

O X Y G E N 8



VITA

Residential H/ERV

Who We Are

Oxygen8 is reinventing how buildings provide healthy and comfortable air in an energy efficient way. We work to enhance living and working environments with 100% fresh, filtered air using smart technology for maximum comfort and value.

[ox·y·gen·ate]

Nothing is more refreshing and essential to the human body than oxygen, which happens to be the eighth element in the periodic table. We oxygenate businesses, classrooms, senior care facilities and other buildings with 100% fresh air so people can work, live, and breathe in a safe and comfortable environment.

Why We Do What We Do

To Create Healthy Indoor Environments

People are getting sick while working in offices, learning in classrooms and convalescing in senior care facilities. Traditional centralized HVAC systems that recirculate air without proper filtration and humidity control are the root cause of poor IAQ. To prevent the transmission of bacteria and viruses, new HVAC systems must provide dedicated outdoor air and eliminate recirculation, have small zoned ventilation systems, high filtration, control humidity levels and used fixed-plate ERV technology that eliminates contaminant cross-over between outside and exhaust streams.

To Move Toward Building Electrification

To reduce greenhouse gases, many North American cities are moving toward net-zero energy buildings over the next decade, which will drive demand for all-electric HVAC systems and low energy technologies. We are here to meet that demand with our all-electric heating and cooling solutions.

For Better Building Design

Super-insulated buildings significantly reduce heating requirements, while climate change and developers' desires for large amounts of glazing will increase cooling needs. The integration of VRV with ERV helps to reduce energy consumption and meet ventilation requirements.

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Vita H/ERV for Multi-Unit Residential

To help create healthy indoor environments, Vita is designed to provide constant fresh air to living spaces. Vita is available as an ERV and HRV.

Size and Airflow Range

Dimensions: 22" L x 21" W x 9.25" H

Airflow Range: 30 – 120 cfm

Weight: 37 – 39 lbs

Mounting: Horizontal and Vertical

Power Rating: 3.6 Amp

Vita Standard Features

ECM Fans

Voltage: 120V/1ph/60Hz

Single wall casing with $\frac{3}{4}$ " foam insulation

Speed Modes: 4 adjustable dials on the control board change low and high speed settings for supply and exhaust fans.

