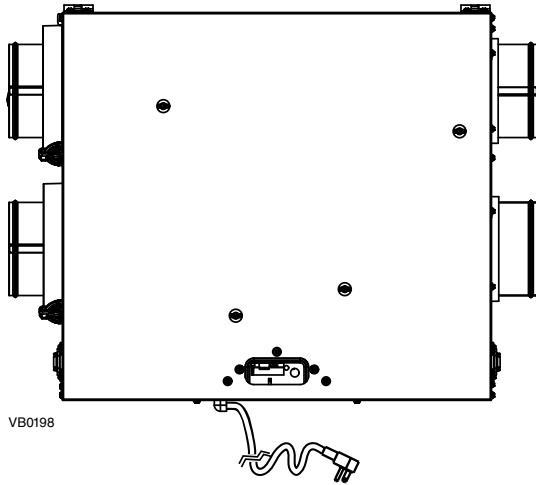




BROAN™ ERVS100

Part no. ERVS100S

65-105 CFM (0.4 in. w.g.)



THE FRESH AIR SOLUTION FOR SOUTHERN REGIONS

The Broan ERVS100 is an effective, balanced ventilation solution designed specifically for homes in southern regions. The ERVS100 provides a continuous supply of fresh air to the home while exhausting stale air and pollutants. Plus it manages excess moisture – making it a centerpiece for tightly-constructed, energy efficient homes in hot and humid or dry climates.

- 65 to 105 CFM at 0.4 in. w.g;
- Energy recovery core recovering up to 51% of the excess moisture and up to 71% of the apparent heat or coolness;
- Built-in humidity sensor limiting the ventilation during periods of excessive humidity to maintain a comfortable humidity level and prevent risks of mold growth;
- Exclusive bracket system providing a faster and easier installation in the ceiling, an attic, a small closet or a garage;
- Integrates with existing forced-air furnace ducting for easy installation but runs independently to limit energy consumption related to ventilation;
- Built-in damper on fresh air supply port to prevent outside air infiltration when the unit is turned off;
- Integrated control to the unit to easily set the unit at installation.

REPAIRS AND MAINTENANCE

All parts requiring maintenance can be removed in less than 5 minutes allowing easy access for repairs. The PSC motors are permanently lubricated.

WARRANTY

The BROAN™ERVS100 is protected by a 5-year warranty on parts only. The energy core is covered by a 5-year warranty, with the original proof of purchase.

Control

Ventilation modes

POSITION	MODE	DESCRIPTION
SB*	Standby	Unit is off. Unit can be activated in high speed by the VB20W 20-minute push-button control, if applicable
INT	Intermittent	Unit works 20 minutes per hour in low speed. Unit can be activated in high speed by the VB20W 20-minute push-button control, if applicable.
1	Low Speed	Unit runs at 65 cfm. Unit can be activated in high speed by VB20W 20-minute push-button, if applicable.
2	High Speed	Unit runs at 105 cfm. Unit can be activated in high speed by the VB20W 20-minute push-button control, if applicable.

