



# FRIGATE

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Heat and Energy recovery ventilators



VENTS-US is a North American division of the VENTS company, the manufacturer of ventilation solutions for residential and commercial applications that provides an outstanding range of ventilation products.

VENTS-US provides complete sales service for all markets, including retail and professional ones.

The branch office and warehouse facilities are located in Cincinnati, Ohio. We distribute products through wholesalers, retailers and HVAC distributors and contractors, as well as hardware and online stores throughout the United States and Canada.

VENTS-US is a member of HVI and HARDI Association. The products are UL, CSA and HVI certified for USA and Canada.



## WHY DO WE NEED VENTILATION?

1770 gallons is the average amount of air a human body consumes during the day



WHY DO WE NEED VENTILATION?

Without ventilation, 1320 gallons of room air will be filled with contaminants such as:

- Dust
- Pollen and other allergens
- Excessive moisture
- Volatile organic compounds from building materials and office equipment
- Excess CO<sub>2</sub>
- Volatile organic compounds (VOC)

This entails the following:

- General discomfort
- Weakness
- Headache
- Impaired concentration
- Exacerbation of chronic diseases
- Poor sleep

PROBLEM		SOLUTION	
	Cross ventilation		Supply and exhaust ventilation with heat recovery
✘	No air flow control	✔	Controlled air flow
✘	No filtration	✔	Air is filtered
✘	High heat loss (in winter)	✔	Low costs for heating up supply air
✘	Increased load on air conditioners (in summer)	✔	Low air conditioning costs
✘	Depends on external weather conditions	✔	Does not depend on external weather conditions

# FRIGATE

## Heat and Energy recovery ventilators

are a complete whole house ventilation system designed to bring a continuous supply of fresh air into the house while exhausting an equal amount of stale air.



9"

## MAIN FEATURES



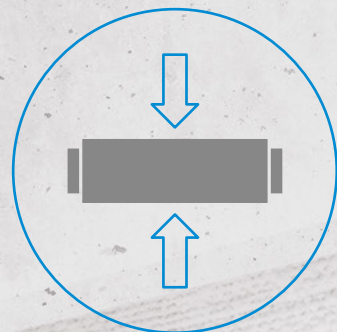
Fast and easy mounting due to bracket system.



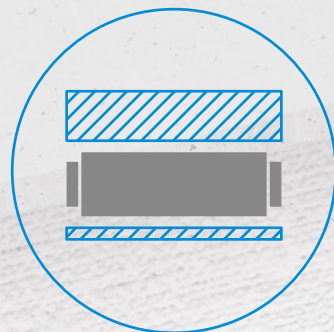
Automatic recirculation damper for pressure neutral frost protection.



No drain needed (enthalpy core)



Super slim steel casing - only 9" thick!



Perfect solution for in-ceiling installation.



Corrosion-resistant alloy with high-quality multilayer aluminium and zinc.