Furnace/fan coil/heat pump interlock

Low leakage @ 0.0023 EATR

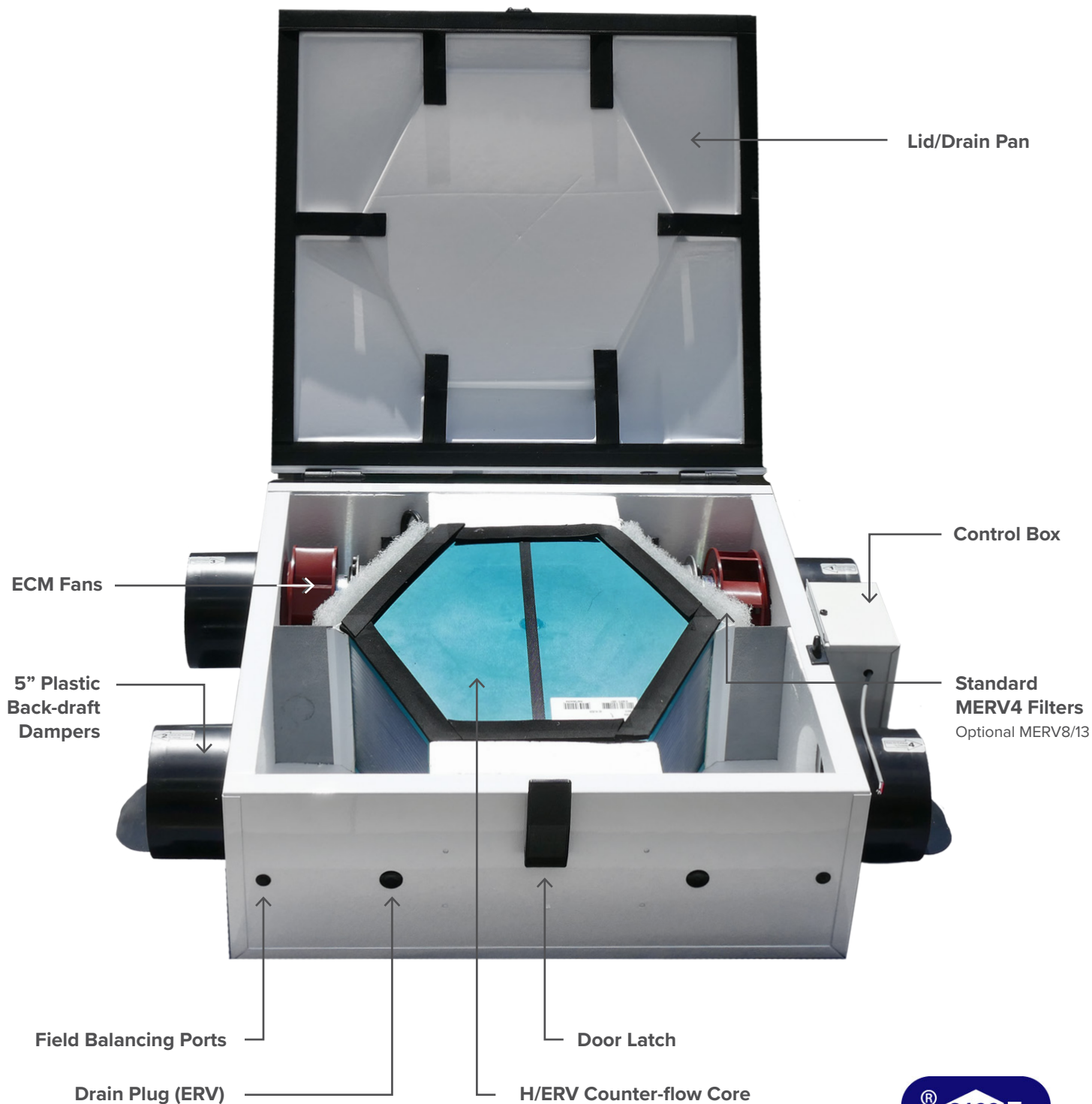
Field balancing ports to ensure the airflow outputs remain consistent and a comfortable temperature is maintained in the spaces.

Controls

Vita's controls consist of a control board that utilizes adjustable fan speeds for both Low and High airflows. These preset values are independent for both supply and return fans. The controller has the ability to connect to multiple timer switches and can trigger On, Off, Low, and High speed modes.

Vita System Overview

For Indoor Residential Applications



Vita HRV Shown



Standard Accessories

Vita is shipped with standard **Mounting Brackets**

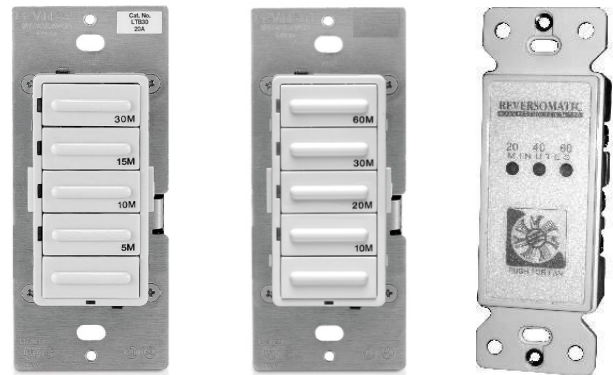
Optional Accessories

Timers and Switches

Vita (H/ERV) can be connected with up to four timers and one intermittent switch. Vita does not include a wall mounted controller.