*Factory setting

Relative humidity limit

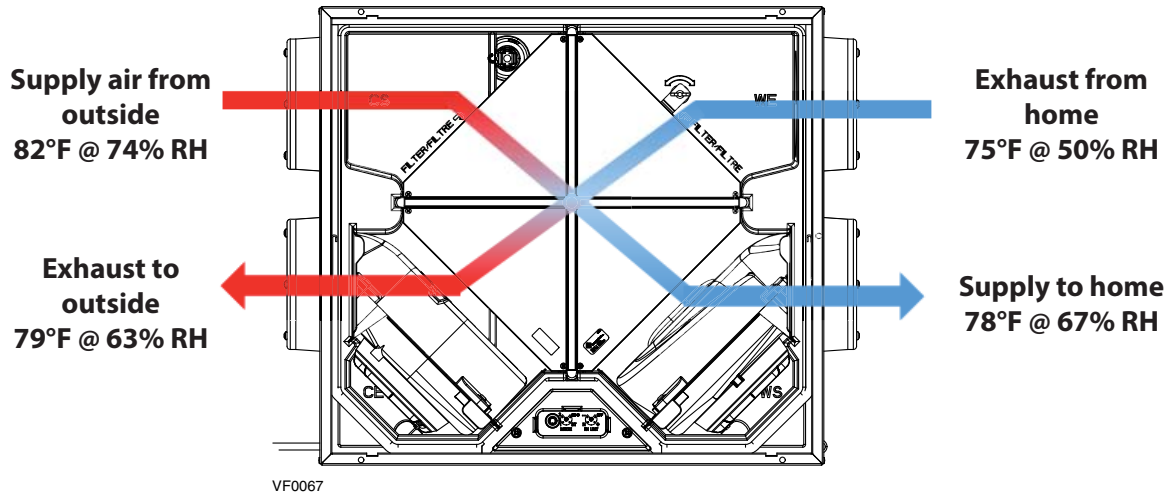
The ERVS100 monitors the outside air conditions (temperature and humidity level) every 10 minutes with a built-in sensor. When the outside conditions are above the set limits, the unit will limit the ventilation to 10 minutes per hour and come back to its previous setting when the conditions get back to the set limit. The accepted RH limit varies in function of the outside conditions and can be adjusted to 4 different positions:

Position	Description	Distributed air RH*	
		Outside temp <73°F	Outside temp ≥73°F
OFF	Relative humidity limit is deactivated	-	-
+	Higher relative humidity limit	Up to 60%	Up to 80%**
N	Factory set relative humidity limit	Up to 55%	Up to 75%**
-	Lower relative humidity limit	Up to 50%	Up to 70%**

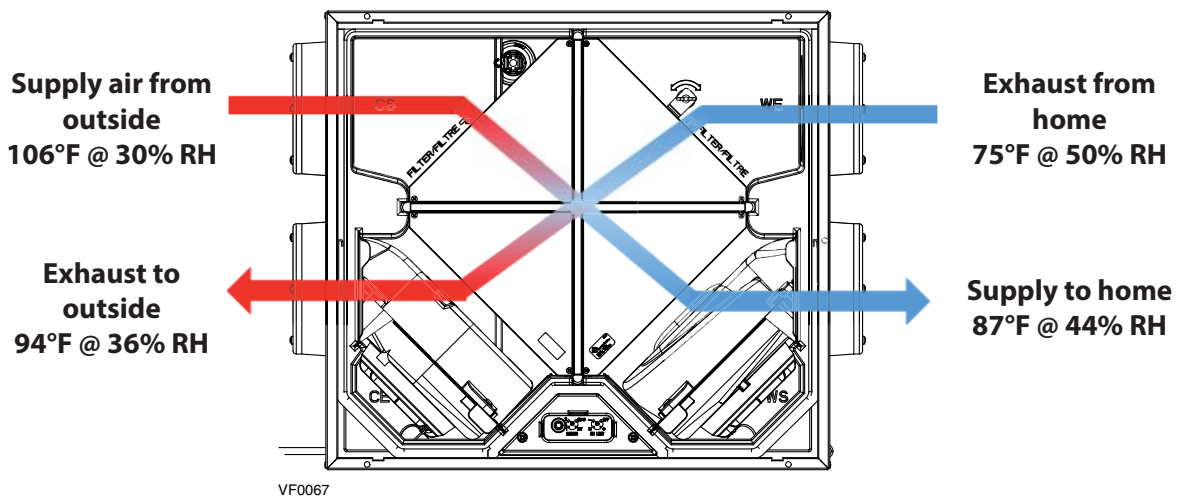
* The RH limit of distributed air is calculated at 75°F.

** When the outside temperature is equal or above 73°F, the maximum relative humidity level accepted is higher considering that the air conditioning will partly dehumidify the incoming fresh air after it is distributed and mixed with the conditioned inside air.

