

# Residential Ventilation Systems

Heat and Energy Recovery Ventilators (HRV/ERV)



# Residential Top Port

ERVs



Model		HERO 100E	HERO 120E-EC <sup>new</sup>	HERO 140E <sup>new</sup>	HERO 160E-EC <sup>new</sup>
<b>R</b> <b>Easy to specify</b> BIM objects & CSI specs available on product page					
Airflow range (low-high)	cfm @ 0.4" w.g.	40-102	40-112	50-142	60-159
Duct connection		5	5	6	6
Voltage / Phase	V/~	120/1	120/1	120/1	120/1
Connection type		Round	Round	Round	Round
Consumed power (Low/High speed)	W	42/91	21/87	55/180	26/120
Fan efficacy @ 0°C/32°F	cfm/W	1.2	2.1	1.0	2.0
Adjusted Sensible Recovery Efficiency	%	88	88	86	85
Sensible Recovery Efficiency @ 0°C/32°F	%	82	85	79	81
Sensible Recovery Efficiency @ -25°C/-13°F	%	60	63	60	64
Total Recovery Efficiency @ 35°C/95°F	%	70	80	72	78
Max current	A	1.1	3.0	1.4	6.4
Certification					
Defrost Cycle		Recirculation	Recirculation	Recirculation	Recirculation
Height	inch	24 1/4	24 1/4	24 7/8	24 7/8
Width	inch	23 1/4	23 1/4	27 7/8	27 7/8
Depth	inch	11 1/2	11 1/2	15 3/8	15 3/8
Weight	lbs.	47	50	59	59

<sup>1</sup>Performance at low speed.

# Residential Top Port

HRVs





Model		HERO 120H	HERO 150H	HERO 200H	HERO 150H-EC	HERO 250H-EC
    						
<b>R</b> <b>Easy to specify</b> BIM objects & CSI specs available on product page						
Airflow range (low-high)	cfm @ 0.4" w.g.	40-112	50-150	60-203	50-172	80-252
Duct connection		5	6	6	6	6
Voltage / Phase	V/~	120/1	120/1	120/1	120/1	120/1
Connection type		Round	Round	Round	Round	Round
Consumed power (Low/High speed)	W	69/165	59/180	98/210	23/110	34/260
Fan efficacy @ 0°C/32°F	cfm/W	1.2	1.2	0.8	3.0	2.5
Adjusted Sensible Recovery Efficiency	%	85	86	88	86	85
Sensible Recovery Efficiency @ 0°C/32°F	%	80	80	80	84	82
Sensible Recovery Efficiency @ -25°C/-13°F	%	64	65	67	68	63
Total Recovery Efficiency @ 35°C/95°F	%	-	-	-	-	-
Max current	A	1.2	1.4	2.0	3.0	6.4
Certification						
Defrost Cycle		Recirculation	Recirculation	Recirculation	Recirculation	Recirculation
Height	inch	24 1/4	24 7/8	24 7/8	24 7/8	24 7/8
Width	inch	23 1/4	27 7/8	27 7/8	27 7/8	27 7/8
Depth	inch	11 1/2	13 3/8	15 3/8	15 3/8	15 3/8
Weight	lbs.	41	51	59	51	57

<sup>1</sup>Performance at low speed.