- 120VAC 5/10/15/30 min timer*
- 120VAC 10/20/30/60 min timer*
- 5VDC 20/40/60 min timer**
- 5VDC (low/intermittent/high) switch**
- On/off switch**

*Separate power connection required | **Dry contact connection

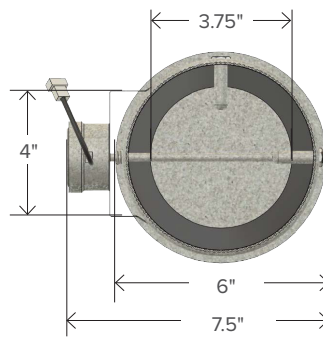
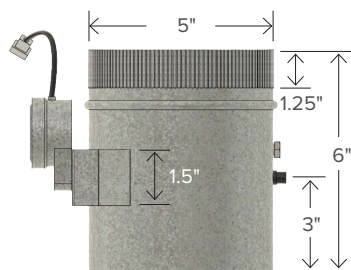
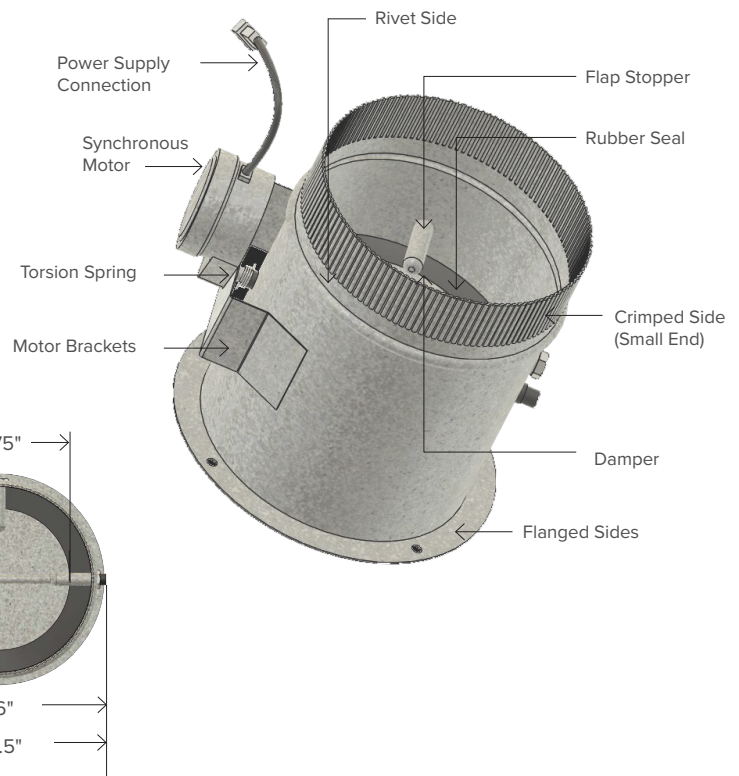


Motorized Dampers

Vita is compatible with 5" round motorized spring return dampers (with and without flange). A 120VAC motor is attached directly to the damper shaft.

Power open opening / spring return close.

Dampers require a separate power connection.



Frost Prevention Strategy

When the unit operates without a frost prevention strategy it means that it will switch into a defrost mode every time the supply air goes below 41°F (5°C) and the supply fan will shut off. In order to provide continuous operation of the unit in a normal mode, frost prevention methods should be used.

Electric Pre-Heaters

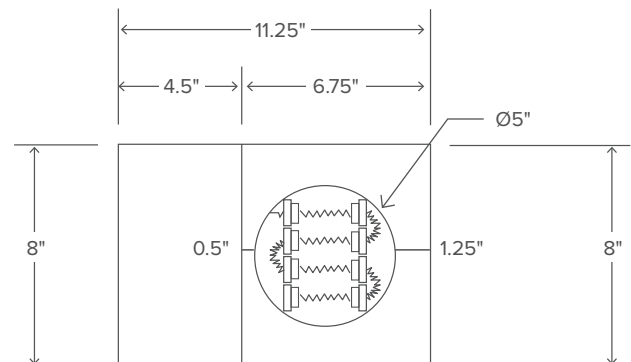
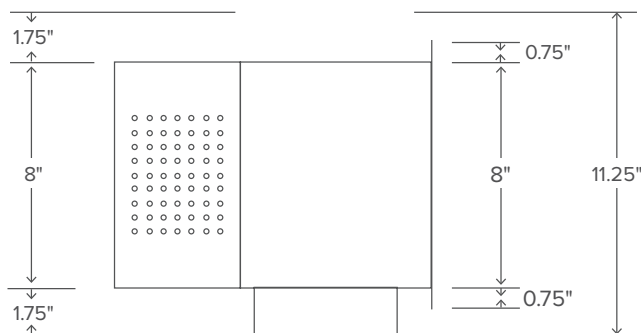
Pre-heaters are used to heat up the outside air above the frost threshold and provide continuous operation of the unit. The heater is self-controlled with no external control connection. The heater works based on on-board LAT sensor and a flow meter. Heaters require a separate power connection.

