OXYGEN8

VENTUM LITE

For School and Office Applications

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

Oxygen8's ventilation solutions provide 100% fresh outside air to occupants with very low energy consumption and no operational greenhouse gas emissions. Our dedicated outside air systems use high-efficiency energy or heat recovery, ECM fans, MERV 13 filtration, and integrate with VRV heat-pump technology. Oxygen8's solutions help lower the overall carbon footprint of buildings and contribute to improvements in the health, wellbeing and cognitive function of building occupants.

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 helps to reduce energy consumption and meet ventilation requirements.

Table of Contents

VENTUM LITE
High Efficiency Ventilation System

High-Efficiency Solution

Ventum Lite features variable speed plenum ECM direct-driven fans with low energy consumption and insulated walls for a high-efficiency solution. The counter-flow core allows for high sensible energy recovery with no moving parts or cross-contamination.

Healthy Air For All

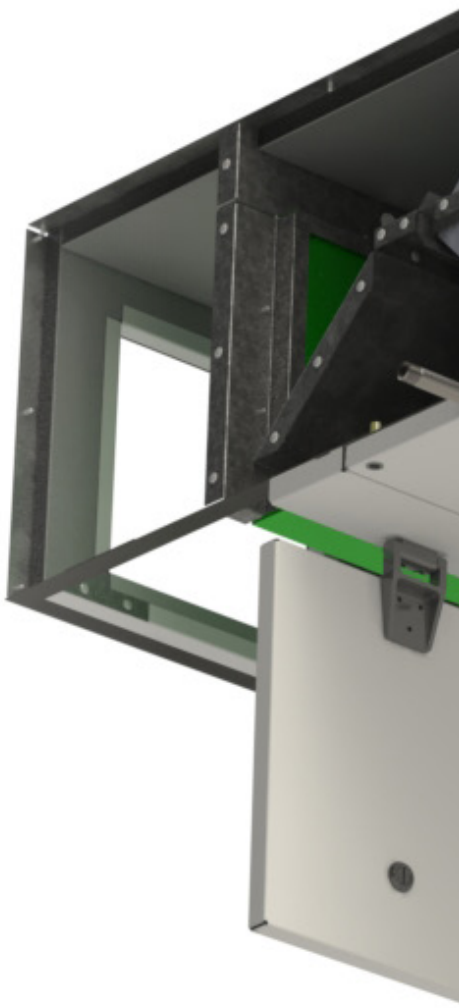
Ventum Lite uses 100% outside air with no recirculation. The high efficiency counter-flow core has an outdoor air correction factor (OACF) of 1.0 and an exhaust air transfer ratio (EATR) of 0.1% tested to AHRI 1060.