# Residential Side Port

HRV / ERVs













Model		ATMO 150H	ATMO 200H	ATMO 150E	ATMO 200E	ATMO 300E-EC
<b>R</b> <b>Easy to specify</b> BIM objects & CSI specs available on product page						
Recovery ventilator type		HRV	HRV	ERV	ERV	ERV
Airflow range (low-high)	cfm @ 0.4" w.g.	50-150	60-200	50-150	60-200	80-300
Duct connection	inch	6	6	6	6	6
Voltage / Phase	V/-	120/1	120/1	120/1	120/1	120/1
Connection type		Round	Round	Round	Round	Round
Consumed power (Low/High speed)	W	54/168	50/168	52/168	52/168	31/200
Fan efficacy @ 0°C/32°F	cfm/W	1.1	1.3	1.2	1.2	2.0
Adjusted Sensible Recovery Efficiency	%	80	81	81	81	80
Sensible Recovery Efficiency @ 0°C/32°F	%	74	75	75	75	77
Sensible Recovery Efficiency @ -25°C/-13°F	%	60	60	60	60	63
Total Recovery Efficiency @ 35°C/95°F	%	-	-	60	65	68
Max current	A	1.4	1.4	1.4	1.4	6.4
Defrost Cycle		Fan Shutdown	Fan Shutdown	Fan Shutdown	Fan Shutdown	Fan Shutdown
Certification						
Height	inch	21 7/16	21 7/16	21 7/16	21 7/16	21 7/16
Width	inch	23 7/8	23 7/8	23 7/8	23 7/8	23 7/8
Depth	inch	11 11/16	16 5/8	11 11/16	16 5/8	16 5/8
Weight	lbs.	42	46	51	57	60

<sup>1</sup> Performance at low speed.

# Residential Side Port

## ERVs



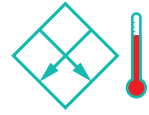
Model		FIT 80E <sup>2</sup>	FIT 80E-D <sup>2</sup>	FIT 120E <sup>2</sup>	FIT 120E-D <sup>2</sup>	FIT 120E-D-EC <sup>2</sup>
<b>R</b> <b>Easy to specify</b> BIM objects & CSI specs available on product page						
Airflow range (low-high)	cfm @ 0.4" w.g.	20-78	20-78	40-127	40-127	40-129
Duct connection	inch	4	4	5	5	5
Voltage / Phase	V/-	120/1	120/1	120/1	120/1	120/1
Connection type		Round	Round	Round	Round	Round
Consumed power (Low/High speed)	W	42/52	42/52	55/104	55/104	23/74
Fan efficacy @ 0 °C/32 °F	cfm/W	1.5	1.5	0.9	0.9	2.2
Adjusted Sensible Recovery Efficiency	%	75	75	81	81	80
Sensible Recovery Efficiency @ 0 °C/32 °F	%	70	70	74	74	77
Sensible Recovery Efficiency @ -25 °C/-13 °F	%	55	55	61	61	61
Total Recovery Efficiency @ 35 °C/95 °F	%	50	50	64	64	70
Max current	A	0.6	0.6	1.4	1.4	2.3
Defrost Cycle		Fan Shutdown	Fan Shutdown	Fan Shutdown	Fan Shutdown	Fan Shutdown
Certification						
Height	inch	20 5/8	20 5/8	23 5/32	23 5/32	23 5/32
Width	inch	21 5/8	21 7/8	24 5/8	25 1/16	25 1/16
Depth	inch	10 1/6	10 1/6	10	10	10
Weight	lbs.	29	30	34	35	35

<sup>1</sup>Performance at low speed.

<sup>2</sup>Standard has fresh air supply on the right side; Mirrored has fresh air supply on the left.



# Residential Top Port

## HRVs



### VHR Series

### FLEX

Model		VHR 70	VHR 70R ES	FLEX® 100H
 <b>Easy to specify</b> BIM objects & CSI specs available on product page				
Airflow range (low-high)	cfm @ 0.4" w.g.	20-57	20-70	40-106
Diamètre de conduit	inch	4	5	5
Voltage/Phase	V/-	120/1	120/1	120/1
Connection type		Round	Oval	Oval
Consumed power (Low/High speed)	W	42/48	35/60	60/93
Fan efficacy @ 0°C/32°F	cfm/W	1.5	1.2	0.8
Adjusted Sensible Recovery Efficiency	%	-	-	67
Sensible Recovery Efficiency @ 0°C/32°F	%	63	65	61
Sensible Recovery Efficiency @ -25°C/-13°F	%	57	62	57
Total Recovery Efficiency @ 35°C/95°F	%	-	-	-
Max current	A	0.4	1.1	1.6
Defrost Cycle				
Certification		Fan Shutdown	Recirculation	Recirculation
Height	inch	17 1/8	17 3/8	17 7/8
Width	inch	21 1/2	21 1/2	21 1/2
Depth	inch	10 1/4	10 1/4	14 1/2
Weight	lbs.	26	30	39

\*Performance at low speed.