Standard Heater Sizes:

Power (kW)	Voltage (V/PH)	FLA (A)	MCA (A)	RFS (A)
0.5	120/1/60	4.17	5.21	15
1	120/1/60	8.33	10.41	15
1.5	120/1/60	12.5	15.63	25
2	120/1/60	16.67	20.84	35
2.5	120/1/60	20.83	26.04	45
3	120/1/60	25	31.25	50

Heaters come with built-in thermostat and are shipped loose. Non-standard sizes are available upon request.

Electric Heater Top View



Defrost Strategy

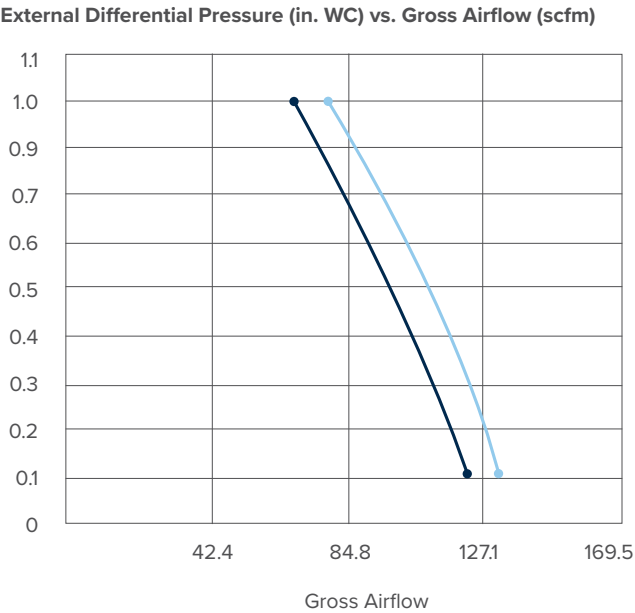
Vita's defrost sequence will start at temperatures equal or below 41°F (5°C) measured in the supply air section of the unit. When the temperature sensors measure the supply air temperature below 41°F (5°C), it will shut off the supply air fan and signal the exhaust air fan to operate at the "high" airflow rate, as set on the control board. The defrost sequence will continue until the supply air temperature reads XX°F (15°C) or above. Once the temperature reaches 41°F (15°C) or above, the supply motor will turn back on to its "normal" airflow setting and the return air fan will return to its "normal" airflow.

During the defrost cycle, the HRV unit may produce some condensation and the water should flow into a nearby drain. The HRV cabinet has pre-punched holes (two on the side and one on the door) for the drain, in order to keep the drain pan intact. See Vita Installation Manual for installation instructions.

