



BRSAN

#### BALANCED VENTILATION SYSTEMS







#### Broan.com

Broan-NuTone LLC, 926 W. State Street Hartford, WI 53027 • 800-558-1711 In Canada call 877-896-1119

America's Choice For Green Builders.<sup>®</sup> Proud to be ENERGY STAR<sup>®</sup> partners.





# Today's tightly constructed homes seal in more than you think.

Bedroom: Dust and dander on sheets and carpets, CO<sub>2</sub>, odors, formaldehyde off-gassing, fumes from dry cleaning and other solvents Bathroom: Odors, CO<sub>2</sub>, I window condensation, and mold and mildew, and formaldehyde and aerosol fumes

Living Room: Dust and dander on furniture and carpets, CO<sub>2</sub>, carpet cleaning fumes and particles, fireplace smoke and ash and formaldehyde off-gassing

Kitchen: Cooking pollutants, carbont monoxide from gas cooktops, waste bin e odors and cleaning de chemical fumes

of 40–60% relative numidity you'll

rohlem

Attic: Insulation fibers, construction dust and formaldehyde off-gassing

#### Percent of Relative Humidity

0 10 20 30 40	50 0	60 70 80 90 10
Bacteria	0	Bacteria
Viruses	рt	Viruses
A LAND	o t i m u	Fungi
		Mites
Allergic Rhinitis & Asthma	З	Allergic Rhinitis & Asthma
Respiratory Infections	N o	S IA
	n e	Chemical Interactions
Ozone Production		

# Broan has ventilation options for every home and budget.



**Exhaust:** Expel stale air automatically. Ventilation fans that once worked independently can now be coordinated in an economical, integrated system called Broan SmartSense.<sup>®</sup>



**Balanced:** Blend fresh outside air with indoor air. Step up to balanced ventilation to replace stale air with fresh, outside air.

**HEPA\* + Balanced:** Blend in fresh outside air and continuously filter. Our best solution filters microscopic particles as small as 0.3 microns from incoming fresh air and indoor air. For comparison, a human hair is 150 microns thick.

#### Eliminating or minimizing sources of indoor

**air pollution.** Awareness and information are the keys to better understanding indoor air quality. Eliminating smoking indoors, regularly cleaning and maintaining your HEPA\* filtration equipment are good first steps to removing contaminants in your home.

**Local and Whole-house ventilation.** Proper ventilation has two main components:

- Local ventilation removes pollutants at the source through locally operated bathroom fans and kitchen range hoods. Rapidly eliminating humidity and contaminants at the source lessens the possibility of dissipation throughout the home.
- Whole-house ventilation continually removes and dilutes pollutants not captured by local ventilation. This constant exchange of fresh air provides for a more healthy and comfortable home.

**Filter incoming outside air with a whole-house air cleaning system.** Using a HEPA\* filtration system with antimicrobial protection will lower the airborne concentration of dust, pollen and other particulates. HEPA\* is different from electronic air cleaners that typically produce ozone, which itself is classified as a pollutant. And, portable air cleaners have been cited as ineffective by leading consumer safety organizations.

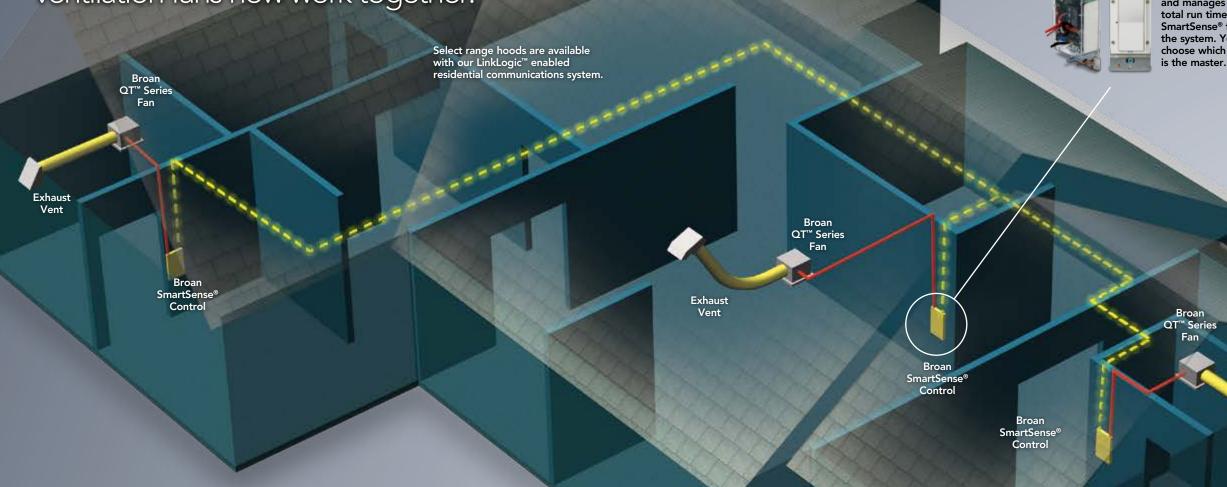
**Control indoor humidity.** While humidity is not a pollutant, it can create a range of problems from health concerns to structural problems. Maintain indoor relative humidity between 40 to 60 percent to minimize mold, mildew and other possible hazards.