# Wall controls

Ideal for single and multi-family residential projects

## Bathroom timers



### RTS 4 Push-Button Timer, Wired

Activates the appliance at the highest speed for 20, 40 or 60 minutes.

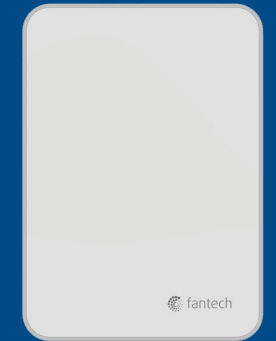
## Wall controls



### EDF3 Multi-Function Controller

Runs your appliance with three mode options (Econo, 20 minutes/hour, continuous).

## TVOC controls



### ECO-Feel® TVOC-Sensing Controller

Pre-programmed to run continuously on ECO Mode. Ideal for multi-family homes. Set it and Forget it!



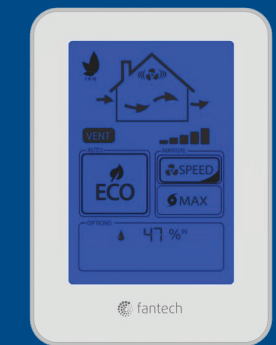
### RTS-W Wireless Timer, with Battery<sup>1</sup>

Activates the appliance at the highest speed for 20, 40 or 60 minutes. Following the completion, it returns the appliance to predetermined setting preferences on the ECO-Touch® IAQ controller.



### EDF8 Digital Multi-Function Controller

Controls appliance with four speed settings & three modes (Ventilation Mode, Recirculation Mode, Standby Mode).



### ECO-Touch® IAQ Touchscreen

TVOC Sensing Controller Controls your appliance to its ideal setting using multiple sensing options. Ideal for single-family homes/unifamiliales.

<sup>1</sup>This timer can only be paired to a Fantech HRV/ERV via the ECO-Touch IAQ wall control.

## The Right Unit:

An HRV/ERV provides fresh air to the house and buildings by 1) exhausting stale air from bathrooms, kitchen, basement, and other rooms where pollution is generated and 2) supplies fresh outdoor air directly to rooms where people spend their time (i.e. living and bedrooms).

### Cross-flow technology, up to 75% SRE

Cross-flow ERVs and HRVs utilize a perpendicular airflow configuration, where supply and exhaust airstreams intersect at 90 degrees. This design supports sensible energy recovery efficiency up to 75%, depending on airflow rate and temperature differential.

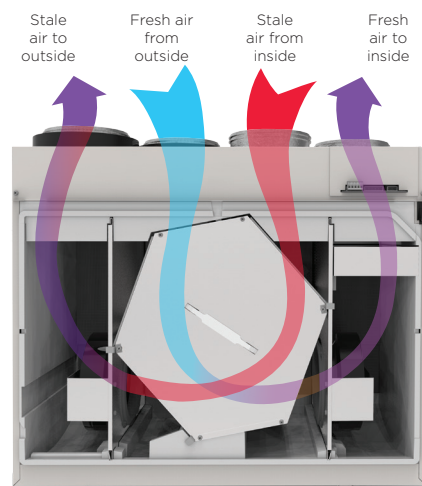


- Compact, low-cost core structure
- Simplified design for reduced maintenance requirements
- Suitable for moderate climates and cost-sensitive applications

Recommended for standard residential ventilation where moderate recovery performance is acceptable.

### Counter-flow technology, up to 84% SRE

Counter-flow core configurations align supply and exhaust airstreams in opposite directions along parallel channels, maximizing the temperature gradient across the heat exchange surface. This design achieves heat recovery efficiencies up to 84%, enhancing thermal performance and moisture transfer capabilities.



- Extended contact surface for optimized energy transfer
- High thermal efficiency under continuous operation
- Preferred for cold-climate zones and high performance building standards

Appropriate for applications requiring maximum heat and humidity recovery performance.