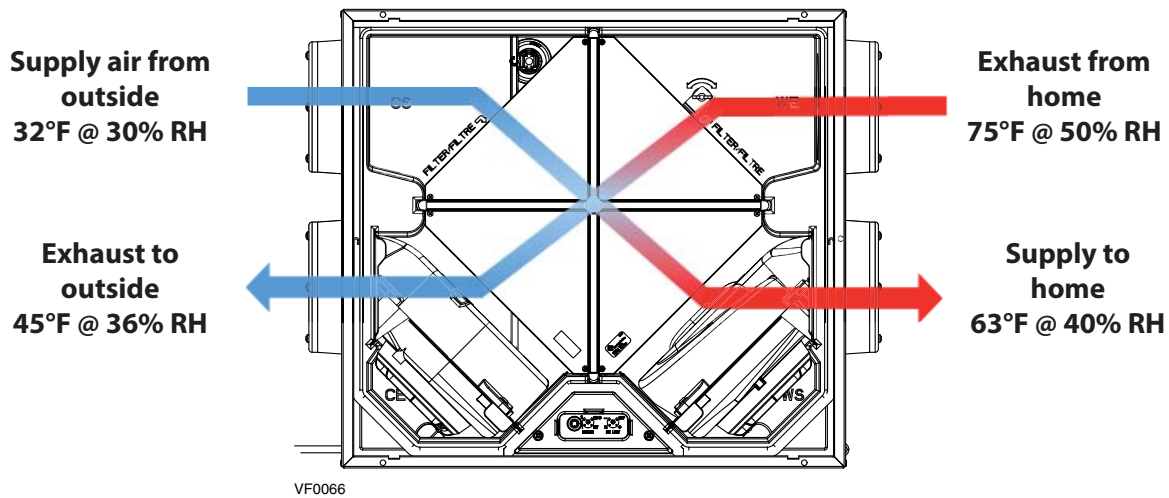
Performance in hot and humid climate



Performance in hot and dry climate



Performance in winter season



Product balancing

The ERVS100 is equipped with 2 high static pressure blowers and is balanced at the factory. At installation, the ERVS100 will remain balanced (within 10% difference between the exhaust and supply airflows) when the static pressure difference between the exhaust and the supply remains below 0.2 in. wg. after all ducting is installed. No balancing is required when this condition is met.

Filters

- 2 washable filters, 20 PPI.
- MERV 7 optional filters, part 21030.

Defrosting system

Unit operates a negative defrost during 10 minutes every 20 minutes when outside temperature is below 14°F and 10 minutes every 10 minutes below -4°F