**up to 189 CFM**

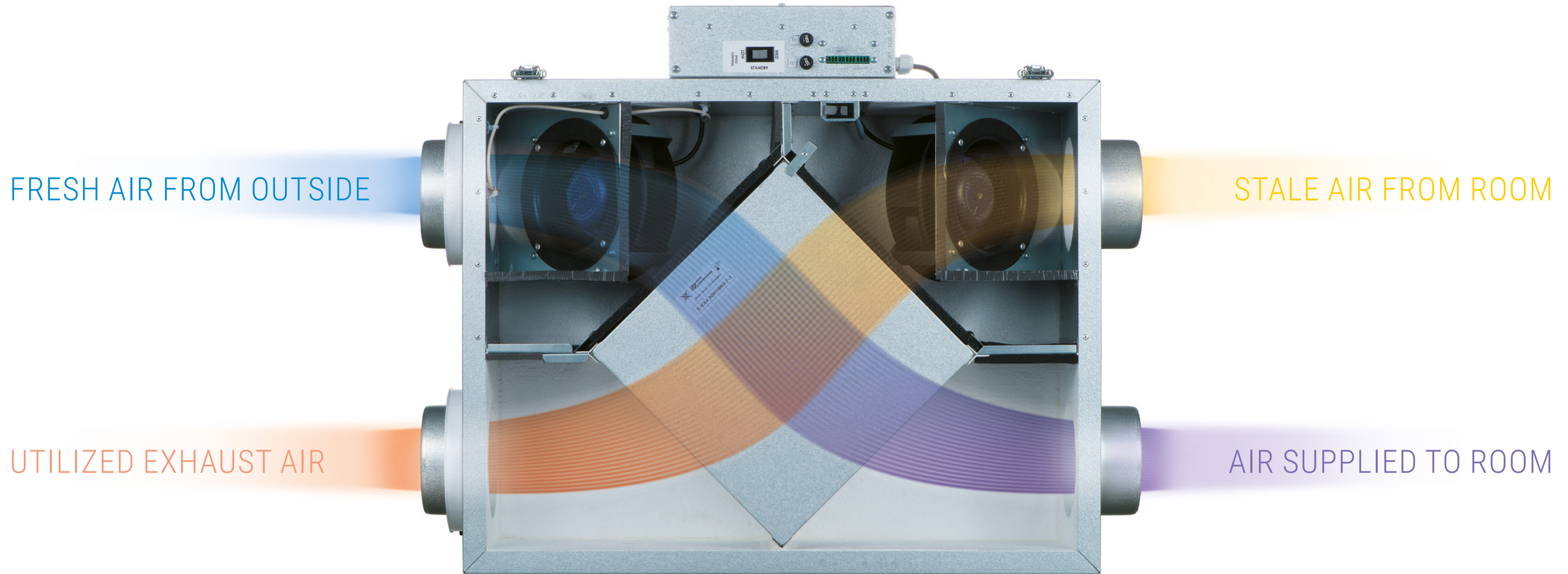
Effective ventilation overcoming high pressure in condo tower duct systems.

**up to 79%**

Sensible Recovery Efficiency.

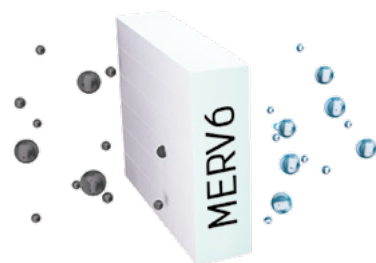
**0 to 100%**

Built-in control board enables supply and exhaust fan independent speed adjustment from 0 to 100% right at the installation site.



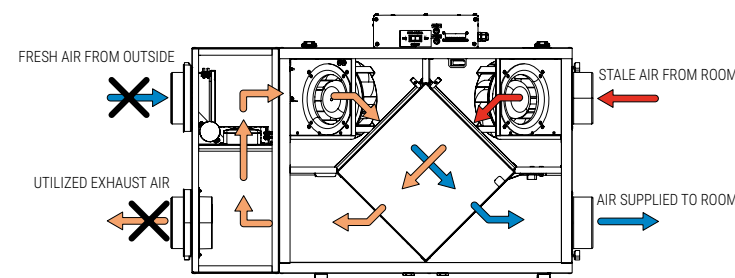
## FILTER

- Washable MERV6 air filters in exhaust and supply air streams.
- Optional supply: anti-grease aluminium filter.



## DEFROST SYSTEM

- Energy efficient frost prevention by pressure-neutral recirculation mode. Defrost system is activated when the outdoor temperature falls below 23° F (-5° C). Recirculation defrost (R option).