## What are the defrost cycles?

Fantech offers 2 different defrost mechanisms in order to prevent frost inside of the unit:

### Supply fan shutdown

#### Advantages

- This is a simple and robust frost prevention system

Application note: For integration into a central air handling unit, Recirculation Defrost models (e.g., HERO) are recommended. These models have a mechanical backdraft damper that interlocks with the HRV/ERV, blocking outdoor air when not in use.

Appliances: VHR 70, ATMO 150E, ATMO 200E, ATMO 300E-EC, FIT 80E, FIT 80E-D, FIT 120E, FIT 120E-D, FIT 120E-D-EC, ATMO 150H, and ATMO 200H

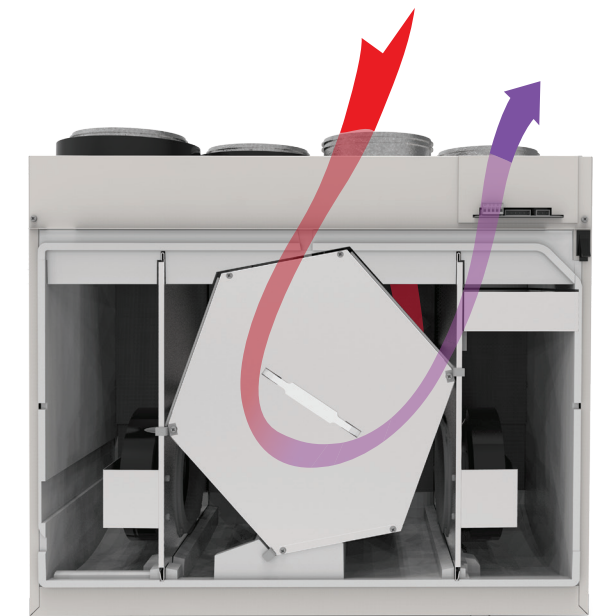


### Recirculation defrost

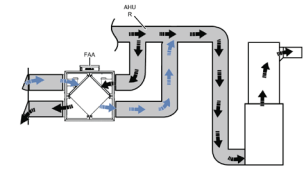
#### Advantages

- The most energy efficient frost prevention
- Ideal for higher humidity outdoor conditions or colder outdoor conditions
- Ideal to avoid stagnant air that may contribute to indoor condensation during the winter

Appliances: HERO 100E, HERO 120H, HERO 150H, HERO 200H, HERO 150H-EC, and HERO 250H-EC.  
Note: VHR 70R-ES, and FLEX 100H (defrost not shown)