Energy Recovery Core

Material: Polymerized paper
Type: Cross flow
Warranty 5 years

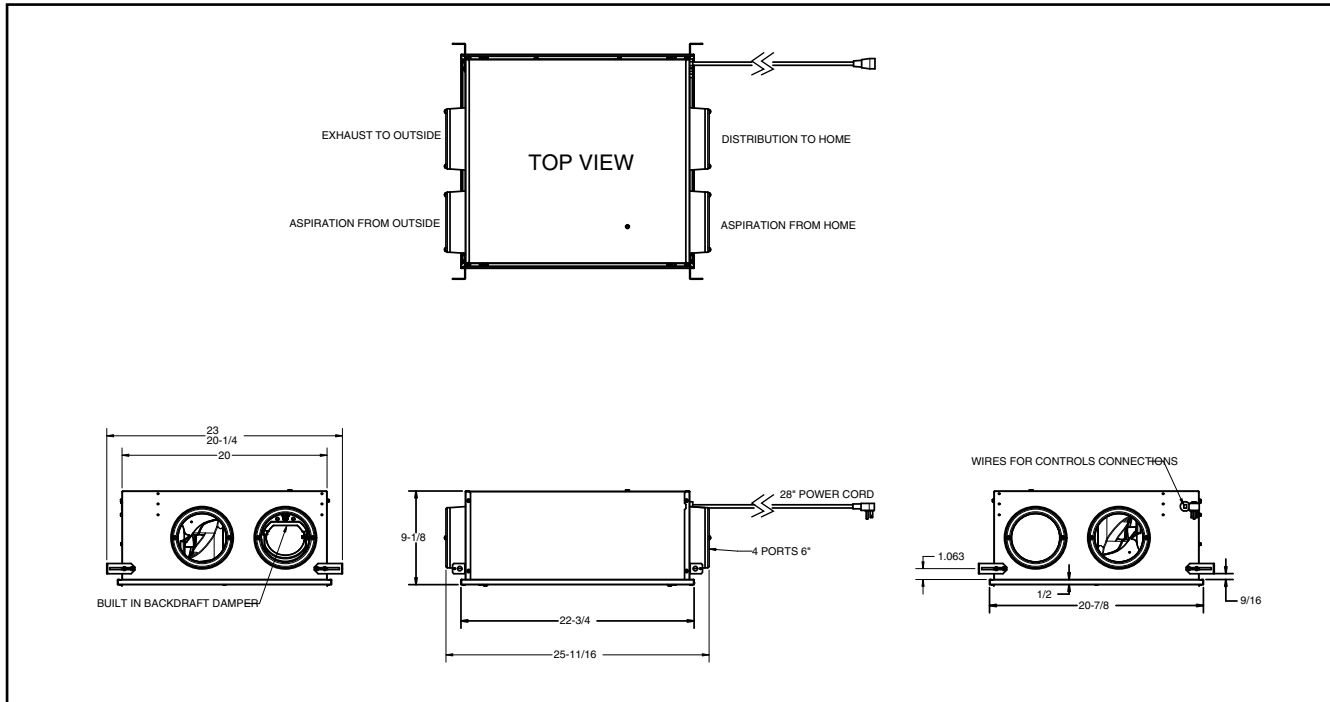
Options

- Broan VB20W 20 min push-button control
- Broan 69V Single-Function Control, Ivory (Dry contact standby switch)
- Broan 69W Single-Function Control, White (Dry contact standby switch)
- Broan 634M black exhaust roof cap 6" with backdraft damper and bird screen
- Broan 843BL black exhaust wall cap 6" with backdraft damper and bird screen
- Broan 641 aluminum exhaust wall cap 6"
- Broan EH6 aluminium inlet wall cap 6" with bird screen
- Broan 641FA aluminum inlet wall cap 6" with bird screen
- Broan CVG6 interior inlet plastic grille 6"
- Broan CVL6 mounting sleeve for inlet grille CVG6
- Broan CVLD6 sleeve with 6" backdraft damper

Requirements and standards

- Complies with the UL 1812 requirements regulating the installation of Energy Recovery Ventilators
- HVI certified
- Technical data was obtained from published results of tests relating to CSA C439 Standards

Dimensions

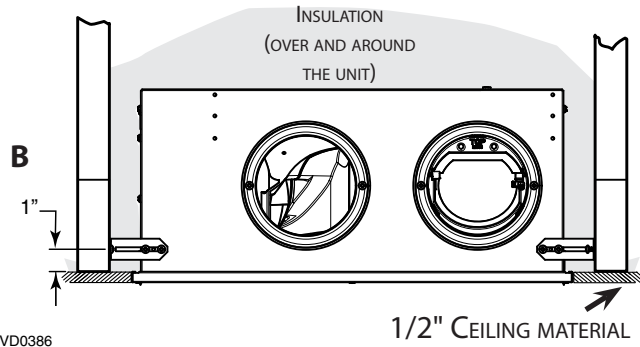
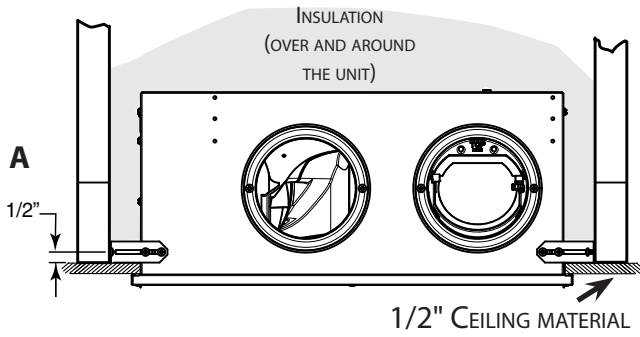


