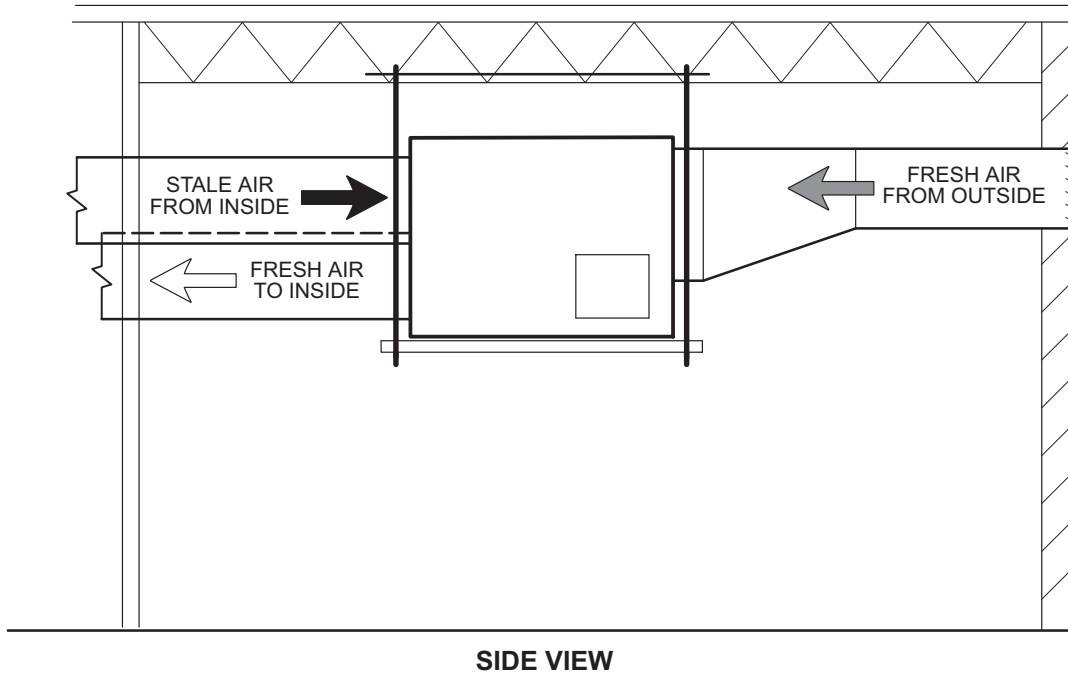
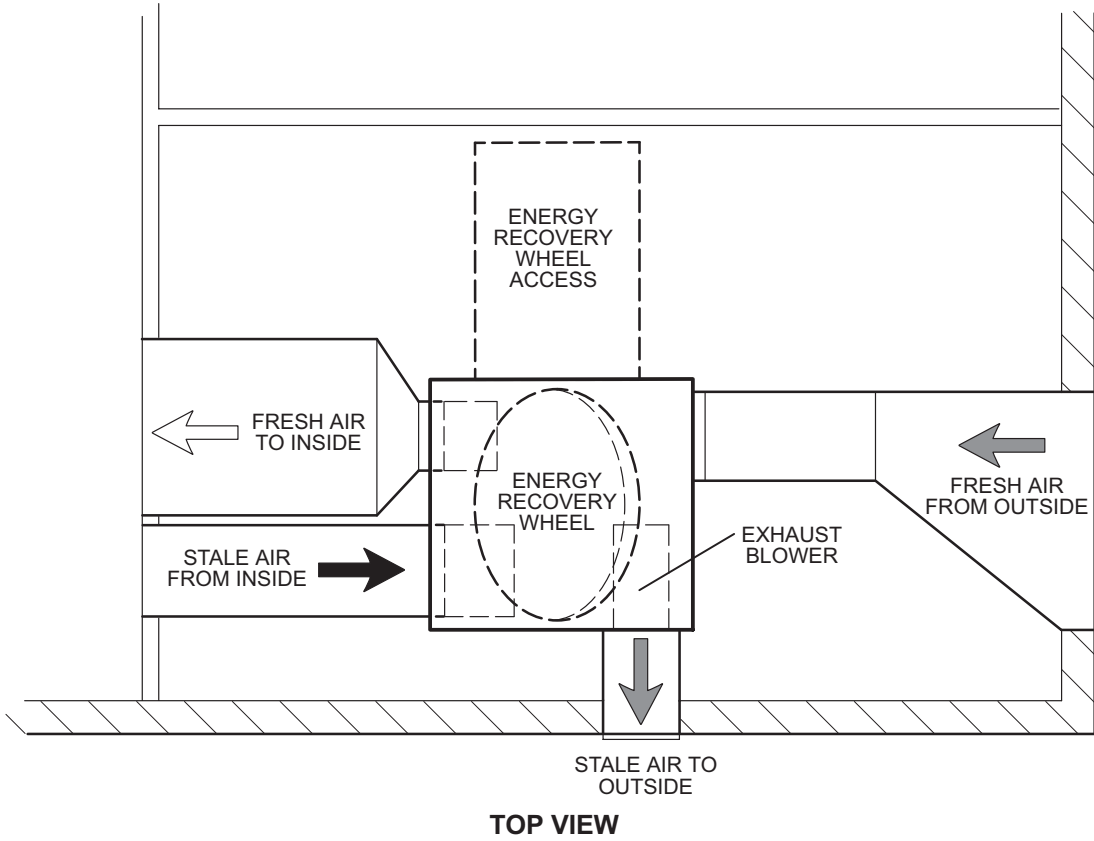
NOTE - All data is measured external to the unit with air filters in place.