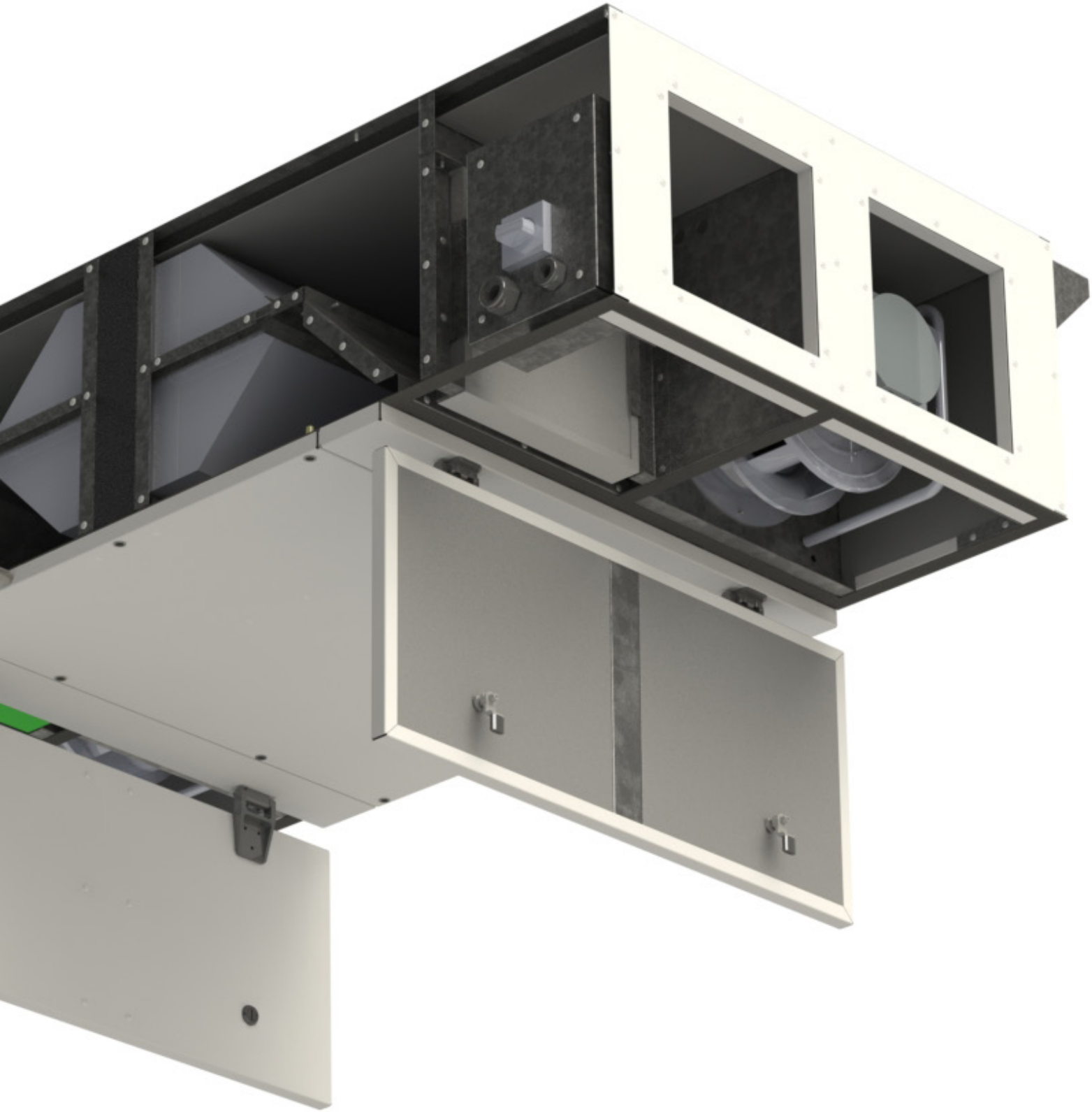
Controls

ECM fans are wired to a factory installed terminal strip, all other controls are by others.

