SER 450

Light Commercial Energy Recovery Ventilators

Product #: 99266

Fantech® commercial energy recovery ventilators (ERV) models provide cost-effective energy savings while delivering ventilation to buildings in a compact product.
The exchanger tempers the outdoor air before supplying it to the building by recovering the energy in the building's air before exhausting it.
In summer, the ERV will pre-cool and reduce moisture in the ventilation air while in winter it will pre-heat and recover moisture. We designed our commercial energy recovery ventilators to operate in both warm and humid climates and in very cold climates.

Feature

- Push-pull configuration
- Removable screw terminal for easy connection
- Dual service doors & reversible electrical box
- External three position switch (Low/Standby/High)
- Weighs 132 lbs (60Kg)

Applications

- Class Room
- Offices
- Retail Shops
- Clinics
- Hair Salon
- Animal Shelters
- Bars & Restaurants
- Larger Homes

Specifications

- Voltage/Phase – 120/1
- Power rated – 500 W
- Amp – 4.17 A
- Average airflow @ 0.4" P_S (100Pa) – 468 cfm (221 L/s)

Port configuration

The unit has access doors on the front and back. Also, the main control panel may be moved from front to back allowing for ducting layout.

Warranty

3 years on all parts

Fans

Two (2) factory balanced fans with backward curved blades. Motors come with permanently lubricated sealed ball bearings and (TOP) thermal overload protected.

Energy recovery core

Two (2) modular energy recovery cores made from water vapor transport durable polymer membrane that is highly permeable to humidity. The ERV core is freeze tolerant and water washable. Core dimensions are 11.4" x 11.4" (290x 290 mm) with a 11.4" (290 mm) depth.

Defrost

A preset frost control sequence is initiated if the outdoor temperature falls below the set point of 23°F (-5°C). During the initial stage, the supply blower shuts down & the exhaust blower switches into high speed to eliminate frost build-up in the core. The unit then returns to normal operation for the final stage of the frost control sequence at which time the sequence is repeated if the outdoor air temperatures is still below the set point.

Serviceability

Cores, filters and drain pan can be accessed easily from both sides of the ERV from hinged access panels. Cores conveniently slide out with only 15" (380 mm) clearance. Blowers can be accessed from both side of the ERV from fastened access panels. Blowers are easily removed by taking off the access panel and sliding the motor plates out of the ERV. A quick connect allows for fast inspection of blowers.

Case

22 gauge galvanized steel. Baked powder coated paint.

Insulation

Insulated with 1in. (25 mm) fiberglass with FSK facing for condensation control.

Filters

The exhaust and fresh air streams are protected by MERV1 washable filters constructed to meet UL 900. Optional MERV6 filters are direct replacement to the MERV1. Use of MERV6 filters will add an additional system pressure of 0.52 in.wg (130 Pa) at 450 cfm (212 l/s). Additional MERV Rated filters available upon request.

Drain

A Drain and Tubing (included) must be installed for all HRV units. For ERV units, drain is not required,however, it is recommended for climates where outdoor temperature typically remains below -25°C(-13°F) combined with an indoor relative humidity higher than 40% for a period of 24 hours or severaldays in arow.

Controls

External three (3) position (Low/Stand By/High) rocker switch that will offer continuous ventilation. In addition Fantech offers a variety of external controls.

Mounting

Unit may be suspended by using threaded rod, not supplied, or placed on a platform. Unit shall be adaptable for easy service of electrical components

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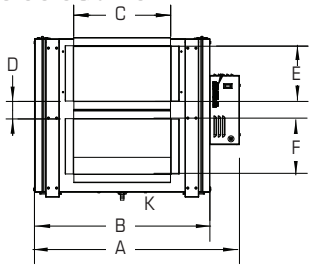
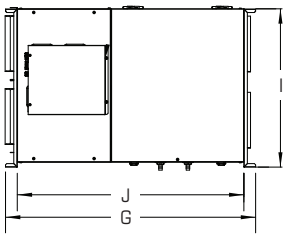
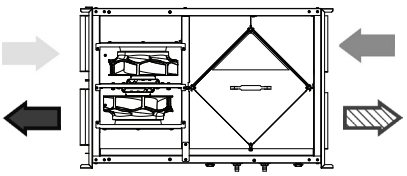
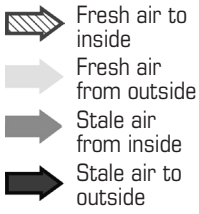
Dimensions & airflow