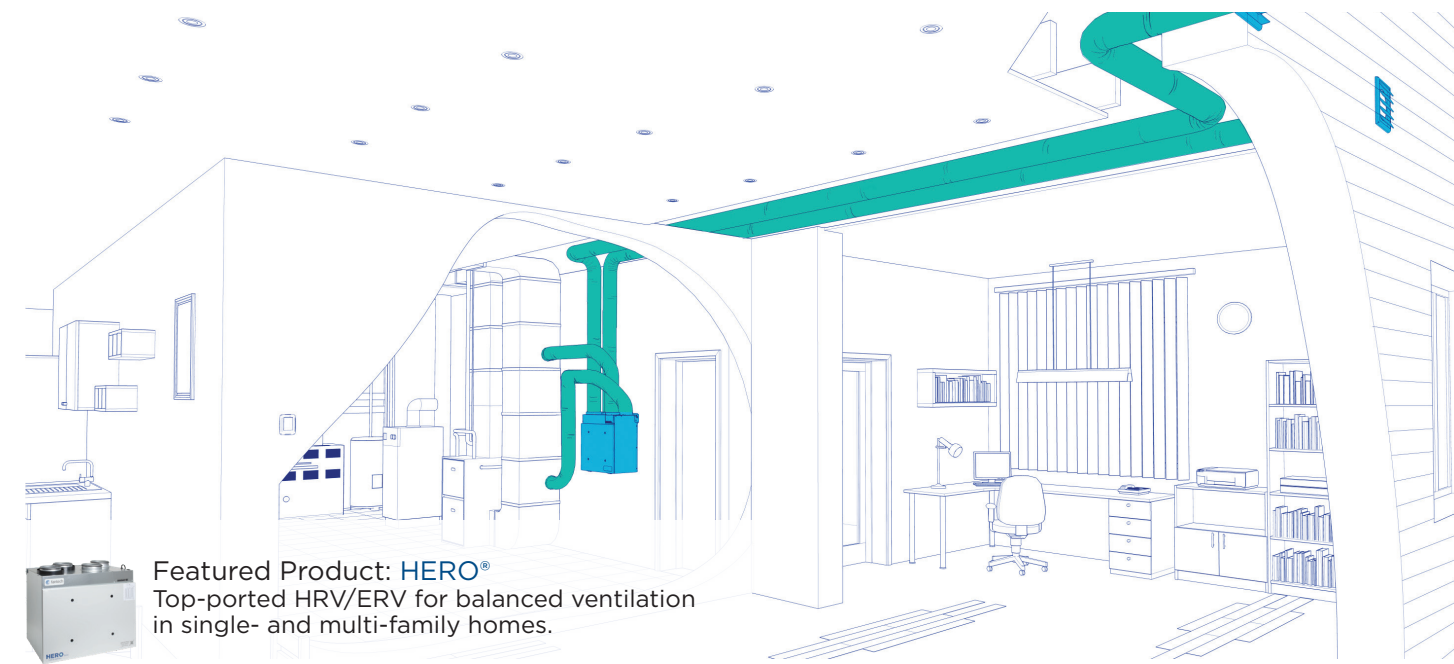


# Balanced Ventilation Installation Options:

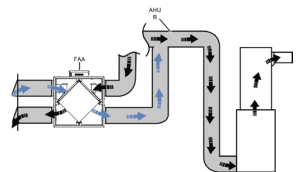


## Simplified Installation

The HRV/ERV draws exhaust from the return duct and supplies fresh air a few feet downstream.