# Ventilate your home intelligently.

Broan SmartSense® and QT<sup>™</sup> Series ventilation fans now work together.

#### How does it work?

The Broan SmartSense<sup>®</sup> system monitors and activates Broan QT<sup>™</sup> Series fans 24/7 throughout the home. Broan QT<sup>™</sup> Series fans operate at a barely audible 0.3 and 0.7 sones, so they are ideal for any room that might require additional ventilation. Even in a bedroom, you'll never know they're running.



#### An economic alternative to other systems.

Broan SmartSense<sup>®</sup> utilizes exhaust ventilation fans normally installed in the home. It automatically adjusts total runtime based on square footage and number of bedrooms. Broan SmartSense® controls monitor manual fan operation and adjust ventilation time to optimize energy usage. This system is more cost effective and energy efficient than other ventilation strategies that require the use of the home's air handler. With only one fan running at a time, Broan SmartSense® uses less than 40 watts during ventilation cycles.

Up to ten fans can be installed on one Broan SmartSense® Ventilation System. Broan SmartSense<sup>®</sup> is the smart choice to meet local and whole-house requirements of ASHRAE Standard 62.2\* and other related guidelines (including building codes derived from the ASHRAE standard).

\*American Society of Heating, Refrigerating and Air-Conditioning Engineers standard for ventilation and acceptable indoor air quality for low-rise residential building.

#### Why do I need to ventilate all day?

Proper ventilation exhausts stale air and replaces it with fresh air. This minimizes mold and mildew growth, and helps remove gases and particles not trapped by filtration units. This automatic ventilation solution reduces indoor pollutants such as household cleaners, VOCs, carbon monoxide, off-gassing formaldehyde from building materials, carpets and other furnishings.

#### Installs as easily as an exhaust fan.

Simply recess the fan housing in the ceiling, vent with 6" duct to the outside and connect the power wires. No separate control wiring is necessary. Then, program the controls to match the size of the home.

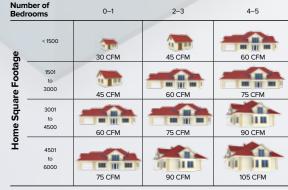
#### For tightly built homes.

Consider using a Broan Make-up Air Damper to form a complete balanced ventilation system by linking with Broan SmartSense<sup>®</sup> ventilation fans and/or select Best<sup>®</sup> range hoods.

#### Sizing your ventilator

In order to select the proper unit, you need to look at the square footage and number of bedrooms in your home in order to get the right amount of airflow necessary. The following chart is based on the standards for ventilation and indoor air quality as stated in ASHRAE 62.2

Before specifying your Broan SmartSense® system, check the local building codes to ensure it meets specific requirements.



CEM requirements based on ASHRAE 62.2 continuous ventilation specification

One control monitors and manages the total run time of all SmartSense® fans on the system. You choose which control

Exhaust Vent

Broan SmartSense<sup>®</sup> uses LinkLogic,<sup>™</sup> a powerful, wireless home control technology powered by INSTEON.<sup>™</sup> It will interface with other LinkLogic<sup>™</sup> enabled products by Broan<sup>®</sup> or Best.<sup>®</sup>

Model	CFM	Dimension
SSQTXE080	80	11-3/8 x 10-1/2 x 7-3/4
SSQTXE110	110	11-3/8 x 10-1/2 x 7-3/4



Broan SmartSense® is the smart choice to meet local and whole-building ventilation requirements of green building programs such as Leadership in Energy Efficient Design (LEED), NAHB Green Building delines and ENERGY STAR® Indoor Air Package.