Low Profile Design

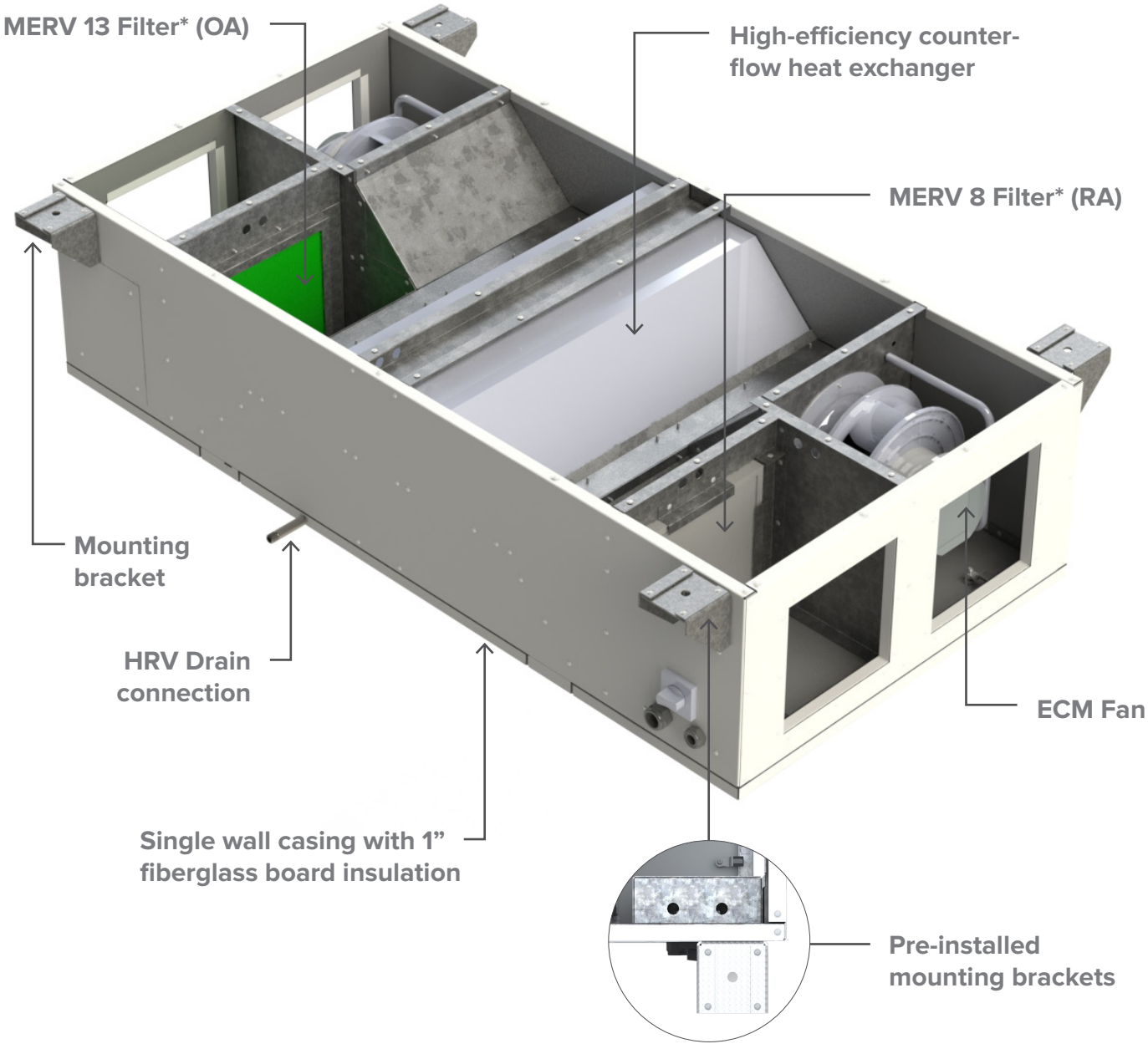
Ventum Lite has a low profile design of 16”, making it the ideal solution for in-ceiling design and retrofits. The units frees up valuable roof space with decentralized indoor ventilation and adds floor space by eliminating vertical duct runs.





Ventum Lite System Overview

For Indoor Applications



Ventum Lite Climate Applications

ERV

Hot, Humid Climates and Cold Climates

Ventum ERV functions best in cold, dry winters and hot, humid summers. During a cold and dry winter, ERVs can help retain some of the moisture inside the space and lower the frost temperature of the heat exchanger, while also recovering heat and providing fresh air. In humid climates, ventilation air can help dehumidify independent from heating and cooling. Ventum Lite will prevent moist outside air from entering the space.