HRV Performance

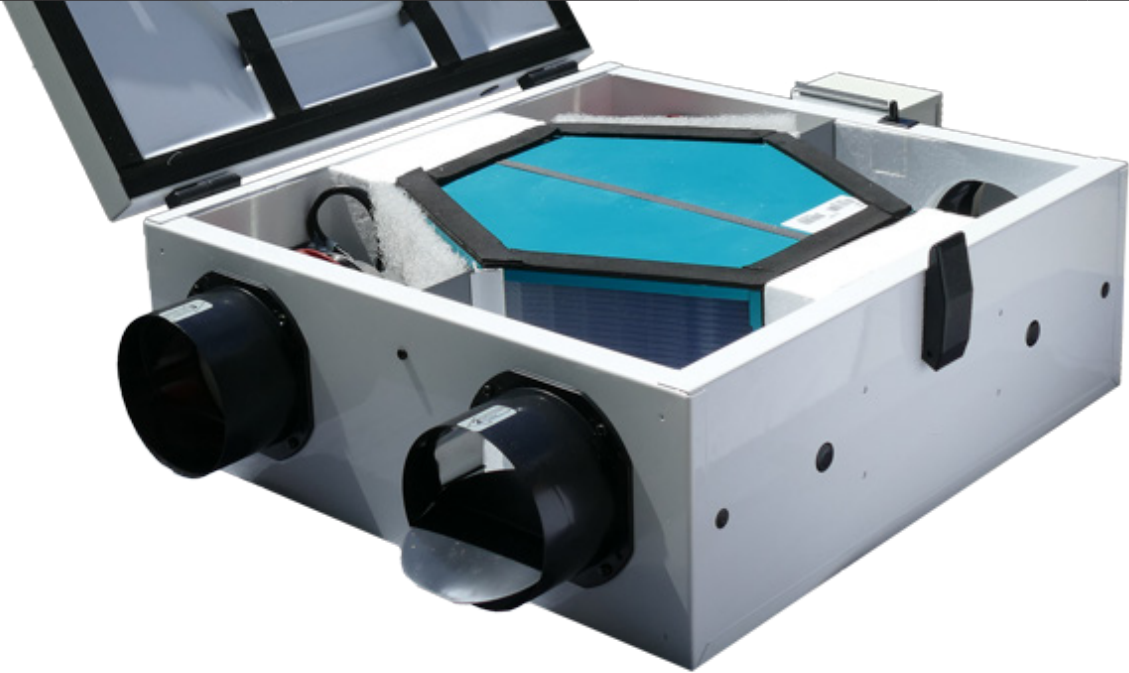
HRV Energy Performance

Ext. Static Pressure		Net Supply Airflow		Gross Airflow Supply		Gross Airflow Exhaust	
Pa	in. w.g.	L/s	cfm	L/s	cfm	L/s	cfm
25	0.1	56	119	58	123	63	133
50	0.2	55	117	56	119	61	129
75	0.3	53	112	54	114	58	123
100	0.4	50	106	51	108	55	117
125	0.5	48	102	49	104	52	110
150	0.6	45	95	46	97	49	104
175	0.7	42	89	43	91	46	97
200	0.8	38	81	39	83	43	91
225	0.9	35	74	36	76	39	83
250	1.0	32	68	33	70	36	76