**BLOWER DATA****ERV-7500**

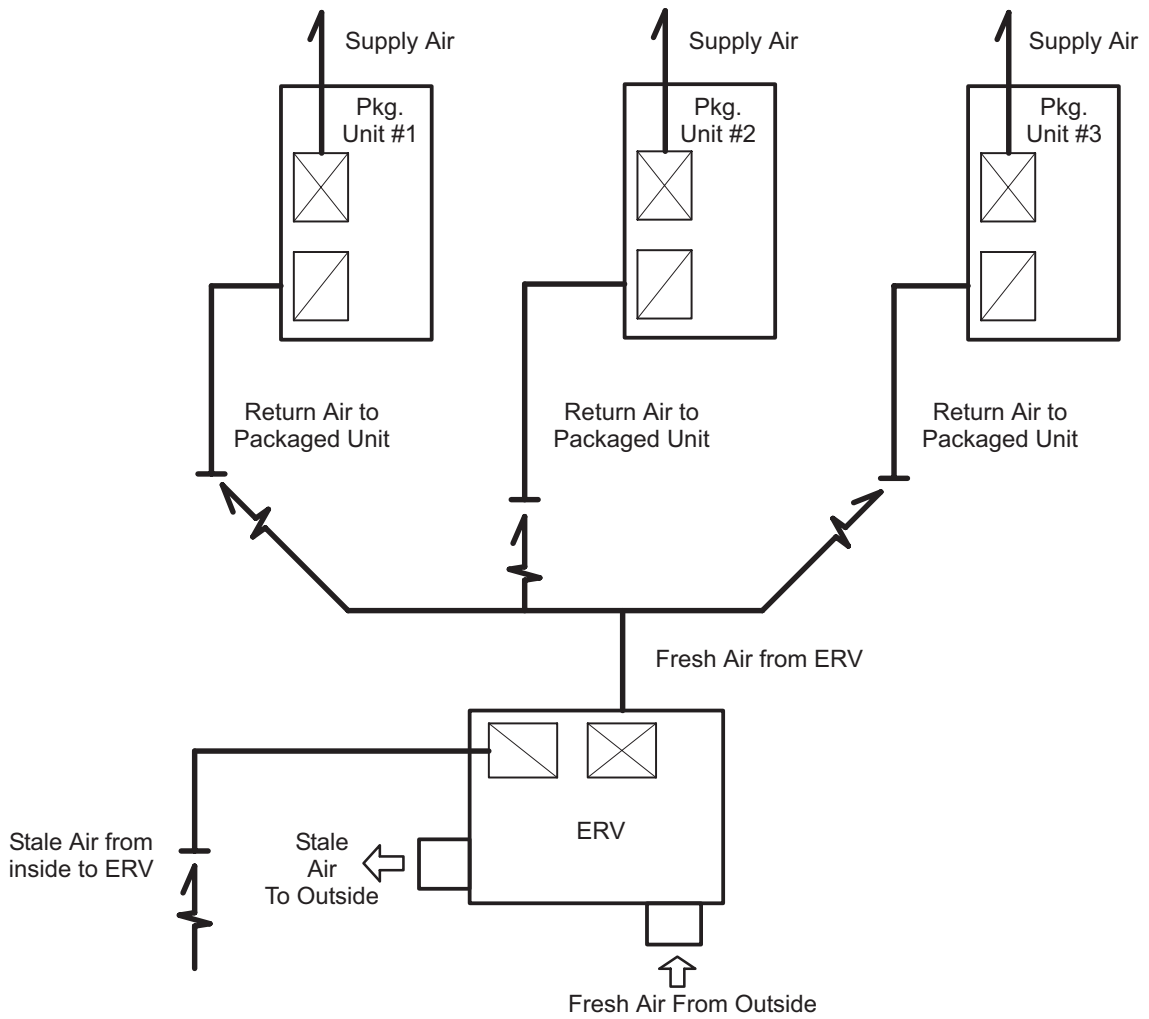
Energy Recovery Wheel Effectiveness	Air Volume cfm	STATIC PRESSURE EXTERNAL TO UNIT - Inches Water Gauge															
		0.10		0.30		0.50		0.70		0.90		1.10		1.30		1.50	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
74%	7500	640	3.25	680	3.55	715	3.85	755	4.20	790	4.50	830	4.80	865	5.10	905	5.40
73%	8000	660	3.75	700	4.10	735	4.40	770	4.75	805	5.10	840	5.40	875	5.75	910	6.05
72%	9000	710	4.95	745	5.35	775	5.70	810	6.10	840	6.45	835	6.85	905	7.25	935	7.60
70%	10,000	765	6.40	795	6.80	820	7.25	850	7.65	880	8.10	910	8.50	940	8.90	965	9.35