#### **Broan Automatic Make-Up Air Dampers** work with Broan SmartSense<sup>®</sup> to enable efficient and effective home ventilation. The damper communicates with every SSQTXE080 and SSQTXE110 fan in the home to ensure a supply of fresh air is available while fans are

being operated. This assists in maintaining a healthy air-pressure balance in the home while preventing unwanted air infiltration and wasted energy.

#### Easy Installation of Broan Make-Up Air Dampers.

- Located in a 6-inch or 8-inch duct running between an exterior wall fresh air inlet (641FA or 643FA) to an interior location such as a cold-air return or supply duct.
- Damper is locally powered by a 24 VAC transformer.
- Damper and fans communicate over existing home electrical wiring. No additional interconnection required.

#### **Broan Make-Up Air Dampers feature:**

- Heavy-duty galvanized steel construction.
- 24 VAC transformer.
- 6-inch round (SMD6), 8-inch round (SMD8).
- Use with any single fan or combination of SSQTXE080 or SSQTXE110 fans.



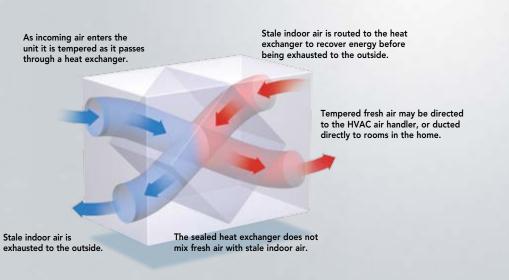
# HRV or ERV? Learn how to select the best air exchanger for your home.

Where your home is geographically located will determine whether a Heat Recovery Ventilator (HRV) or Energy Recovery Ventilator (ERV) air exchanger is best suited for your environment. An HRV is ideal for colder climates while an ERV system provides year-round ventilation that is suitable for all climates.

# **HRV**–Heat Recovery Ventilators

HRVs enable heat to be retained during cooler seasons, making it ideal for colder climates where home heating and energy savings are essential. The HRV keeps the home supplied with a steady flow of fresh outdoor air. As stale, warm air is expelled from inside the home through the HRV air exchanger, the heat recovery core warms incoming colder, fresh air before it is distributed throughout your home. The result is a constant supply of tempered fresh air, no unpleasant drafts and greater home comfort. The HRV not only improves heat retention during cooler seasons but also removes heat from warm outside air during warmer seasons to help reduce the workload on your furnace/air conditioner.

By ensuring your home is ventilated with a steady flow of fresh, outdoor air at all times, the HRV system improves air quality resulting in greater comfort in your home.



# **ERV–Energy Recovery Ventilators**

ERVs are suitable for all climates including those with hot, humid summers where homes are air conditioned and possibly dehumidified during multiple seasons of the year.

Similar to the HRV, an ERV system recovers heat in the cold season but also recovers the energy trapped in moisture, greatly improving overall efficiency. In humid climates, where homes are airconditioned and outside air is more humid than inside, an ERV system limits the amount of moisture coming into the home. In dry climates and humidified homes where humidity levels are greater inside, ERV systems limit the amount of moisture expelled to maintain optimal comfort levels.

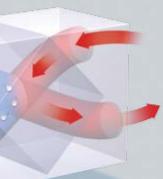
The ERV air exchanging system improves recovery efficiency by recovering heat and retaining the energy trapped in moisture while also tempering your home with humidity-balanced fresh air. The result is better indoor air quality and comfort in your home.

As incoming air enters the unit it is tempered as it passes through a heat exchanger

> Stale indoor air is exhausted to the outside

**HRV** Zone Energy Recovery Ventilators (ERV) are suitable for all climates but are recommended for use in warmer climates where humidity is a factor. • For HRV systems with HEPA filtration, see page 13. **ERV** Zone • Areas close to the dotted line may be able to use either ERV or HRV products. Consult local codes prior to specifying.

Depending on desired humidity levels, moisture in the air may be brought back into the home, or transferred to outgoing stale air.



Stale indoor air is routed through the heat and moisture exchanger before being exhausted to the outside

Tempered, humidity-balanced fresh air may be directed to the HVAC air handler, or ducted directly to rooms in the home.