HRV

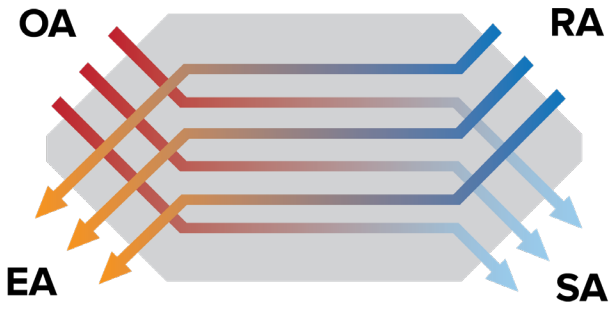
Mild Climates

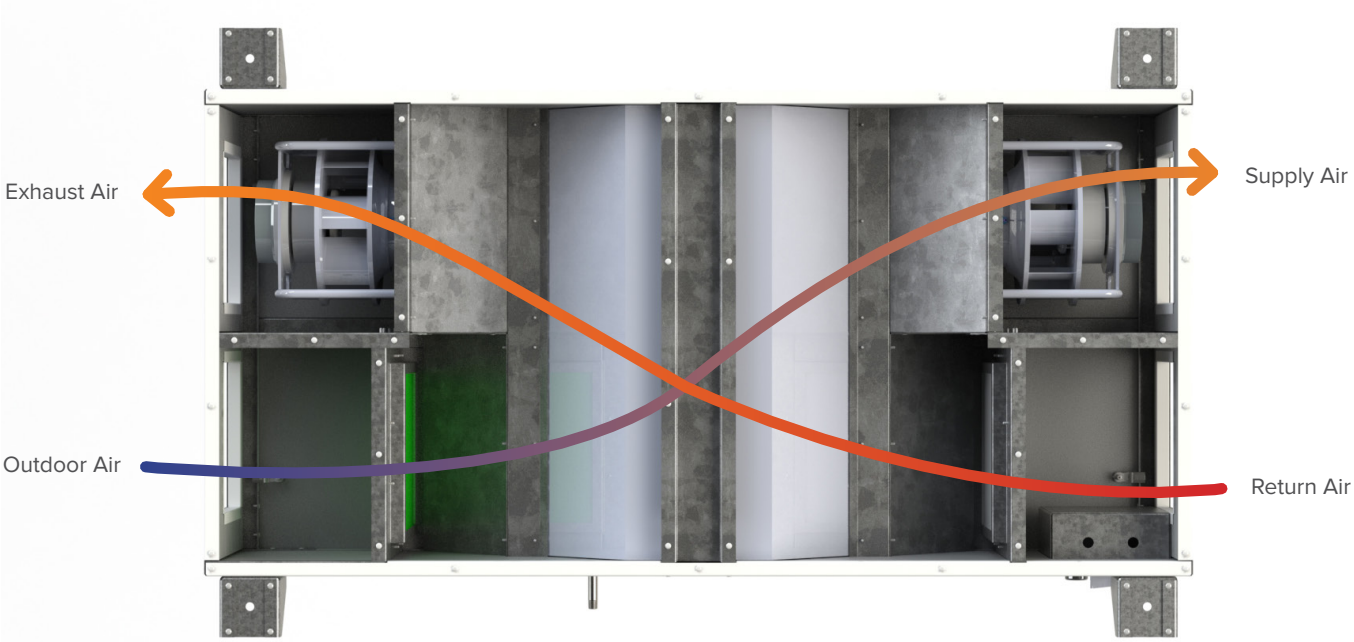
Ventum HRV is best for mild climates. The HRV system uses the heat from the exhaust air to pre-heat incoming fresh air. This reduces the amount of heat required to create an ambient room temperature.

Energy Recovery Technology

Counter-Flow Heat Exchanger

Heat recovery counter-flow heat exchangers provide up to 82% sensible effectiveness, while energy recovery counter-flow heat exchangers provide up to 76% sensible and 66% latent effectiveness. Fixed-plate enthalpy cores have no moving parts and require little to no maintenance. Due to the structure of the core, return and outdoor air never mix, eliminating the possibility of virus and contaminant crossover.





Accessories

1

Electric Pre-Heat

Electric pre-heat is available in 208/1 and 240/1 voltages, with standard sizes to match the heating requirements.

Single point power is available for the electric pre-heater and unit.

Dampers

2

Shut-off damper control and power are provided by a third party taking in on/off input. Dampers can be factory mounted to the unit's inlet and outlet or provided loose for duct-mounting.

Performance and Electrical

Model [HRV]	Dimensions (W x L x H) in.	Weight lbs	Heat Recovery Ventilator	
			Airflow cfm	**SRE*** %
H04	32 x 65 x 16	325	200 – 450	82.5
H08*	47 x 72 x 18	TBD	450 – 800	82.1
H12*	62 x 72 x 18	TBD	800 – 1200	81.4

Model [ERV]	Dimensions (W x L x H) in.	Weight lbs	Energy Recovery Ventilator			
			Airflow cfm	**SRE*** %	**LRE**	**TRE**
H04	32 x 65 x 16	325	200 – 450	75.7	63.3	68.0
H08*	47 x 72 x 18	TBD	450 – 800	77.1	66.2	70.4
H12*	62 x 72 x 18	TBD	800 – 1200	75.8	63.9	68.5

*Additional HRV sizing and ERV options coming soon.