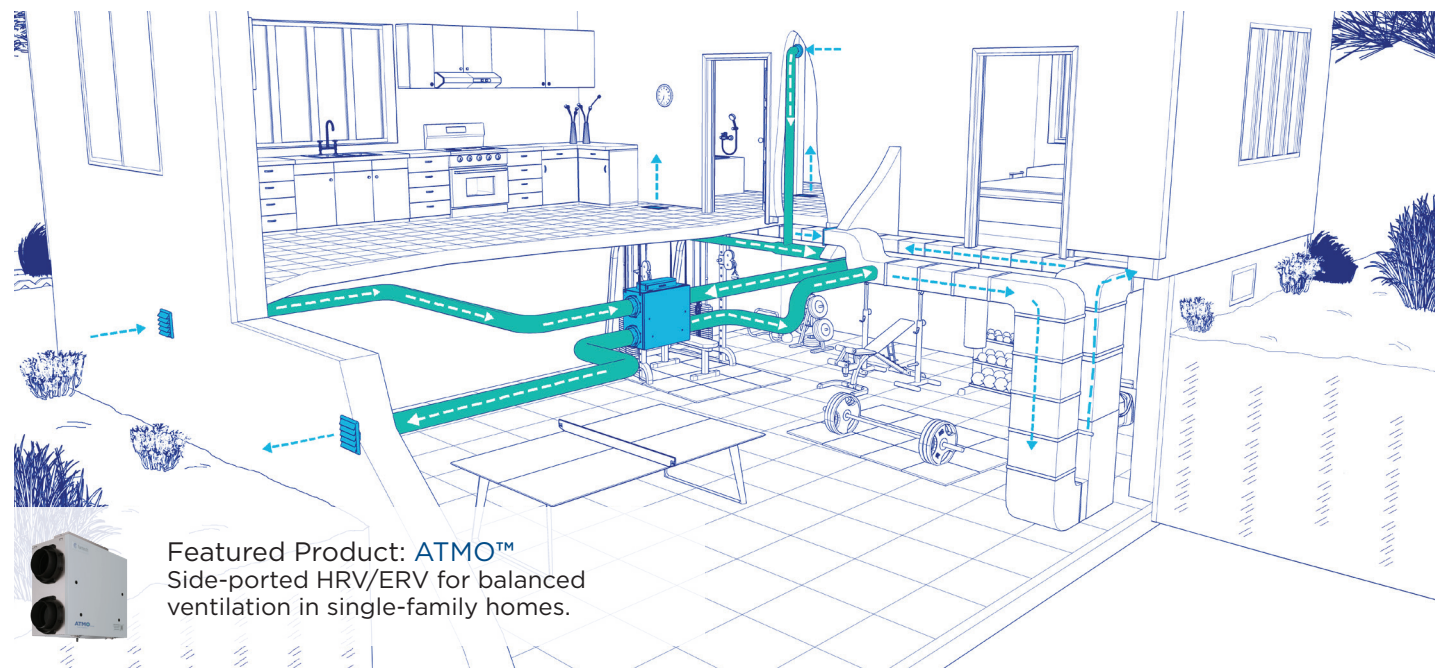


**Featured Product: HERO®**  
Top-ported HRV/ERV for balanced ventilation in single- and multi-family homes.

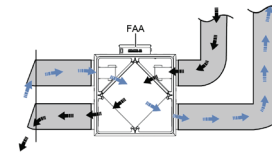


## Partially Dedicated Installation

A partially dedicated system combines dedicated exhaust ducts with fresh air supplied through the return duct.

