

**vänEE 90H-V ECM ERV**

**Part no. 43916**

85 to 140\* CFM            40 to 125\* CFM  
 65 to 140\* CFM            40 to 80\* CFM  
 55 to 125\* CFM    (**Factory Set**)

\*MAXIMUM SPEED AT 0.4 IN. W.G.



VB0137

**A NEW ERA BEGINS WITH THE VÄNEE 90H-V ECM ERV  
 ULTRA-EFFICIENT AND ENVIRONMENTALLY-  
 FRIENDLY ENERGY RECOVERY VENTILATOR**

The 90H-V ECM ERV has been designed to be one of the most energy-efficient ERV air exchangers available on the market. Its innovative design incorporates high performance ECM\* motors which consume significantly less electricity. ERVs are ideal for LEED®-certified residential projects and other energy-efficient homes because they recover the heat or coolness of the indoor air while helping to maintain comfortable moisture levels inside the home.

- Perfect for drier homes using humidifiers in heating season and air conditioning during cooling season
- Compact footprint allows an easy fit in restricted spaces
- No drain required\*\*
- State-of-the-art ECM motors provide significant electrical consumption savings
- 6" metal ports located on top of unit to simplify installation and provide a cleaner appearance
- Integrated pressure taps and balancing dampers to quickly measure and balance the air-flow
- Faster and easier installation of insulated flexible ducts with practical straps
- Homeshield™ defrosting system (no negative pressure)
- ENERGY STAR® qualified: Ideal for high performance small to mid-size homes

\*Electronically Commutated Motor.

\*\*For most climate zones.

**REPAIRS AND MAINTENANCE**

The 90H-V ECM ERV high output ECM\* motors are permanently lubricated. The electronic circuit board eliminates electromechanical parts, reducing repair time to a minimum.

**WARRANTY**

The 90H-V ECM ERV unit is protected by a 5-year warranty on all parts, including the energy recovery core.

Available at:

**ENERGY RECOVERY VENTILATOR**

**Controls**

- This unit is very simple to operate. Once it is installed, press on its push button, located under the unit, to activate it. Press once for low speed, once again for high speed, and once more to stop it.
- For more convenience, this unit can also be controlled by an optional main control. For a complete list of optional main and auxiliary controls available, refer to the **Wall Control Compatibility Chart** on last pages of wall controls specification sheet, available at [www.vanee.ca](http://www.vanee.ca).

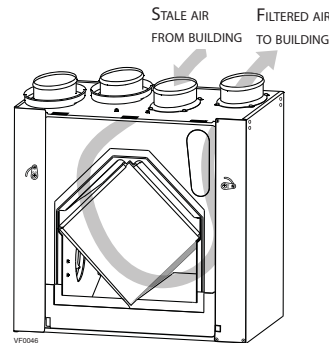
For more details about controls, refer to their specification sheet and to the **Main and auxiliary wall control user guide** at [www.vanee.ca](http://www.vanee.ca).

**Options**

- Complete line of registers and diffusers
- Electric duct heater

**Homeshield™ Defrosting System**

The 90H-V ECM ERV uses a unique defrosting method. No negative pressure is created by air exhausted to the outside, as the air is recirculated into the house, helping to prevent any backdraft.



OUTSIDE TEMPERATURE		DEFROST CYCLE MIN./ OPERATING MIN.
°C	°F	
WARMER THAN -5	WARMER THAN 23	7/40
-5 TO -15	23 TO 5	7/25
-15 TO -27	5 TO -17	7/25
-27 AND LESS	-17 AND LESS	10/22

**Energy Recovery Core**

Dimensions: 10" x 10" x 14.25" (25.4 cm x 25.4 cm x 36.2 cm)

Exchange surface: 110 ft.<sup>2</sup> (10.2 m<sup>2</sup>)

Weight: 20 lb. (9.1 kg)

Material: Polymerized paper

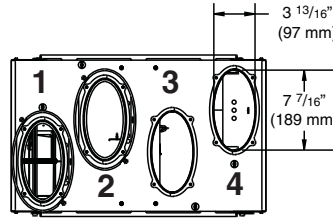
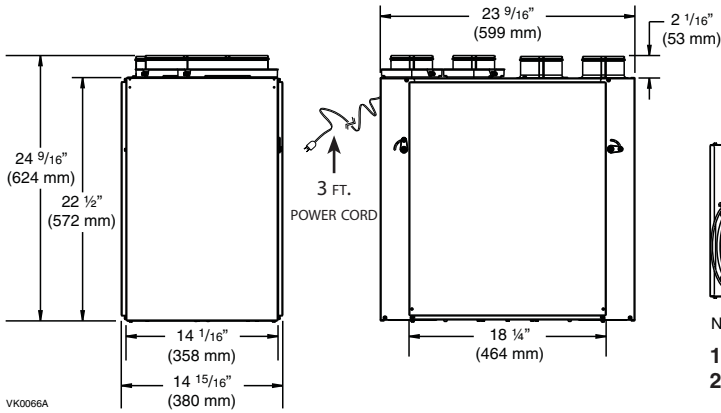
Type: Cross Flow

Warranty: 5-year

**Requirements and standards**

- Complies with the UL 1812 requirements regulating the installation of Energy Recovery Ventilators
- Complies with the CSA C22.2 no. 113 Standard applicable to ventilators
- Complies with CSA C444 requirements regulating the installation of Energy Recovery Ventilators
- Technical data was obtained from published results of tests relating to CSA C439 Standards
- HVI certified and ENERGY STAR® qualified

# DIMENSIONS: 90H-V ECM ERV



NOTE: ALL UNITS PORTS WERE CREATED TO BE CONNECTED TO DUCTS HAVING A MINIMUM OF 6" DIAMETER, BUT IF NEEDED, THEY CAN BE CONNECTED TO BIGGER SIZED DUCTS BY USING AN APPROPRIATE TRANSITION (E.G.: 6" DIAMETER TO 7" DIAMETER TRANSITION).