- Fan stop defrost (standard option)

## CONTROL

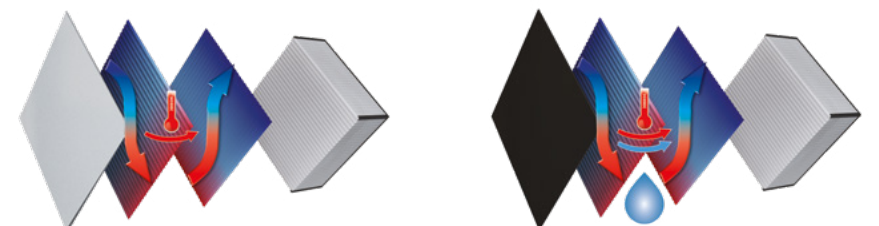
The unit incorporates an integrated automation and control system with following functions:

- Operation mode switch.
- Air flow balancing enabled by supply and exhaust fan independent speed adjustment from 0 to 100% (percentage is displayed on built-in screen).
- Automatic recovery core frost protection.

## HEAT/ENERGY RECOVERY CORE

Polystyrene cross-flow core (for heat recovery units) ensures efficient heat recovery.

Enthalpy core (for energy recovery units) provides both heat&humidity recovery. No drain required for enthalpy core.



## FANS

The Frigate ERV/HRV 80/150 EC units are equipped with high efficient electronically commutated motors with an external rotor and impeller with backward curved blades. The EC motors are featured with high performance and total speed controllable range. The electric motors and impellers are dynamically balanced.



The Frigate ERV/HRV 80/150 units are equipped with supply and exhaust centrifugal fans with backward curved blades and build-in thermal overheating protection with automatic restart. The electric motors and impellers are dynamically balanced.



The Frigate ERV/HRV 120 EC units are equipped with high efficient electronically commutated motors with an rotor and impeller with forward curved blades. The EC motors are featured with high performance and total speed controllable range. The electric motors and impellers are dynamically balanced.

The Frigate ERV/HRV 120 units are equipped with supply and exhaust centrifugal fans with forward curved blades and build-in thermal overheating protection with automatic restart. The electric motors and impellers are dynamically balanced.

## CONSTANT FLOW (CF OPTION)

The Frigate units have an automatic constant air flow control function to keep the air flow in supply and exhaust air ducts constant even in case of variable air resistance.

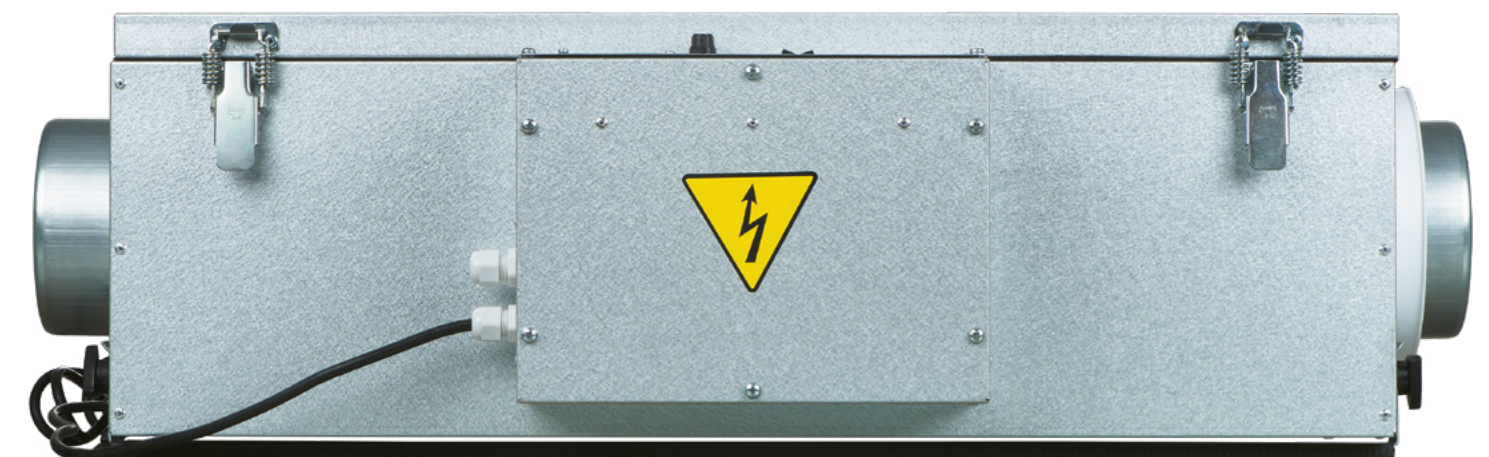
### No manual balancing needed!