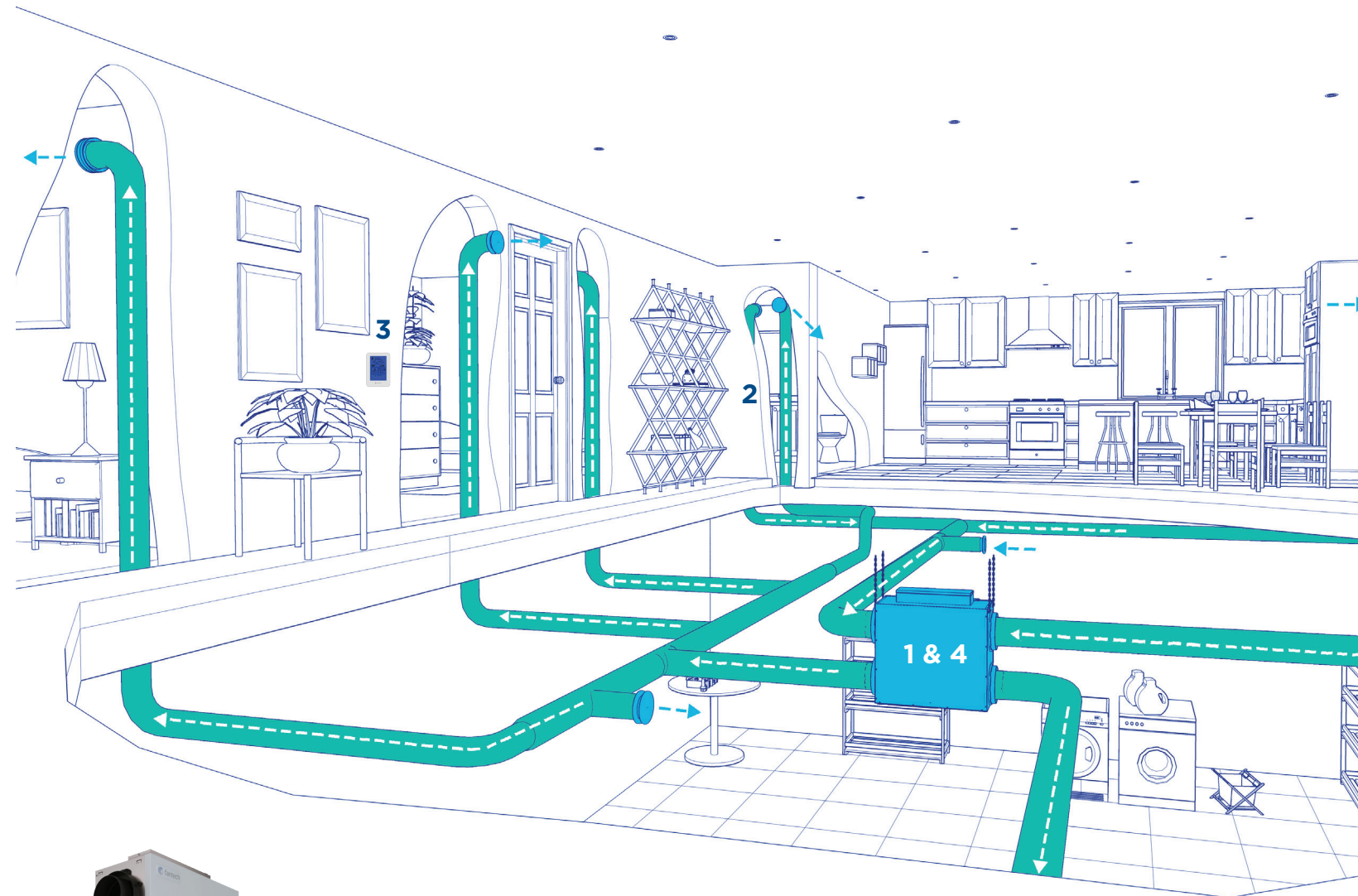


**Featured Product: ATMO™**  
Side-ported HRV/ERV for balanced ventilation in single-family homes.



## Fully Dedicated Installation

Dedicated ducts supply fresh air to living areas and remove stale air from bathrooms and the kitchen, separate from heating and cooling ducts. Fully ducted systems ensure precise air delivery and easier balancing.



## Featured Product: ATMO™ & ECO-Touch® Auto IAQ

- 1 HRV/ERV**  
Brings in and tempers fresh outdoor air and removes stale air.
- 2 Bathroom Timer**  
Runs HRV/ERV for 20/40/60 minutes as required
- 3 ECO-Touch® Auto IAQ**  
Increases ventilation rate based on the total VOC levels.
- 4 Filter Upgrade**  
MERV 8 and MERV 13 are available as an optional add-on



## Portfolio of Case Studies

### Balanced Ventilation in a Net-Zero Ready Home

Architect: Passive Design Solutions

Location: Nova Scotia, Canada

The Bay View House, a waterfront home designed for retirees, blends energy efficiency, creativity, and budget-conscious design. Working with Passive Design Solutions, Carpentry Inc., and Engineering Ltd., the project focused on passive energy design and minimizing environmental impact. The home's layout and orientation maximize natural light and cross ventilation, while sustainable water management was achieved using the existing drainage.

A high-performance, ENERGY STAR®-certified HERO® heat recovery ventilator (HRV) was installed to provide continuous fresh air ventilation, supplying 175 cfm of filtered air and recovering 80% of heat from outgoing air. Net-zero-ready with solar rough-ins, the Bay View House ensures long-term energy savings and sustainability.



### Breathing Easy: Increasing IAQ in a Modern Apartment Complex

Architect: Fathom Studio

Location: Riverview, NB, Canada

Located in Riverview, New Brunswick, The Tides is a 5-story apartment complex featuring 74 units with breathtaking views of the Petitcodiac River. Conveniently situated near major highways and minutes from downtown Moncton, this complex embraces the natural beauty of the surrounding Acadian Forest.

To comply with the 2010 Canadian National Building Code, each apartment is equipped with Fantech's HERO 150H-EC units. These heat recovery ventilators (HRVs) effectively exhaust stale air from kitchens and bathrooms while supplying outdoor air, meeting ASHRAE 62 standards.