The sealed heat and moisture exchanger does not mix fresh air with stale indoor air.

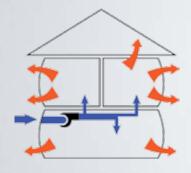
Heat Recovery Ventilators (HRV) are ideal in colder climates where heat must be retained.

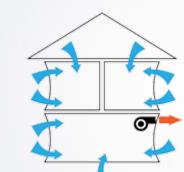
## Equalizing Indoor Air Pressure

Although you may not realize, it is important not to neglect the impact of an unbalanced ventilation system. If an air exchange unit does not expel and intake equal amounts of air, a negative or positive imbalance can occur.

#### Positive Air Pressure

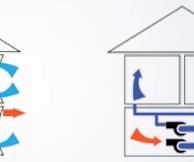
- Pushes hot and/or humid air into walls and insulation; condensation can lead to mold, mildew and rot
- Heat escapes from inside the home as it is pushed through the walls to the exterior





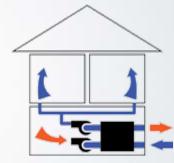
### Negative Air Pressure

- Infiltration of unconditioned air increases risks of mold and higher energy costs
- Potential backdraft from combustion appliances such as gas water heaters



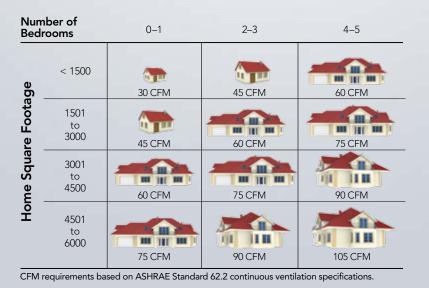
#### Equal Air Pressure

- Supply airflow (CFM) is equal to stale air exhaust
- Balancing is required on all units unless specified otherwise



### ASHRAE Square Footage Chart

In order to select the proper unit for your home, look at the square footage and number of bedrooms to make sure you will get the right amount of air flow necessary. The following chart is based on the standards for ventilation and indoor air quality as stated in ASHRAE 62.2. Before selecting your ERV or HRV, check with local codes as well to make sure your unit will meet all requirements in your area.



### Types of Installations

Any Broan unit can be easily integrated with an existing forced-air system (furnace) or can be installed independently using the fully ducted system installation. Homeowners will be satisfied with multiple air intake and air exhaust grilles that bring exceptional ventilation into every room; not just selected areas. Whatever the installation or ventilation requirements, Broan has the solution to ensure proper ventilation and better indoor air quality.

#### Fully Ducted System

Primarily for homes with radiant flooring, hot water or electric baseboard heating. Effective because unit captures pollutants at the source and distributes fresh air to living areas.

#### Exhausted Ducted System

For homes with forced air heating systems or air handlers. Effective because unit captures pollutants at the source.

#### Simplified

For homes with forced air heating systems or air handlers. Easy to install as unit uses existing furnace or air handler ducting.









# ERV70S, ERV70T / HRV70SE, HRV70TE

# ERV90HCS, ERV90HCT / HRV90HS, HRV90HT



#### Significantly increase the quality of the air inside your home with the Broan™ HRV70 and ERV70 Series balanced ventilation solutions.

These units are an ideal choice for homes, condominiums, apartments and other limited space applications that require up to 70 CFM of continuous ventilation. With its compact size and 4-inch horizontal and top ports, it can be installed in small spaces such as a closet or mechanical room above a hot water tank. These units are perfect for builders needing energy-efficient balanced ventilation solutions that won't have a significant impact on the budget. The HRV70SE and HRV70TE are ENERGY STAR® Certified in Canada.

#### Maximum square footage of homes by number of bedrooms

Model	2 Bedrooms	3 Bedrooms	4 Bedrooms	5 Bedrooms	6 Bedrooms	ENERGY STAR®
ERV70S	4,700	4,000	3,200	2,500	1,700	_
ERV70T	4,700	4,000	3,200	2,500	1,700	-
HRV70SE	4,700	4,000	3,200	2,500	1,700	
HRV70TE	4,700	4,000	3,200	2,500	1,700	Second Second

\*Square footage based off of ASHRAE 62.2 continuous ventilation requirements. Consult local codes before installing.