Standard Power

Model	Nom. V.	Phase	Motor (kW)	SA Fan Qty	SA Fan FLA	SA Fan FLA Total	RA Fan Qty	RA Fan FLA	RA Fan FLA Total	FLA	MCA	MROPD	RFS
H04	208/240	1	0.53	1	3.50	3.50	1	3.50	3.50	7.00	7.88	11.38	15A
H08	208/240	1	0.50	1	2.50	2.50	1	2.50	2.50	5.00	5.63	8.13	15A
H12	208/240	1	0.78	1	3.90	3.90	1	3.90	3.90	7.80	8.78	12.68	15A

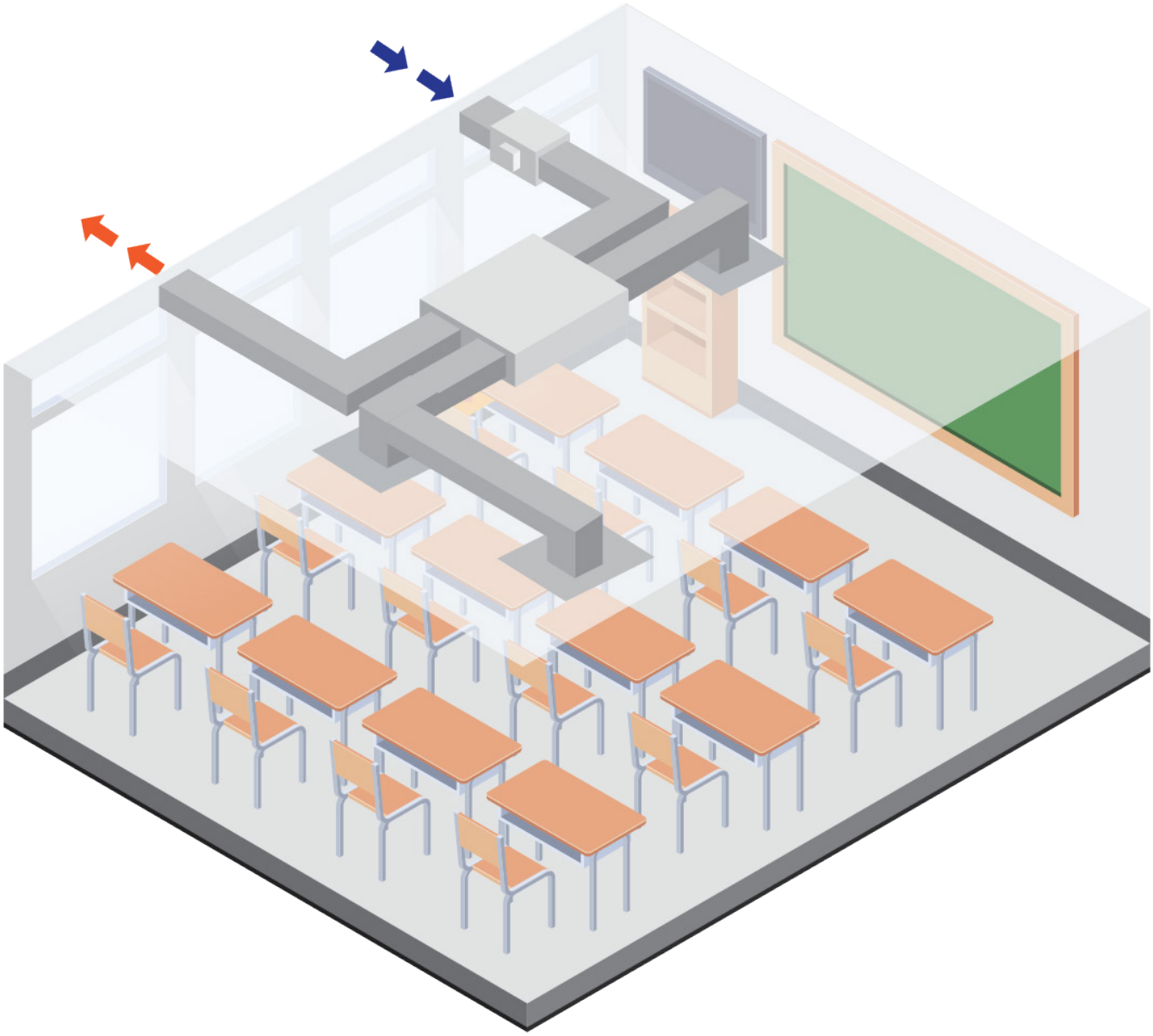
Single-Point Power

Ventum Lite features single-point power, the pre-heater accounts for the amperage from the ventilation unit and runs from one electrical connection. The table below shows the total required values for the pre-heater and unit combined.