NOTE - All data is measured external to the unit with air filters in place.

**TYPICAL ERV INDOOR APPLICATION**

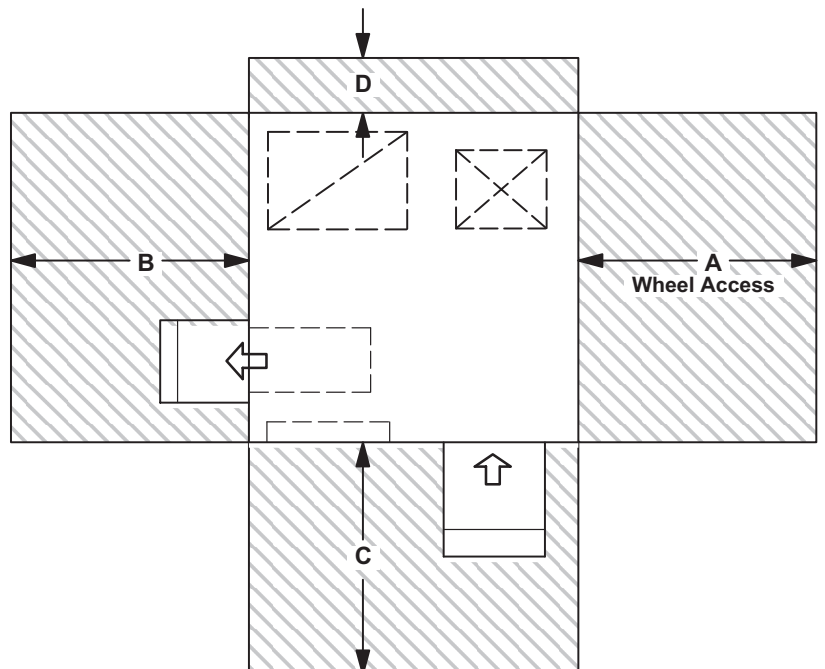


## ERV FRESH AIR DISTRIBUTION

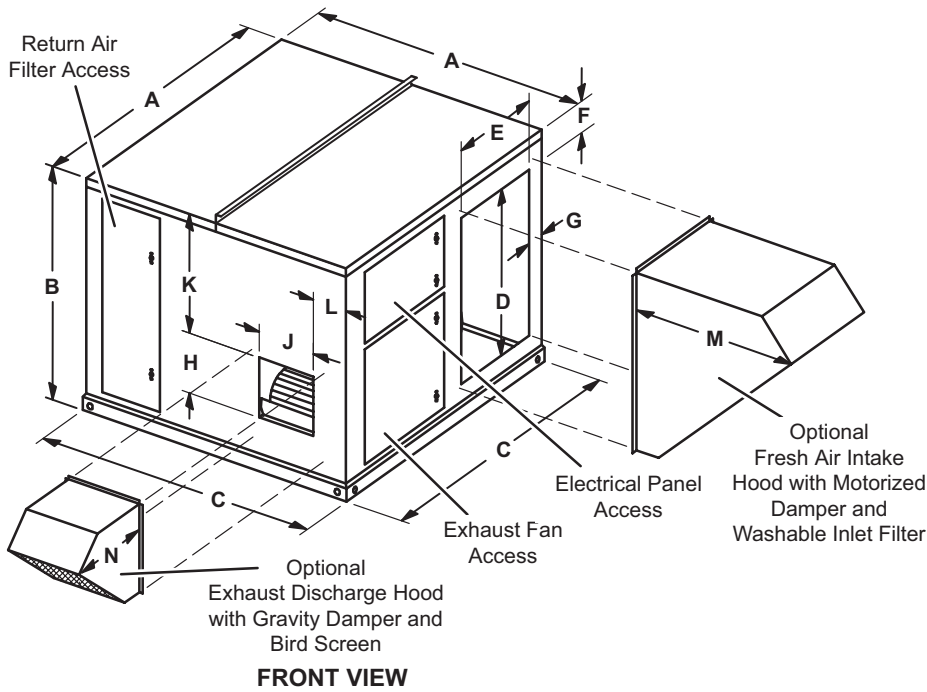


## INSTALLATION CLEARANCES - INCHES (MM)

- A = 36 (914) ERV-1500, ERV-2300 Indoor or Outdoor  
52 (1320) ERV-3000, ERV-4500 Indoor or Outdoor  