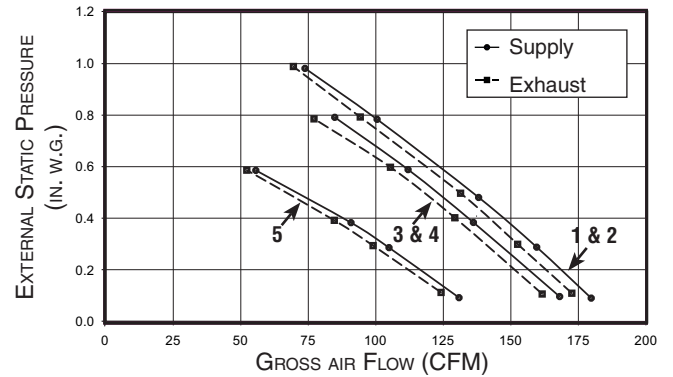
NOTE: Every port fits 6" round duct.

- 1: EXHAUST AIR TO OUTSIDE PORT
- 2: FRESH AIR FROM OUTSIDE PORT
- 3: EXHAUST AIR FROM BUILDING PORT
- 4: FRESH AIR TO BUILDING PORT

## VENTILATION PERFORMANCE

EXTERNAL STATIC PRESSURE	PA	IN. W.G.	NET SUPPLY AIR FLOW		GROSS AIR FLOW						
			L/S	CFM	SUPPLY			EXHAUST			
			L/S	CFM	L/S	CFM	M <sup>3</sup> /H	L/S	CFM	M <sup>3</sup> /H	
25	0.1		76	161	274	77	163	277	78	166	282
50	0.2		74	157	267	75	158	268	74	156	265
75	0.3		69	147	250	70	149	253	71	150	255
100	0.4		66	140	238	67	142	241	65	138	234
125	0.5		59	125	212	60	127	216	62	132	224
150	0.6		55	117	199	56	119	202	58	122	207
175	0.7		50	105	178	50	107	182	53	111	189
200	0.8		44	93	158	45	95	161	45	95	161
225	0.9		37	77	131	37	79	134	39	83	141
250	1.0		29	61	104	29	62	105	34	73	124

## FAN CURVE ACCORDING TO SPEED



- SPEED RANGE 1: 85 TO 140\* CFM
- SPEED RANGE 2: 65 TO 140\* CFM
- SPEED RANGE 3: 55 TO 125\* CFM (FACTORY SET)
- SPEED RANGE 4: 40 TO 125\* CFM
- SPEED RANGE 5: 40 TO 80\* CFM

\*MAXIMUM SPEED AT 0.4 IN. W.G.

## ENERGY PERFORMANCE

SUPPLY TEMPERATURE		NET AIR FLOW			POWER CONSUMED WATTS	SENSIBLE RECOVERY EFFICIENCY	APPARENT SENSIBLE EFFECTIVENESS	LATENT RECOVERY/ MOISTURE TRANSFER
°C	°F	L/S	CFM	M <sup>3</sup> /H				
HEATING								
0	32	24	52	88	24	67	73	0.59
0	32	31	65	110	30	67	72	0.55
0	32	39	83	141	36	65	71	0.52
0	32	57	122	207	60	62	67	0.46
-25	-13	33	70	119	39	60	75	0.61
35	95	24	51	87	24	52**	71	0.51

\*\*Total recovery efficiency

NOTE: All specifications are subject to change without notice.

## SPECIFICATIONS

- Model: 90H-V ECM ERV
- Part Number: 43916
- Total Assembled Weight (including polymerized paper core): 65 lb. (29.5 kg)
- Oval shaped ports; fit 6" round ducts
- Drains: Optional
- Core Filters: 2 washable Merv 7 filters, 9.2" x 14.25" x 0.38" (23.4 cm x 36.2 cm x 1 cm)
- Housing: Pre-painted steel
- Insulation: Expanded polystyrene
- Mounting: Suspension by chains and springs
- Supply and Exhaust Blower Motors: 2 ECM motors
  - Protection type: Thermally protected
  - Insulation class: B
- Speed Control on Unit:
  - Low speed and high speed
  - Other modes available with Platinum or Deco-Touch
- Energy Recovery Core:
  - Heat Exchange Surface Area: 110 ft.<sup>2</sup> (10.2 m<sup>2</sup>)
  - Type: Crossflow
  - Material: Polymerized paper
- Unit Electrical Characteristics:
 

Volts	Frequency	Ampere	Watts
120	60 Hz	1.3	90

Project:	REMARKS
Location:	
Part no.: 43916	
Qty.:	
Submitted by:	Date:



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www.vaneer.ca

90H-VECMERVd1604