This function is provided with the integrated air flow control units. The electronic sensors convert the actual air flow to the analogue signal that is proportional to the air flow in the air duct. These signals are transmitted to the controller that controls the rotation speed of a respective fan in such a way that the actual rotation speed is equal to the set value.



## BALANCING

Manual balancing is a standard balancing system. Fan speed manually adjusted via the built-in control panel with independent fan speed adjustment 0-100%.



# MODIFICATIONS

## FRIGATE 80 MODIFICATION

	Motor type	HVI status	Defrost	Balancing
Frigate ERV 80	AC	Tested at 32 °F (0 °C)		
Frigate ERV 80 R	AC	Tested at -13 °F (-25 °C)	- fan defrost	- manual balancing
Frigate ERV 80 EC	EC	-	<b>R</b> - recirculation	<b>CF</b> - ConstantFlow option
Frigate ERV 80 R EC	EC	-		



## FRIGATE 120 MODIFICATION

	Motor type	HVI status	Defrost	Balancing
Frigate ERV 120	AC	Tested at 32 °F (0 °C)		
Frigate ERV 120 R	AC	Tested at -13 °F (-25 °C)	- fan defrost	- manual balancing
Frigate ERV 120 EC	EC	Tested at 32 °F (0 °C)	<b>R</b> - recirculation	<b>CF</b> - ConstantFlow option
Frigate ERV 120 R EC	EC	Tested at -13 °F (-25 °C)		



## FRIGATE 150 MODIFICATION

	Motor type	HVI status	Defrost	Balancing
Frigate ERV 150	AC	Tested at 32° F (0 °C)		
Frigate ERV 150 R	AC	-	- fan defrost	- manual balancing
Frigate ERV 150 EC	EC	-	<b>R</b> - recirculation	<b>CF</b> - ConstantFlow option
Frigate ERV 150 R EC	EC	-		



# CHOOSING BETWEEN HRV AND ERV



COLD & DRY	MODERATE	MARINE	HOT & DRY	HOT & HUMID
<ul style="list-style-type: none"> <li>• Frigate ERV series</li> <li>• Frigate ERV EC series</li> </ul>	<ul style="list-style-type: none"> <li>• Frigate ERV series</li> <li>• Frigate ERV EC series</li> <li>• Frigate HRV series</li> <li>• Frigate HRV EC series</li> </ul>	<ul style="list-style-type: none"> <li>• Frigate ERV series</li> <li>• Frigate ERV EC series</li> <li>• Frigate HRV series</li> <li>• Frigate HRV EC series</li> </ul>	<ul style="list-style-type: none"> <li>• Frigate HRV series</li> <li>• Frigate HRV EC series</li> </ul>	<ul style="list-style-type: none"> <li>• Frigate ERV series</li> <li>• Frigate ERV EC series</li> </ul>



**VALLEMEDE TOWERS**  
Richmond Hill, ON

**Frigate ERV 80 R**  
Quantity: 57  
**Frigate ERV 100 R**  
Quantity: 251  
**A50 (Push Button Timer)**  
Quantity: 308



**CAP WEST**  
North Vancouver, BC

**Frigate ERV 80**  
Quantity: 240  
**Frigate ERV 120**  
Quantity: 227



**LOUGHEED HEIGHTS**  
Coquitlam, BC

**Frigate ERV 80 EC**  
Quantity: 412  
**Frigate ERV 100**  
Quantity: 199



**ELENORE ON FIFTH**  
Vancouver, BC

**Frigate ERV 80**  
Quantity: 30  
**Frigate ERV 120**  
Quantity: 29  
**TwinFresh Expert RA1-50-2 24**  
Quantity: 298