86 (2185) ERV-6000 to ERV-10000 Indoor or Outdoor
- B = 32 (813) ERV-1500 to ERV-10000 Indoor or Outdoor
- C = 32 (813) ERV-1500, ERV-2300 Indoor or Outdoor  
40 (1016) ERV-3000, ERV-4500 Indoor or Outdoor  
48 (1219) ERV-6000 to ERV-10000 Indoor or Outdoor
- D = 4 (102) ERV-1500 to ERV-10000 Indoor  
24 (610) ERV-1500 to ERV-10000 Outdoor



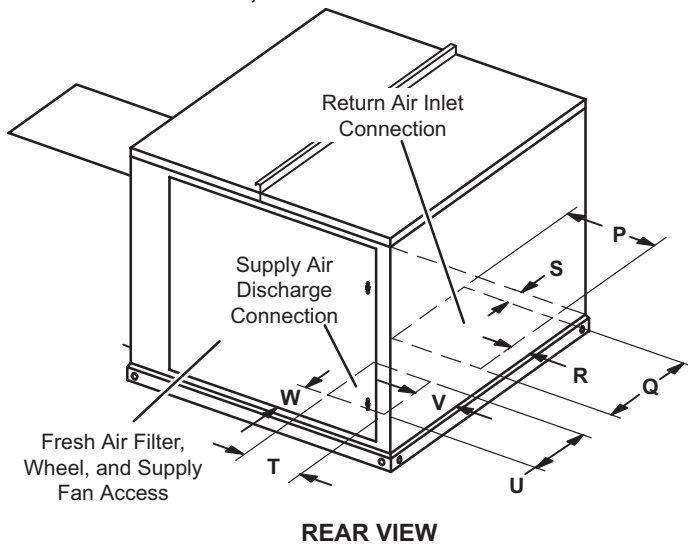
# DIMENSIONS - INCHES (MM)