Model	Nom. Voltage	Heat Capacity (kW)	EC FLA	SA Fan Qty	EA Fan Qty	Unit FLA	SPP FLA	SPP MCA	SPP MROPD	SPP RFS
H04	208/1/60	1	4.81	1	1	7.00	11.81	14.76	17.82	15
		2	9.62				16.62	20.78	28.65	25
		4	19.24				26.24	32.80	50.29	35
		6	28.86				35.86	44.83	71.94	45
		8	38.48				38.48	48.10	86.54	50
		10	48.10				55.10	68.88	115.23	70
	240/1/60	1	4.17	1	1	7.00	11.17	13.96	16.38	15
		2	8.34				15.34	19.18	25.77	20
		4	16.68				23.68	29.60	44.53	30
		6	25.02				32.02	40.03	63.30	45
		8	33.36				33.36	41.70	75.06	45
		10	41.70				48.70	60.88	100.83	70
H08*	208/1/60	2	9.62	1	1	5.00	14.62	18.28	26.65	20
		4	19.24				24.24	30.30	48.29	35
		7	33.67				38.67	48.34	80.76	50
		10	48.10				53.10	66.38	113.23	70
		14	67.34				67.34	84.18	151.52	90
		18	86.58				91.58	114.48	199.81	125
	240/1/60	2	8.34	1	1	5.00	13.34	16.68	23.77	20
		4	16.68				21.68	27.10	42.53	30
		7	29.19				34.19	42.74	70.68	45
		10	41.70				46.70	58.38	98.83	60
		14	58.38				58.38	72.98	131.36	80
		18	75.06				80.06	100.08	173.89	110
H12*	208/1/60	3	14.43	1	1	6.20	20.63	25.79	38.67	30
		6	28.86				35.06	43.83	71.14	45
		10	48.10				54.30	67.88	114.43	70
		15	72.15				78.35	97.94	168.54	100
		21	101.01				101.01	126.26	227.27	150
		27	129.87				136.07	170.09	298.41	175
	240/1/60	3	12.51	1	1	6.20	18.71	23.39	34.35	20
		6	25.02				31.22	39.03	62.50	40
		10	41.70				47.90	59.88	100.03	60
		15	62.55				68.75	85.94	146.94	90
		21	87.57				87.57	109.46	197.03	110
		27	112.59				118.79	148.49	259.53	150

MCA Minimum Circuit Ampacity | **MROPD** Maximum Rating of Over-Current Protective Device
RFS Recommended Fuse Size | **FLA** Full-Load Amps

Ventum Lite for School Applications



Through the process of exchanging stale indoor air with fresh outdoor air, VOCs, CO2 and viruses are exhausted from the space. Many North American schools (K-12 and Post-Secondary) have inefficient ventilation systems, or no ventilation at all. The absence of ventilation in these buildings can lead to increased virus transmission and lowered cognitive function for students and faculty members.

Solution Features

- Low-Profile (16” depth) for Easy Installation and Retrofit Construction
- Heat and Energy Recovery Ventilator
- HRV: 82%+ SRE, ERV: 75%+ SRE, 63.3% LRE
- High-Efficiency Counter-Flow Core
- ECM Fans
- MERV13 Filtration

Adapting to New Technology.