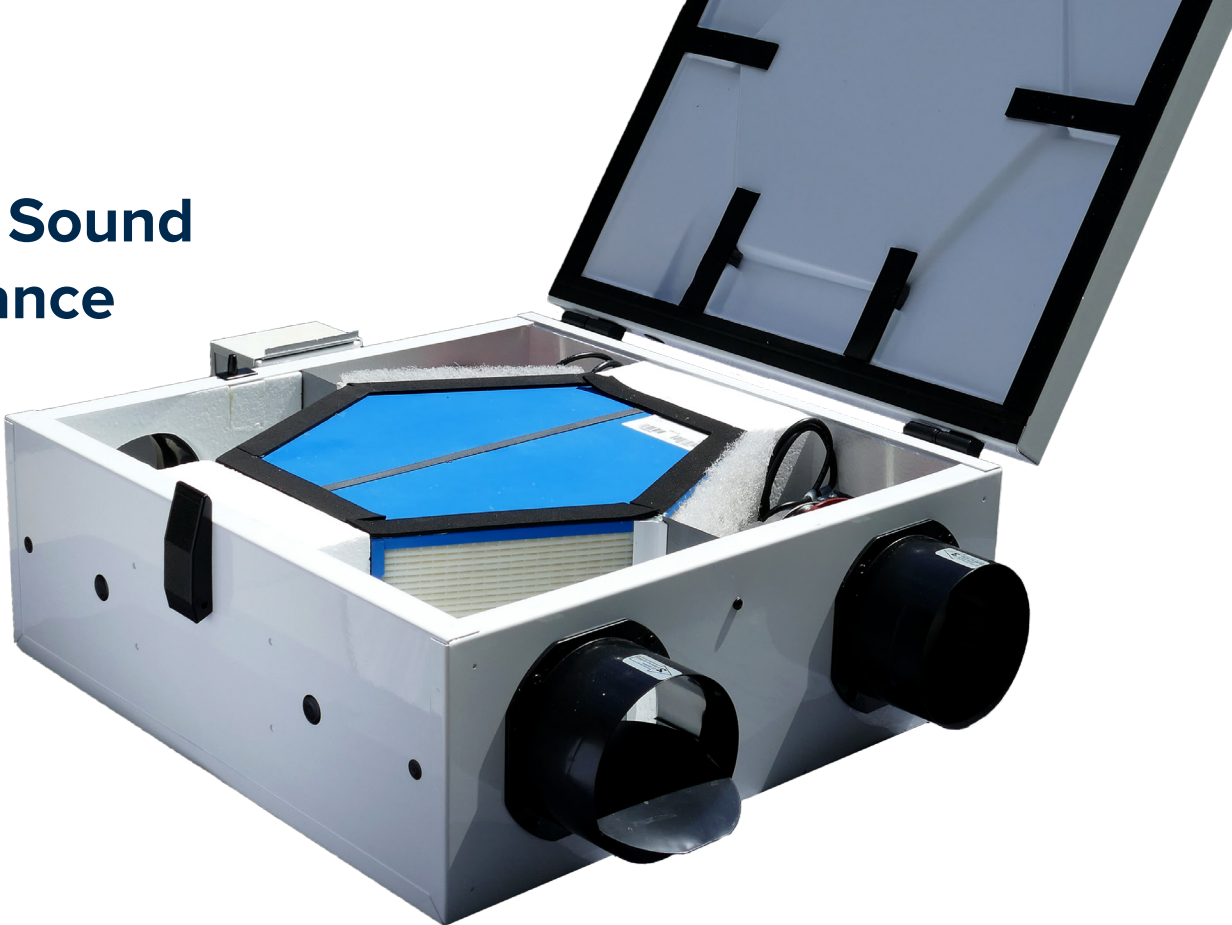


HRV Energy Rating

Temp Mode	Supply Temp		Net Airflow		Avg. Power	SRE	ASRE	Net Moisture Transfer
	°C	°F	L/s	cfm	Watts			
Heat	0	32	30	64	32	82	86	0
Heat	0	32	37	78	46	80	84	0
Heat	0	32	43	91	56	78	83	0



ERV and Sound Performance



ERV Energy Performance

Airflow			Effective Ventilation Rate	Static Pressure at Supply Air	Static Pressure at Return Air	Supply/ Exhaust Ratio	Temperature Efficiency	Moisture Efficiency	Enthalpy Efficiency
cfm	L/s	M³/H	L/s	Pa	Pa		SRE	LRE	TRE
30	14	51	-	19.1	18.6	0.97	84.7%	79.0%	81.3%
60	28	102	-	47.5	49.5	1.04	78.3%	68.7%	72.5%
120	57	204	96.8%	131.4	143.3	1.09	68.5%	56.5%	61.2%

Assuming summer conditions: 95°F DB, 78°F WB / 75°F DB, 63°F WB | Not HVI Certified

Sound Performance

Frequency	dB @ 0.2 in. w.g. SP							
Hz	160 cfm		120 cfm		95 cfm		65 cfm	
63	35.5	33.8	39.5	33.2	29.1	29.8	23.5	21.9
125	42.6	38.9	37.7	35.7	35.4	32.8	28.1	27.2
250	46.4	44.9	43.5	42.4	36.9	37.4	27.7	27.2
500	50.8	49.8	44.9	45.4	38.8	38.4	27.3	26.9
1000	48.7	47.4	43.7	42.5	37	36	24.9	24.6
2000	42	40.6	36.6	35.7	30.4	29	18.6	18.4
4000	33.5	31.7	26.5	24.7	17.7	16.1	6.1	7.1
8000	22.4	22.4	14.9	15.1	8.5	8.9	6.1	6.1
Sones	3.35		2.2		1		0	

HVI-Certified Performance Report

For Heat Recovery Ventilators (HRVs) and Energy Recovery Ventilators (ERVs)