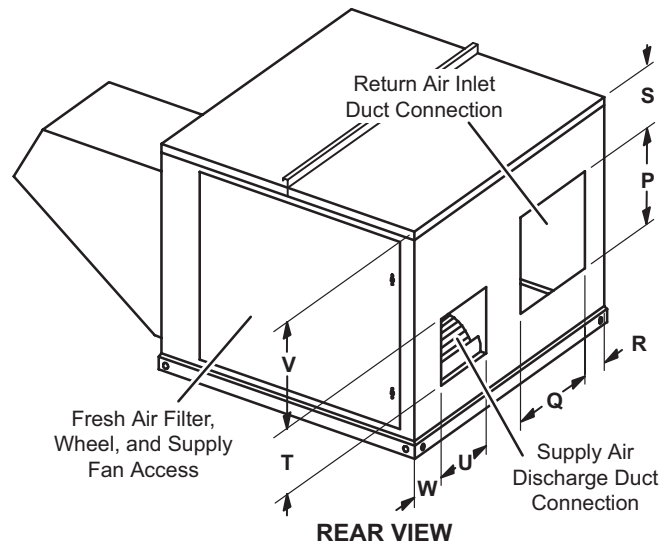
Model No.	ERV-1500-2300	
	in.	mm
A	53	1346
B	49-3/4	1264
C	54-1/2	1384
D	34-1/2	876
E	21-1/2	546
F	5-1/2	140
G	2	51
H	11-3/8	289
J	13-1/8	333
K	32-1/4	820
L	6	153
M	28	711
N	14	356

Model No.	ERV-3000-4500	
	in.	mm
A	66-1/2	1689
B	67-1/4	1708
C	68-1/4	1734
D	40	1016
E	24	610
F	11	279
G	5-1/2	133
H	13-5/8	346
J	15-3/4	400
K	45-1/2	1156
L	8-1/4	210
M	36	914
N	20	508