#### Limited space is no longer a reason to keep yourself from enjoying fresh, tempered air in your home.

The ERV90 and HRV90 are powerful units with small footprints enabling you to install them basically anywhere in your home. These units are the ideal choice for homes, condominiums, apartments and other limited space applications that require up to 90 CFM of continuous ventilation. The high-pressure blower design eliminates the need to balance the unit in most installations. Integrated circuit logic in the motor along with intelligent flow dampers make these units easy to access, easy to maintain and very precise. The interchangeable core enables the unit to be upgraded from an HRV to an ERV, and vice versa, without additional mechanical adjustments.

#### Maximum square footage of homes by number of bedrooms

Model	2 Bedrooms	3 Bedrooms	4 Bedrooms	5 Bedrooms	6 Bedrooms
ERV90HS	>6,000	>6,000	>6,000	5,400	4,600
ERV90HT	>6,000	>6,000	>6,000	5,400	4,600
HRV90HS	>6,000	>6,000	5,800	5,100	4,300
HRV90HT	>6,000	>6,000	5,800	5,100	4,300

\*Square footage based off of ASHRAE 62.2 continuous ventilation requirements. Consult local codes before installing.

# ERV100HC / HRV100H



#### The ERV100 and HRV100 are perfect for a larger single-family size home that require up to 142 CFM.

The ERV100 and HRV100 are perfect for a larger single-family homes that require up to 142 CFM. You can ensure that the air within your home is being circulated and the pressure remains balanced. These units are durable, reliable and offer high performance that will be sure to add value and quality to any home. The easy-access side panel makes maintenance quick and convenient with the ability to remove all parts in five minutes or less. With the BROAN<sup>™</sup> ERV100 and HRV100, feel confident that the air quality in your home is fresh and clean.

#### Maximum square footage of homes by number of bedrooms

Model	2 Bedrooms	3 Bedrooms	4 Bedrooms	5 Bedrooms	6 Bedrooms
ERV100HC	>6,000	>6,000	>6,000	>6,000	>6,000
HRV100H	>6,000	>6,000	>6,000	>6,000	>6,000

\*Square footage based off of ASHRAE 62.2 continuous ventilation requirements. Consult local codes before installing



The ERVH100SE energy recovery ventilator and HRVH100SE heat recovery ventilator are equipped with a HEPA filter that removes 99.97% of allergens and other microscopic particles in the air. That significantly increases the quality of air inside your home and reduces symptoms of allergies, asthma and other respiratory problems. The Broan<sup>™</sup> ERVH100SE and HRVH100SE have a cutting edge blower design enabling ultra-quiet operation which is barely audible at low speed (2.5 sones, equivalent to the sound of a standard refrigerator) while providing up to 100 CFM of continuous ventilation.

Both the ERVH100SE and HRVH100SE are ENERGY STAR® Certified in Canada, reducing annual energy consumption by 25% and resulting in estimated savings of \$350 in annual energy costs when compared to previous ERV/HRV products with HEPA filtration.

The HRVH100SE includes an LCD electronic wall control with 5 operational modes including auto, economic, continuous, re-circulate and turbo to allow for optimal performance in any installation.

Model	2 Bedrooms	3 Bedrooms	4 Bedrooms	5 Bedrooms	6 Bedrooms	ENERGY STAR®
ERVH100SE	>6,000	>6,000	>6,000	5,500	4,700	and the second
HRVH100SE	>6,000	>6,000	>6,000	5,500	4,700	lo milità Calmin Casa

HEPA



# ERVH100SE / HRVH100SE

#### HEPA (High Efficiency Particulate Air) filter traps 99.97% of allergens and other

microscopic particles in the air. A HEPA filter will remove all particles that are 0.3 microns in size or larger. As a reference point, a human hair is approximately 60 to 150 microns in diameter and a grain of pollen is 5 microns. Approximately 90% of air pollutants are smaller than 10 microns. These lightweight particles stay in the air longer and are more likely for you to breathe in, leading to more potential respiratory issues for those with sensitivity to dust and allergens. The clean air that HEPA filters produce can result in improved health, especially for those that suffer from asthma



# ERV140TE / HRV150TE



# One of the most energy efficient ERV and HRV on the market.

The Broan<sup>™</sup> ERV140TE and HRV150TE have been designed to be two of the most ecofriendly air exchanges on the market. Their innovative design incorporates extremely high performance ECM motors, which enable operation at power equivalent to a compact fluorescent bulb (13.5 watts), significantly lowering energy costs. It surpasses energy-saving standards by nearly 250% while providing effective heat (HRV150TE) and energy (ERV140TE) recovery, ventilation and quiet operation. The ECM motor technology enables four different motor settings to accommodate ventilation requirements from 80–157 CFM for the HRV150TE, and 80–140 CFM for the ERV140TE.