**THE BEVERLY**  
Vancouver, BC

**Frigate ERV 80**  
Quantity: 70  
**Frigate ERV 100**  
Quantity: 80



**MANTYLA**  
Vancouver, BC

**Frigate ERV 100**  
Quantity: 128  
**A50 (Push Button Timer)**  
Quantity: 128



**1708 ONTARIO**  
Vancouver, BC

**Frigate ERV 120 EC**  
Quantity: 144



**THE LINK**  
Vancouver, BC

**Frigate ERV 80**  
Quantity: 134



**RIVER DISTRICT**  
Vancouver, BC

**Frigate ERV 100**  
Quantity: 156



**FULTON**  
Burnaby, BC

**Frigate ERV 100 DS**  
Quantity: 98  
**Frigate ERV 120 S**  
Quantity: 208



**STANTON**  
Vancouver, BC

**Frigate ERV 120 EC**  
Quantity: 17  
**Frigate ERV 120 EC CF**  
Quantity: 245



**BRENTWOOD 3**  
Burnaby, BC

**Frigate ERV 80 EC**  
Quantity: 221  
**Frigate ERV 120**  
Quantity: 302



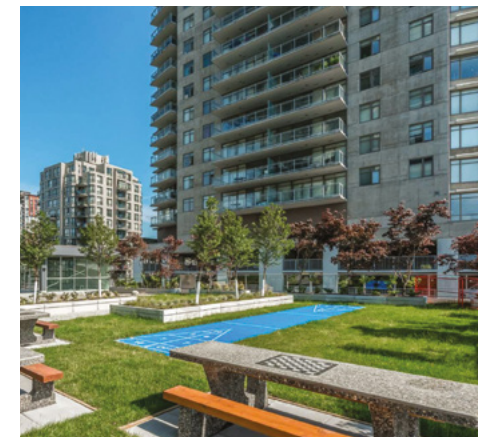
**LYNN VALLEY PH 2**  
North Vancouver, BC

**Frigate ERV 120 EC CF**  
Quantity: 245



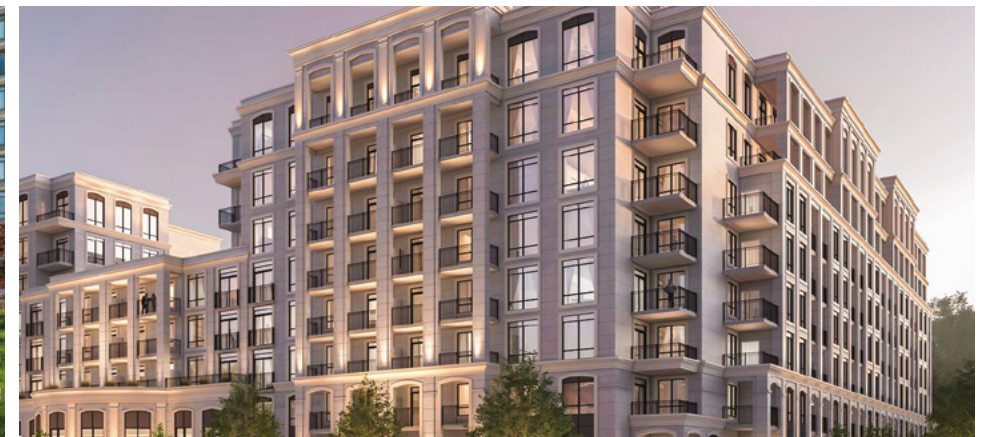
**ENGLISH BAY RESIDENCES**  
Vancouver, BC