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Installation (please refer to the installation and user guide for complete details)

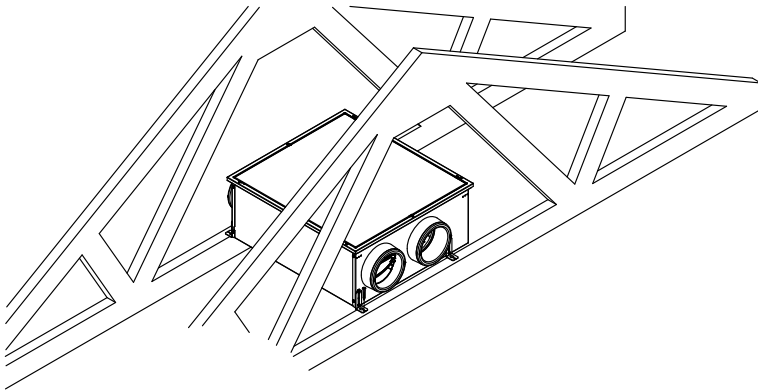
Positioning the unit

Installation in the ceiling (option A and B)



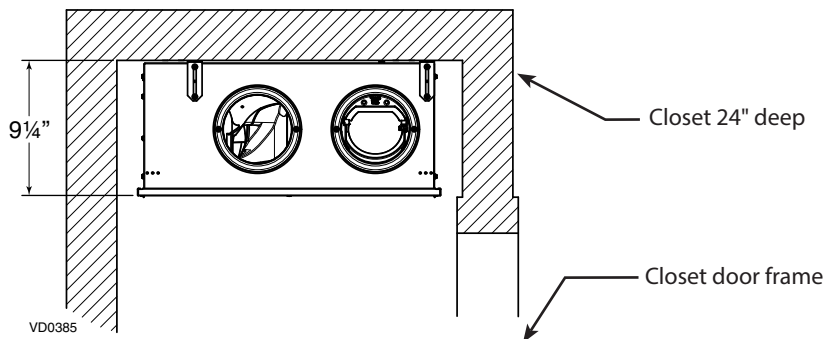
VD0386

Installation in attic



VH0117

Installation under ceiling



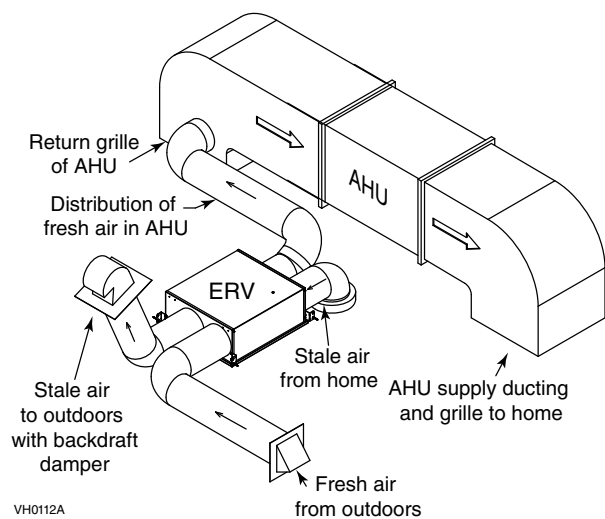
VD0385

Combining with an AHU

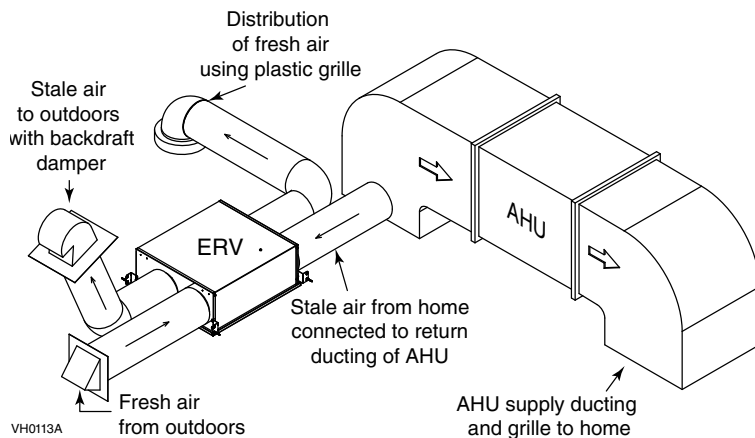
Recommended configurations

When the distribution of fresh air from the ERV is connected to the return of an AHU (such as in the image below, on the left), the connection should be done **as close as possible from the AHU return grille** to ensure proper functioning of the built-in fresh air damper.