Both the ERV140TE and HRV150TE are ENERGY STAR® Certified in Canada.

Maximum square	e footage of h	nomes by numbe	er of bedrooms
----------------	----------------	----------------	----------------

Model	2 Bedrooms	3 Bedrooms	4 Bedrooms	5 Bedrooms	6 Bedrooms	ENERGY STAR®
ERV140TE	>6,000	>6,000	>6,000	>6,000	>6,000	and the second second
HRV150TE	>6,000	>6,000	>6,000	>6,000	>6,000	artitica contrarente

\*Square footage based off of ASHRAE 62.2 continuous ventilation requirements. Consult local codes before installing.



#### The perfect solution for large dwellings.

The Broan<sup>™</sup> ERV200 and HRV200 are the most powerful balanced ventilation systems in the Broan line-up. Delivering up to 235 CFM, these units are ideal for larger homes. With the Broan<sup>™</sup> ERV200 and HRV200, you can ensure that the air within your home is being circulated and the pressure remains balanced.

#### Maximum square footage of homes by number of bedrooms

Model	2 Bedrooms	3 Bedrooms	4 Bedrooms	5 Bedrooms	6 Bedrooms			
ERV200HC	>6,000	>6,000	>6,000	>6,000	>6,000			
HRV200H	>6,000	>6,000	>6,000	>6,000	>6,000			
*Square footage based off of ASHRAF 62.2 continuous ventilation requirements								

\*Square footage based off of ASHRAE 62.2 continuous ventilation requirements. Consult local codes before installing.

# ERV200HC / HRV200H





# The cost-effective solution to dilute contaminants inside your home.

The BROAN<sup>™</sup> AE60 is the perfect Whole-Home Air Exchanger for smaller homes and condominiums with a bathroom fan. This unit can be installed wherever it is convenient, or where ducting to individual rooms is simplified. With up to 185 CFM and continuous background ventilation of 30–55 CFM of fresh air, this exchanger is a cost-effective solution to dilute contaminants inside your home.



# Heat Recovery for small facilities up to 750 CFM

#### Model HRV650

- 500-750 CFM
- Efficient centrifugal blower
- May be installed suspended by chains to minimize sound and vibration
- Side removes for easy maintenance access; all connections are on one side
- Helps meet ASHRAE 62.2 requirements

#### Moisture Reduction and Heat Recovery in extreme environments

#### Model HRV700

- 500-800 CFM
- Sealed centrifugal blower
- Engineered for use in high-humidity locations, such as hotel pool rooms
- Powdercoat finish resists chemicals found in corrosive environments
- Side removes for easy maintenance access; all connections are on one side
- Helps meet ASHRAE 62.2 requirements

### LIGHT COMMERCIAL (Special Order Only)



# Heat Recovery for larger facilities up to 1250 CFM

#### Model HRV1150

- 700-1250 CFM
- Powerful centrifugal blower
- Side removes for easy maintenance access; all connections are on one side
- Helps meet ASHRAE 62.2 requirements

:y s e side



### Accessories



VT1W Central control Off/low/high

me

-

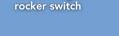
59V/59W

• Operates

Duct

• 60-minute delay

any set period • Available in Ivory



**Optional Controls** 





1000

VT2W

Y

61V/61W

position)

• DT4W

• Operates for any

"continuous on"

VT4W Central control Off/low/high speed/intermittent

- 11 -

ALLER

**DH100W** 

• Dehumidistat

• Available in

White (W)

Variable setting



VT5W • Programmable control with LCD display



VB20W • 20-minute timer

BD6 • Pressure relief

641

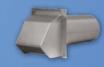
draft damper

finish

and bird screen

Aluminum natural

• Pressure relief damper with wall cap and 6" collar



damper with wall

cap and 4" collar

Roof/Wall Caps

• For 3-1/4" x 10" or • For 6"

damper and bird

Steel baked black

enamel finish

up to 6" round duct round duct • Built-in back draft • Built-in back

Dampers, Inlets and Outlets

643M

screen

BD4

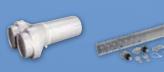
EH6 outlet hood 6"