Mechanical engineer Eric Woodworth, familiar with the HERO® series, chose these units for their high Sensible Recovery Efficiency and MERV8 filtration options. **"I chose the HERO HRV because of the high Sensible Recovery Efficiency and the option to integrate a MERV8 filter,"** he noted. This ensures clean, fresh air for residents while maximizing the area's natural air quality.



### Enhancing a Modern Oasis on Prince Edward Island

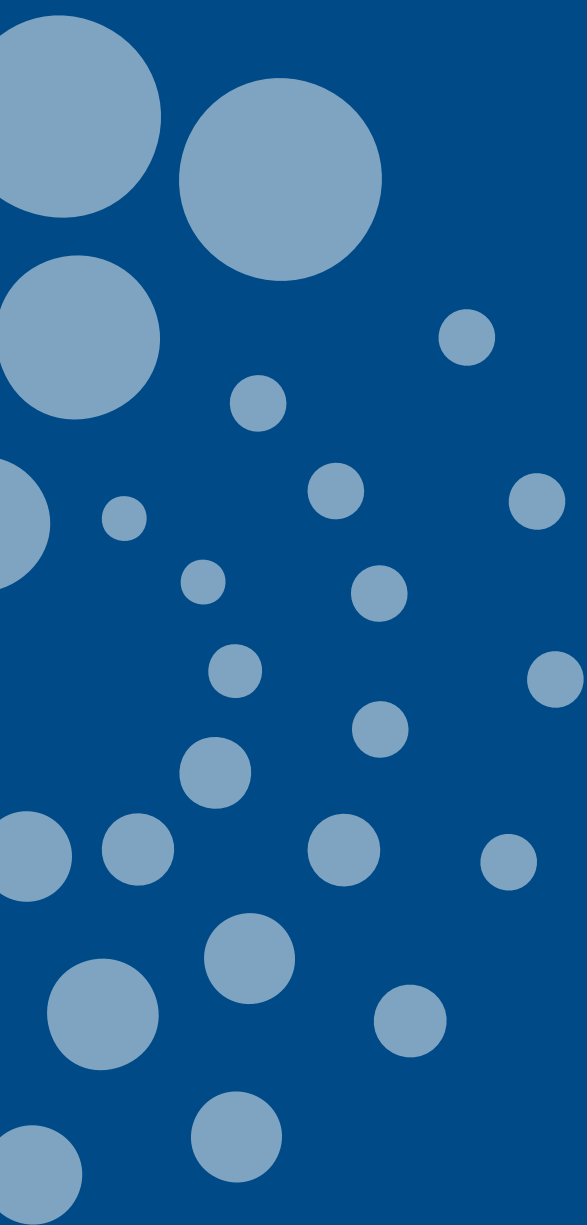
Architect: Lyndon Lynch Architects

Location: Charlottetown, PEI, Canada

West Royalty Suites is a modern 5-story apartment complex located minutes from downtown Charlottetown, surrounded by lush grasslands and forests. Featuring 97 stylish 1- and 2-bedroom units, residents enjoy stunning views and easy access to beaches, golf courses, and fine dining.

Constructed to the 2020 National Building Code of Canada, the complex emphasizes energy efficiency and sound suppression for a peaceful living experience. Each unit is equipped with large windows for natural light and contemporary amenities, including an underground heated parking garage and keyless entry.

To comply with stringent ventilation standards, HERO® HRVs were installed, providing tempered air and advanced filtration options, including HEPA filters. Additional features like RTS2 and RTS5 push-button controls and the ECO-Touch® AUTO IAQ controller allow residents to customize their ventilation for enhanced indoor air quality and comfort.



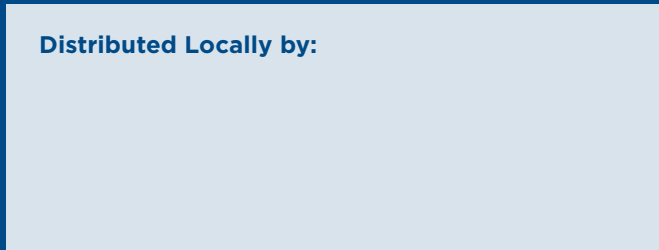
Digital  
version?



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