OPTION 1



OPTION 2



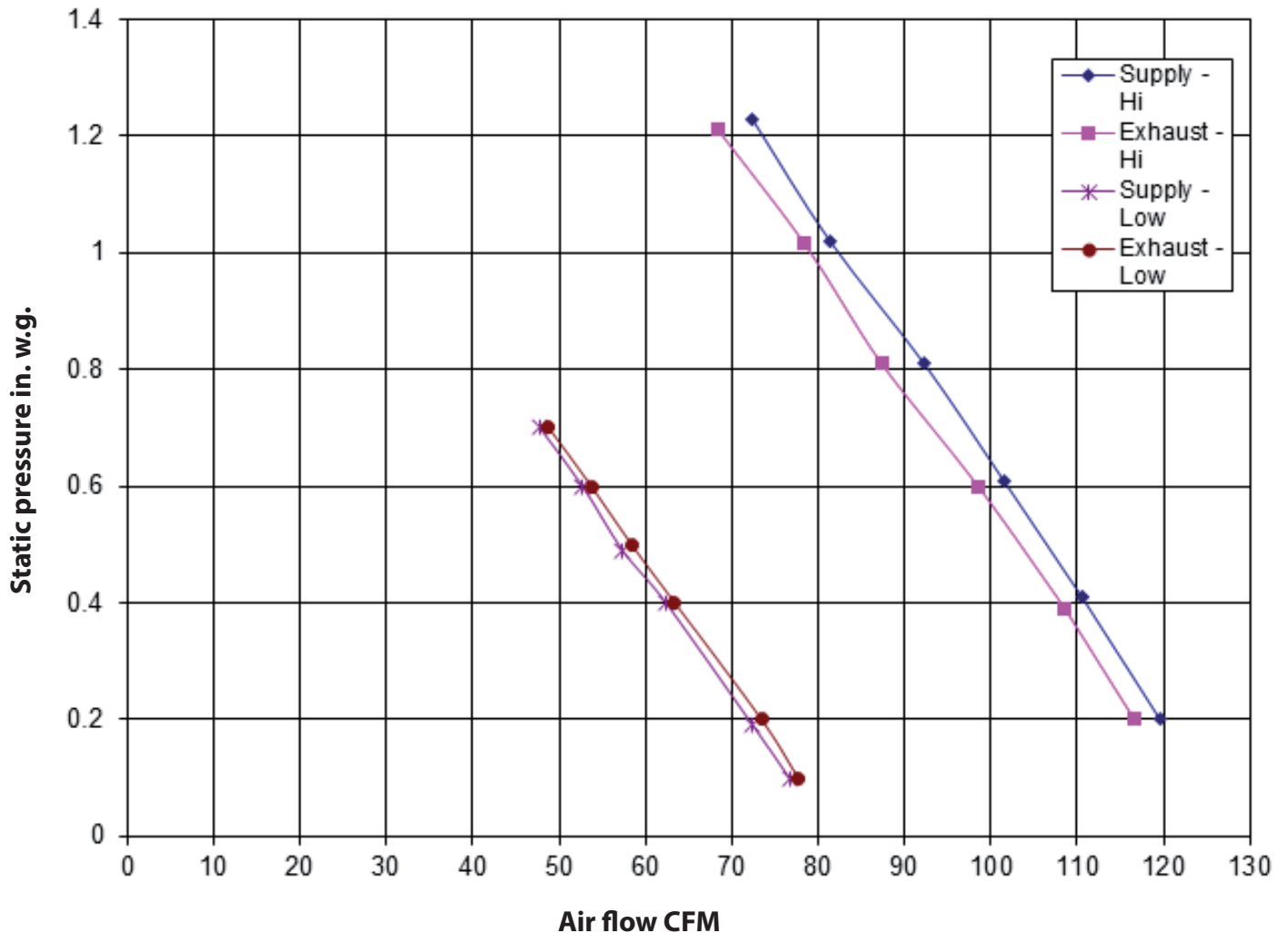
Energy performance

ERVS100

	Supply temperature	Net Air Flow	Power Consummed	Sensible Recovery Efficiency	Apparent Sensible Recovery	Total Recovery	Net Moisture Transfer
	*F	CFM	Watts	%	%	%	%
Cooling	95	64	46		62%	48%	45%
	95	105	103		55%	38%	35%
Heating	32	64	46	64%	71%		51%
	32	105	103	57%	67%		42%

Ventilation performance

Broan ERVS100 Air flow vs Static pressure



Noise level

0.4 sone @ 105 cfm at grille with 5' of flexible ducting (tested in accordance with ISO 5136 and HVI 915).

Specifications

Model : Broan ERVS100

Part number: ERVS100S

Total assembled weight including packaging: 40 lbs.

Metallic round ports: 6" diameter

Built-in magneted backdraft damper to close outside fresh air supply when the unit is turned off

Energy recovery core:

- Type cross flow
- Media membrane: Polymerized paper with aluminum

Core filters: 2 washable filters 20 PPI

Housing material: galvanized steel 22 ga

Door and door frame material: White pre-painted steel 20 ga