## DOWNFLOW, BOTTOM DUCT CONNECTIONS



## HORIZONTAL DUCT CONNECTIONS

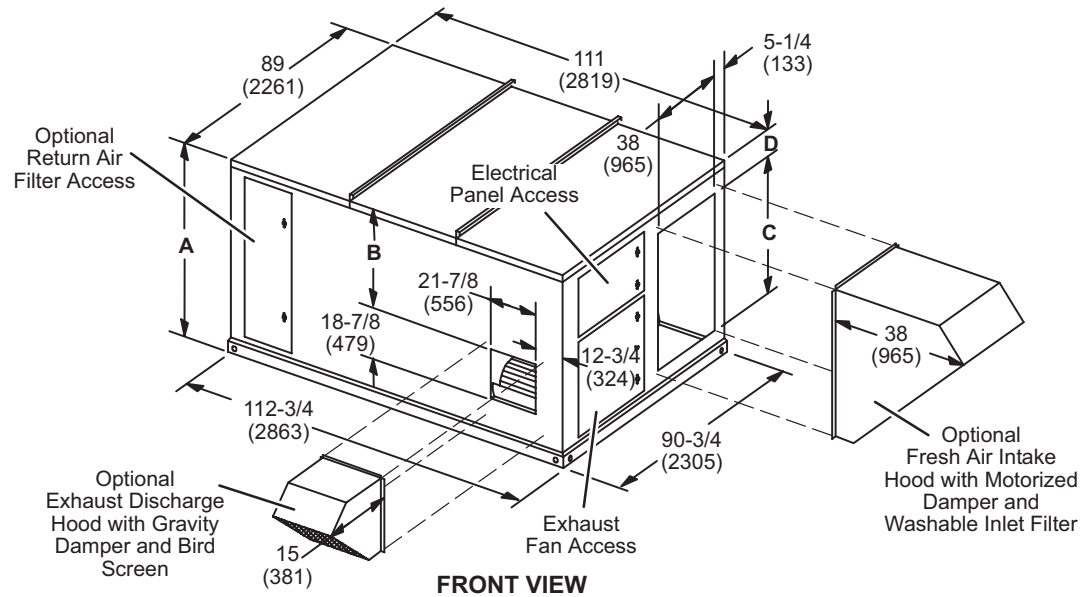


Model No.	ERV-1500-2300		ERV-3000-4500	
	in.	mm	in.	mm
P	14	356	20	508
Q	20	508	22	559
R	3-1/2	89	2-1/4	57
S	3-1/4	83	3-1/4	83
T	11-3/8	289	13-5/8	346
U	13-1/8	333	15-3/4	400
V	7-1/2	191	8-1/4	210
W	7-1/2	191	8-1/4	210

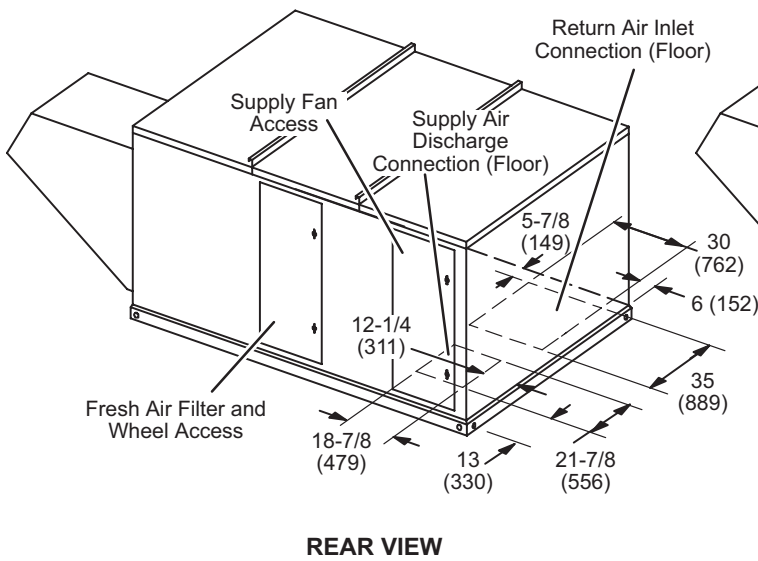
Model No.	ERV-1500-2300		ERV-3000-4500	
	in.	mm	in.	mm
P	14	356	22	559
Q	20	508	20	508
R	3-1/4	89	5-3/16	132
S	17	432	19	483
T	11-3/8	289	13-5/8	346
U	13-1/8	333	15-3/4	400
V	32-1/4	819	45-1/2	1156
W	7-1/2	191	8-1/4	210



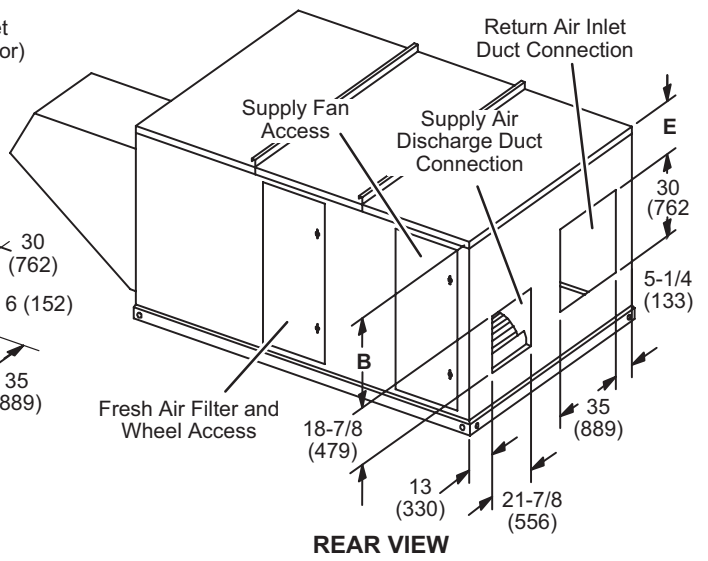
# DIMENSIONS - INCHES (MM)