**Frigate ERV 100**  
Quantity: 157  
**A50 (Push Button Timer)**  
Quantity: 157



**PLAZA 88**  
New Westminster, BC

**Frigate ERV 120 S**  
Quantity: 488










**WYVIEW LOWRISE UNIONVILLE GARDENS CONDO**  
Unionville, ON

**Frigate ERV 100**  
Quantity: 7  
**Frigate ERV 150**  
Quantity: 395

REFERENCE OBJECTS

REFERENCE OBJECTS

Specification	FRIGATE ERV 80	FRIGATE ERV 80 R	FRIGATE HRV 120	FRIGATE HRV 120 R	FRIGATE ERV 120	FRIGATE ERV 120 R	FRIGATE HRV 150	FRIGATE HRV 150 R	FRIGATE ERV 150	FRIGATE ERV 150 R
Maximum continuous air flow capacity (at 0.1 in. w.g.)	86 CFM	93 CFM	142 CFM	142 CFM	127 CFM	135 CFM	161 CFM	161 CFM	177 CFM	177 CFM
Sensible recovery efficiency at 32°F (0°C)	64%	65%	60%	60%	67%	68%	64%	64%	66%	66%
Apparent Sensible Effectiveness at 32°F (0°C)	75%	82%	70%	70%	79%	81%	79%	79%	79%	79%
Air filters (supply/exhaust)	MERV6/MERV6									
Sound level	1.4 Sones		1.9 Sones		1.5 Sones		2.1 Sones		1.9 Sones	
Power consumption	72 W	69 W	158 W	158 W	139 W	143 W	192 W	192 W	189 W	189 W
Recovery core	Enthalpy		Polystyrene cross-flow		Enthalpy		Polystyrene cross-flow		Enthalpy	
Duct diameters	5 in									
Slim casing	9 1/8"		9 5/8"		9 5/8"		9 5/8"		9 5/8"	
Dimensions (H x W x D)	9 1/8" x 20 1/8" x 21 1/8"		9 5/8" x 23 7/8" x 26 1/2"				9 5/8" x 25 1/8" x 27 3/4"			
Defrost system	Fan defrost Recirculation									
Available options	ConstantFlow function (no manual balancing needed)									
Wall controls	 Timer A50  Control panel P3-1-300  Control panel AC208EM2+LP									
Accessories compatibility	 Backdraft dampers KOM U 125  Air disk valve A 125 VRF  Air disk valve AM 125 VRF  Doors DMZ 610x610  Doors DMZ1 762x762  Clamps C 125  Clamps CZ 125									
Warranty	5 years									
	✓	✓	-	-	✓	✓	-	-	✓	-
	✓	-	✓	-	✓	-	✓	-	✓	-
	-	✓	-	✓	-	✓	-	✓	-	✓

Specification	FRIGATE ERV 80 EC	FRIGATE ERV 80 R EC	FRIGATE HRV 120 EC	FRIGATE HRV 120 R EC	FRIGATE ERV 120 EC	FRIGATE ERV 120 R EC	FRIGATE HRV 150 EC	FRIGATE HRV 150 R EC	FRIGATE ERV 150 EC	FRIGATE ERV 150 R EC
Maximum continuous air flow capacity (at 0.1 in. w.g.)	88 CFM	88 CFM	189 CFM	189 CFM	161 CFM	151 CFM	186 CFM	186 CFM	186 CFM	186 CFM
Sensible recovery efficiency at 32°F (0°C)	73%	73%	62%	62%	71%	71%	69%	69%	73%	73%
Apparent Sensible Effectiveness at 32°F (0°C)	82%	82%	69%	69%	78%	78%	78%	78%	82%	82%
Air filters (supply/exhaust)	MERV6/MERV6									
Sound level	1.4 Sones		1.9 Sones		1.5 Sones		2.1 Sones		1.9 Sones	
Power consumption	61 W	61 W	204 W	204 W	175 W	128 W	186 W	186 W	186 W	186 W
Recovery core	Enthalpy		Polystyrene cross-flow		Enthalpy		Polystyrene cross-flow		Enthalpy	
Duct diameters	5 in									
Slim casing	9 1/8"		9 5/8"		9 5/8"		9 5/8"		9 5/8"	
Dimensions (H x W x D)	9 1/8" x 20 1/8" x 21 1/8"		9 5/8" x 23 7/8" x 26 1/2"				9 5/8" x 25 1/8" x 27 3/4"			
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	-	-	-	-	✓	✓	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓





VENTS-US reserves the rights to modify any of its products' features, designs, components and specifications at any time and without notice to maintain the development and quality of manufactured goods.

12/2020