Insulation material: Molded Expanded polystyrene, UL certified for Energy recovery ventilators requirements

Supply and exhaust blower motors:

- PSC motors
- Protection type: Thermally protected
- Lock rotor electronic detection stops unit if motors failed

Installation brackets: included in unit, allow attic, in ceiling and under ceiling installations. Units must be installed with door on bottom or upside down. No vertical installation allowed.

Unit electrical characteristics

-Power cord 28" with 3 prongs

Volts Frequency Ampere Watts

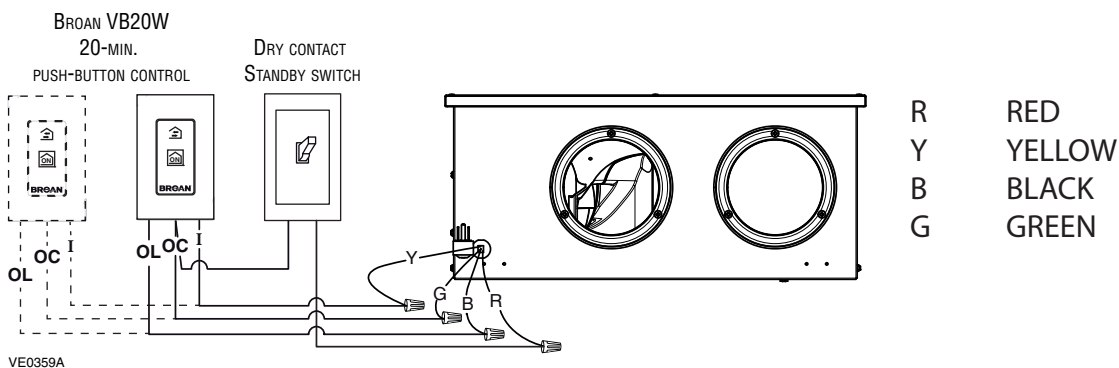
120 60hz 0.9 103

Low voltage connections for optional controls energized by unit

Optional controls wiring

-Broan VB20W 20 min push-button control: Activate 105 cfm speed in all ventilation modes (recommended when the unit exhausts from a bathroom).

-Dry contact standby switch (Broan 69W and 69V): Unit remains powered on, but is put on Standby mode when the switch is turned on.



This connections allows the operation of VB20W push-button controls even if the dry contact standby switch is turned off.