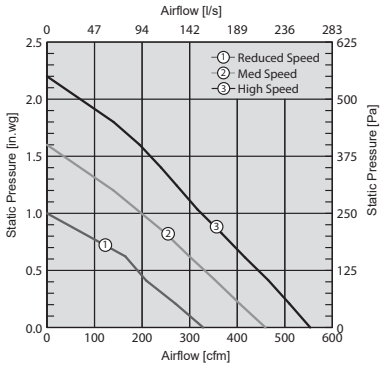




Model	A		B		C		D		E		F		G		I		J		K	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
SER 450	29 1/2	747	25 1/8	639	14	355	2 1/2	64	8	203	8	203	35 15/16	911	22 11/16	577	32 1/2	826	1/2	13

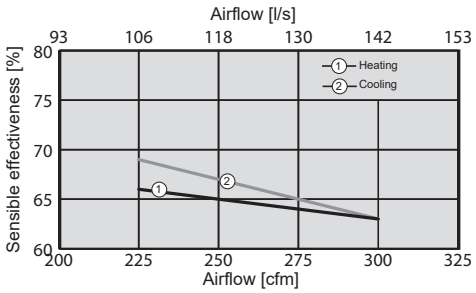
Ventilation Performance

in. wg. (Pa)	0.2 (50)	0.4 (100)	0.6 (150)	0.8 (200)	1.0 (250)	1.2 (300)	1.4 (350)	1.6 (400)
	cfm (L/s)	cfm (L/s)	cfm (L/s)	cfm (L/s)	cfm (L/s)	cfm (L/s)	cfm (L/s)	cfm (L/s)
Supply High	509 (240)	468 (221)	425 (201)	381 (180)	334 (158)	285 (135)	235 (111)	182 (86)
Supply Med	410 (193)	361 (170)	309 (146)	254 (120)	196 (93)	135 (64)	70 (33)	-
Supply Low	277 (131)	222 (105)	158 (75)	85 (40)	-	-	-	-



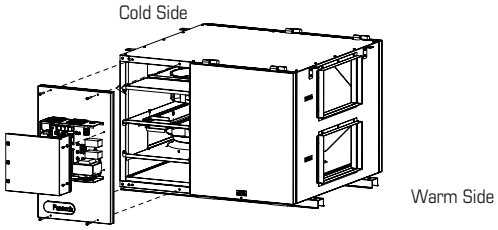
Energy performance

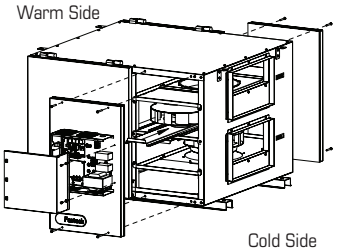
	Supply temperature		Net airflow		Net Effectiveness		
					Sensible	Latent	Total
	°F	°C	cfm	L/s	%	%	%
Heating	35	1.7	300	142	63	46	59
	35	1.7	225	106	66	51	64
Cooling	95	35	300	142	63	42	58
	95	35	225	106	69	48	63



Port configuration

Standard Configuration as shipped from factory





Requirements and standards

- Complies with the UL 1812 requirements regulating the construction and installation of Heat Recovery Ventilators
- Complies with the CSA C22.2 no. 113 Standard applicable to ventilators
- AHRI certifies the published performance ratings of the COMPONENT used in this product in accordance with AHRI 1060. AHRI Certified Reference Number: 202342542, model number EXR-290-290-200-CS-O. Note that only the COMPONENT is AHRI 1060 certified and not the product itself.

Contacts

Submitted by: Date:
Quantity: Model: Project #:
Comments:
Location:
Architect:
Engineer: Contractor:

Distributed by:

United States 10048 Industrial Blvd. • Lenexa, KS 66215 • 1.800.747.1762 • www.fantech.net
Canada 50 Kanalflakt Way • Bouctouche, NB E4S 3M5 • 1.800.565.3548 • www.fantech.net

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