## DOWNFLOW, BOTTOM DUCT CONNECTIONS

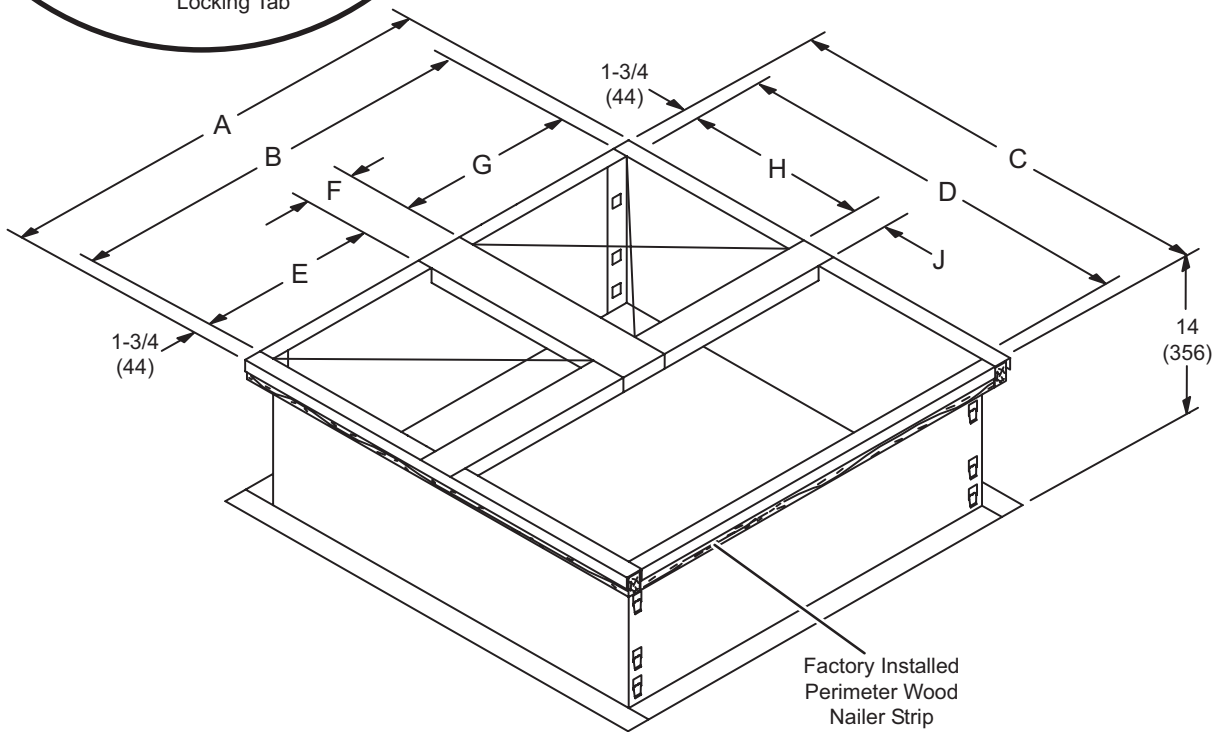
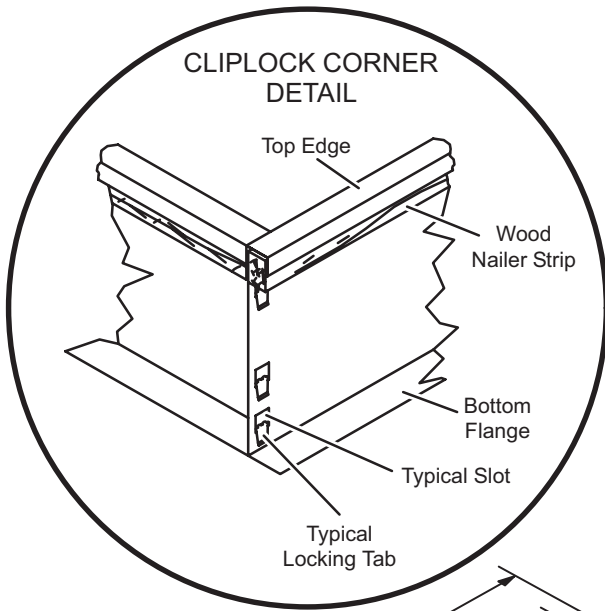