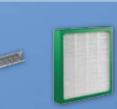
DT4C • Non-insulated flexible duct







TYIK1 ACCWMK • Tandem transition • Wall-mount bracket kit for • For units 100 CFM ERV70/HRV70



DT6C

flexible duct

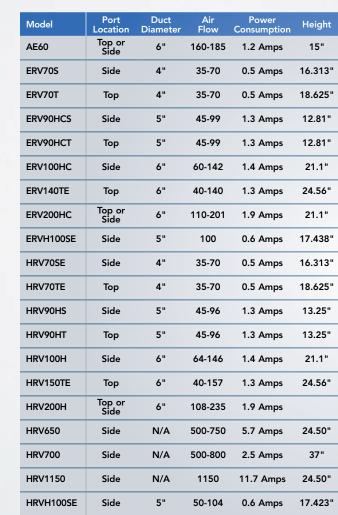
ACCHEPARF HEPA filter for ERVH100SE/ HRVH100SE



Insulated flexible

DT6W

ACCHEPARK • Pre-filter kit for ERVH100SE/ HRVH100SE



\*Refer to ASHRAE Standard 62.1-2007—Ventilation for Acceptable Indoor Air Quality (Commercial and High-Rise)

#### **Control Compatibility**

NA 11		Main C	ontrols			Optional	Controls	
Model	VT1W	VT2W	VT4W	VT5W	VB20W	59V/59W	61V/61W	DH100W
AE60								
ERV70			•		•	•	•	•
ERV90H			•		•	•	•	•
ERV100HC	•	•			•	•	•	•
ERV140TE			•		•	•	•	•
ERV200HC	•	•			•	•	•	•
ERVH100SE*					•	•	•	•
GSHH3K				•				
GSEH3K				•				
HRV70			•		•	•	•	•
HRV90HT			•		•	•	•	•
HRV100H	•				•	•	•	•
HRV150TE			•		•	•	•	•
HRV200H	•	•			•	•	•	•
HRVH100SE*					•	•	•	•

\*Separate control is included with product and must be used exclusively with that model. Dot signifies that specific unit will work with the listed control.

# **Specifications**

Width	Length	Weight	Recovery Type	Filtration Type	ENERGY STAR®	Limited Warranty
12.25"	23"	40 lbs.	Heat	Aluminum Mesh	—	2 Years
19.813"	15.625"	34 lbs.	Energy	Merv 6	—	2 Years
15.438"	15.625"	34 lbs.	Energy	Merv 6	—	2 Years
19.81"	22.56"	45 lbs.	Energy	30 ppi washable reticulated foam	_	2 Years
19.81"	22.56"	45 lbs.	Energy	30 ppi washable reticulated foam	_	2 Years
13.25"	34.6"	65 lbs.	Energy	30 ppi washable reticulated foam	_	2 Years
14.94"	18.25"	65 lbs.	Energy	Merv 7	arentika Manana ana	2 Years
13.25"	34.6"	73 lbs.	Energy	30 ppi washable reticulated foam	-	2 Years
39.375	11.875	47 lbs.	Energy	HEPA	and the second se	2 Years
19.813"	15.625"	30 lbs.	Heat	Merv 6	area and a second a	2 Years
15.438"	15.625"	30 lbs.	Heat	Merv 6	areasta and	2 Years
19.81"	22.56"	39 lbs.	Heat	30 ppi washable reticulated foam	_	2 Years
19.81"	22.56"	39 lbs.	Heat	30 ppi washable reticulated foam	_	2 Years
13.25"	34.6"	65 lbs.	Heat	30 ppi washable reticulated foam	_	2 Years
14.94"	18.25"	52.4 lbs.	Heat	Merv 9	and the second	2 Years
13.25"	34.6"	73 lbs.	Heat	30 ppi washable reticulated foam	-	2 Years
28.12"	34.00"	148 lbs.	Heat		_	
20.75"	47"	211 lbs.	Heat		_	
41.24"	34.00"	186 lbs.	Heat		_	
11.892"	39.442"	56 lbs.	Heat	HEPA	arentia Konstran	2 Years