Model number: **V120 HRV**

Brand name: **Vita**

Manufactured by: **Oxygen8**

270 Orenda Road

Brampton, ON L6T 4X6

has been tested in accordance with *HVI Publication 920®* (02/2020)

for the performance rating of **HRVs**

and, as of the date shown below,

was certified by the Home Ventilating Institute to meet the following product performance ratings:

Temp Mode	Supply Temp (C)	Supply Temp (F)	Net Airflow (L/s)	Net Airflow (cfm)	Power Consumed (watts)	SRE	ASRE	Latent Recovery /Moisture Transfer	TRE	ATRE	VLTVR Supply	VLTVR Exhaust	Very Low Temp Airflow Imbalance
HEATING	0	32	30	64	32	82	86	0.00					
HEATING	0	32	37	78	46	80	84	0.00					
HEATING	0	32	43	91	56	78	83	0.00					

External Static Pressure (Pa)	External Static Pressure (in)	Net Supply Airflow (L/s)	Net Supply Airflow (cfm)	Gross Airflow Supply (L/s)	Gross Airflow Supply (cfm)	Gross Airflow Exhaust (L/s)	Gross Airflow Exhaust (cfm)
25	0.1	56	119	58	123	63	133
50	0.2	55	117	56	119	61	129
75	0.3	53	112	54	114	58	123
100	0.4	50	106	51	108	55	117
125	0.5	48	102	49	104	52	110
150	0.6	45	95	46	97	49	104
175	0.7	42	89	43	91	46	97
200	0.8	38	81	39	83	43	91
225	0.9	35	74	36	76	39	83
250	1.0	32	68	33	70	36	76

HVI Reference Number: 2505029

Certification Date: 9/24/2021*

Today's Date: 09/13/2021

Product Status: Approved

Attested by:

Jacki Donner, CAE
Executive Director/CEO

*This certificate is only valid while the product remains qualified. A product may be disqualified at any time. This certificate is valid only for the particular combination of ratings listed in the most recent edition of *HVI Publication 911: Certified Home Ventilating Products Directory®*. Visit hvicertified.org to verify that this combination is an **active listing** and the data listed on this certificate are accurate. Search on the HVI reference number to quickly locate this ratings combination online.

NOT LISTED=NOT CERTIFIED

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FAQ

Can controls be connected to a bathroom light switch?

Yes.

Can owners have remote access to controls from a smart phone?

No.

Does Vita have bypass?

No.

Are the motors variable speed? What is the flow range?

Yes, motors are ECM. The controller provides the fixed speeds. The standard airflow range is 30 - 120 cfm.

What are the efficiencies?

See page 5 for efficiencies.

Can Vita be mounted both horizontally and vertically?

Yes.

How do the mounting brackets work?

Please contact Oxygen8 for installation manual.

How do you remove filters?

Once the panel is opened, filters can be easily removed from the designated slot.

What are the power requirements?

115 V / 1 ph / 60 Hz.

Do the cores have to be cleaned?

Yes, depending on the installed environment and the particulate in the outdoor and return air streams.

What certifications does Vita have?

UL, HVI and CSA

Vita ERV is not HVI certified.

What are the competitive advantages of these units?

Vita is a high-efficiency, compact and light weight H/ERV.

What is the maximum static pressure?

Vita is sized for 0.5 ESP, however fan curves will be shown in design specs. The maximum static pressure is approximately 1 in. W.C.

Why does Vita have field balancing ports if it has ECM fans?

The field balancing ports verify and adjust flows for exhaust and supply air. In cases where there is a significant pressure drop difference due to either long or short duct runs on either side of the unit and the flows are not balanced or almost equal, the field balancing ports will be used. All published SREs are on balanced, or equal supply and exhaust flows.

Are there any flame or smoke resistant issues with the foam insulation?

The insulation used in the Vita H/ERV is CSA certified and meets the building code requirements for flame and smoke ratings.

In order to access the internals, does the drain connection need to be removed before opening the access door?

No, unless the unit is being removed from the hanging brackets.

Are units reversible in field?

No, units cannot be reversed in the field. Temperature sensors are installed specifically in the outdoor supply air stream to read and manage defrost strategies.