## HORIZONTAL DUCT CONNECTIONS



Model No.	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
<b>ERV-6000</b>	74-1/4	1886	48-1/4	1226	60-3/8	1534	4	102	17	432
<b>ERV-7500</b>	88-1/4	2242	62	1575	70	1778	7-1/2	191	24	610
<b>ERV-10000</b>	88-1/4	2242	62	1575	70	1778	7-1/2	191	24	610

# ACCESSORY DIMENSIONS - INCHES (MM)



Model No.	A		B		C		D		E		F		G		H		J	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RMF-1500 RMF-2300	49-1/2	1257	46	1168	49-1/2	1257	46	1168	21-1/2	546	9-7/8	251	14-5/8	372	16-7/8	429	2	51
RMF-3000 RMF-4500	63-1/2	1613	60	1524	63-1/2	1613	60	1524	28	711	4	102	28	711	28	711	2	51
RMF-6000 RMF-7500 RMF-10000	81-1/2	2070	78	1981	103-1/2	2070	100	2629	36	914	6	152	36	914	36	914	3	76

## **GUIDE SPECIFICATIONS**

*Prepared for the guidance of architects, consulting engineers and mechanical contractors.*

### **General**

*Furnish and install an Energy Recovery Ventilator capable of recovering energy up to 88% effectiveness.*

*Shall be capable of operating within ambient temperatures range of 130°F through 5°F without the need for frost protection.*

*Shall come complete with automatic controls.*

*The ERV shall be a standard product of a firm regularly engaged in the manufacturing of HVAC equipment. The manufacturer shall have parts and service available throughout Canada and the U.S.A.*

*The equipment shall be completely factory assembled and wired internally, ready for field connections.*

*Manufacturer shall test operate the unit at the factory before shipment.*

### **Approval**

*Energy Recovery Wheel included in unit shall be certified in accordance with AHRI Standard 1060-2005, Air-to-Air Energy Recovery Ventilation Equipment.*

*The unit shall be CSA (NRTL/C) approved.*

### **Warranty**

*The recovery wheel shall have a limited warranty for a five years.*

*All other covered components shall have a limited warranty for a period of one year from date of shipment.*

### **Unit Construction**

*Unit casing shall be minimum 18 gauge satin coat steel with baked on powder coat enamel finish.*

*Shall be available with horizontal or downflow supply and return air openings.*

*All seams to be sealed with weather resistant caulking.*

*Interior surfaces to be lined with minimum 1 in. thick, 3 lbs./ft.<sup>3</sup> insulation with adequately spaced clip pins to hold insulation in place.*

*The floor shall be double skinned to protect the insulation.*

*The full perimeter base shall be constructed of a combination of 12/14 steel with integral lifting holes. Hinged access doors shall be double skinned, internally insulated and provided with Nylock hinges (minimum of 2 latches per door) and full automotive grade bulb seal gasket.*

### **Energy Recovery Wheel Assembly**

*The energy recovery wheel assembly shall be designed to slide in and out of the unit for ease of inspection and maintenance.*

*The assembly shall contain an energy recovery wheel made up of eight segments, removable without the use of tools, and shall be constructed of a light weight polymer material.*

*Desiccant recovery wheel shall be permanently bonded with a desiccant coating.*

*The energy recovery wheel assembly shall have an integral wheel drive motor with automatic thermal overload protection and drive belt(s).*

*The wheel shall rotate between two counter flowing air streams at a rate of 50-60 RPM.*

*Wheel bearings shall be self aligning and permanently sealed.*

### **Air Distribution**

*Supply and exhaust fans shall be forward curved double inlet with ball bearings.*

*Fan motors shall be rated continuous duty, ball bearing construction, and class 8 insulation.*

*Variable pitch, V-belt drive and adjustable motor mounts to be provided.*



**(NOTE - Energy Recovery Wheel  
included in unit is AHRI rated)**



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