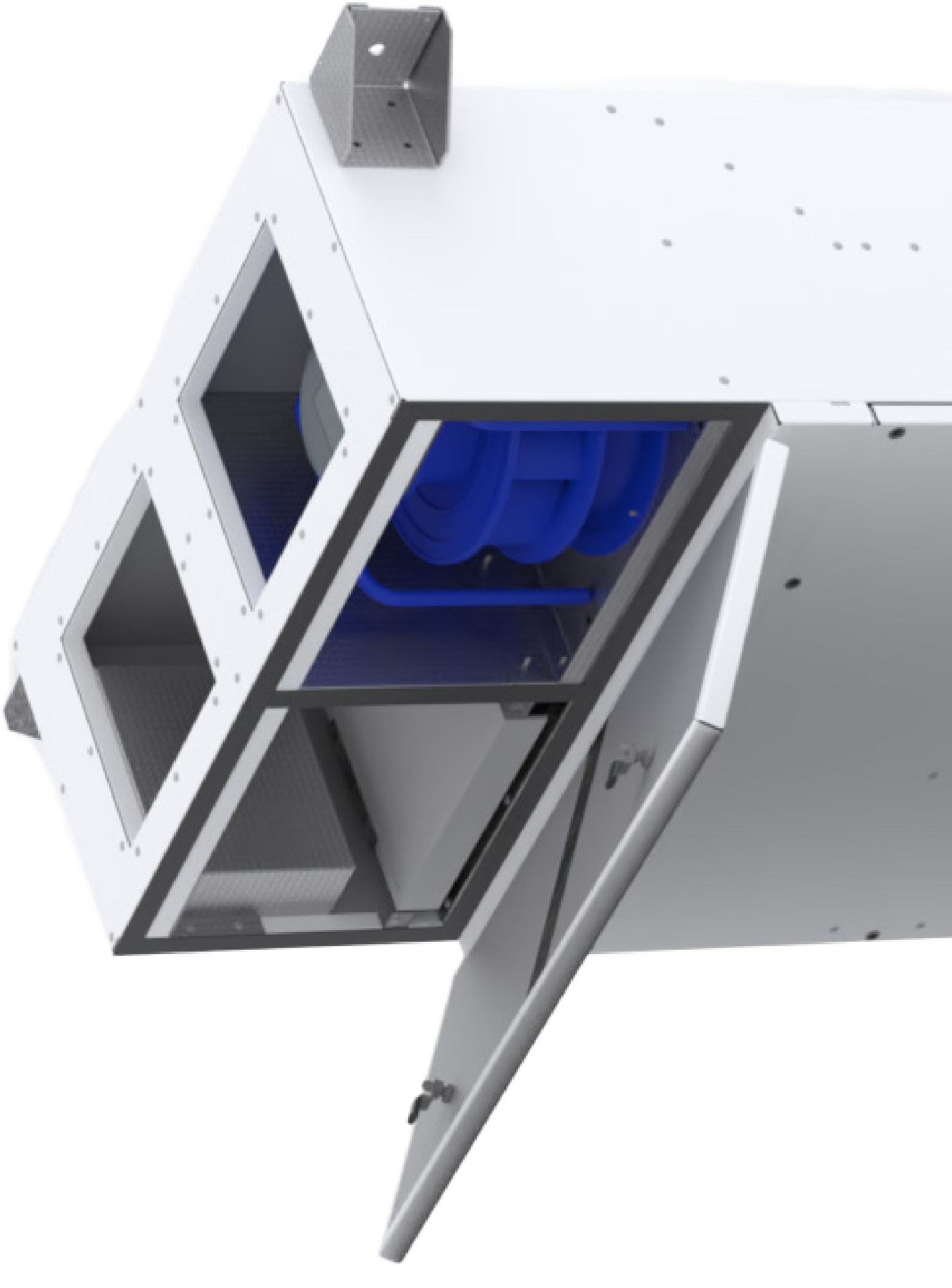
By taking a decentralized approach to ventilation, each HRV delivers fresh, filtered outside air directly to the classroom, while stale air is exhausted. Decentralized ventilation eliminates the need for vertical duct chases, rooftop units and bulky equipment. Low-profile units are ceiling mounted to fit into drop ceilings and mechanical rooms with limited space.

School ventilation systems have a large impact on both students and staff.

With older systems, and in some cases with open windows as the solution for fresh air, building occupants are spending extended periods of time in spaces that could be harmful to their health and wellbeing.

Limited budgets and expensive solutions have been contributing factors to the retention of outdated and inefficient systems. Until recently, there have been limited practical solutions available in the market, which has traditionally favored centralized rooftop units.

Without proper ventilation, students and faculty will continue to get sick and cognitive performance may decline.



Specifications

System Overview

Oxygen8's Ventum Lite Series is a compact, frameless, high-efficiency HRV design with optional duct-mounted heaters.

1 Standard Features

- ☐ High Efficiency Variable Speed EC Direct-Drive Motor
- ☐ Backward Inclined Fans
- ☐ Non-Fused Disconnect Switch
- ☐ Pre-Painted White Exterior Casing
- ☐ 18-Gauge Painted Steel Single-Wall Panel with Fiberglass Board Insulation
- ☐ 2" MERV 13 Supply Air Filter
  2" Pleated MERV 8 Return Air Filter
- ☐ Removable Hinge Pins for Limited Access
- ☐ AHRI-Certified Counter-flow Core

2 Electric Coil Specifications

- ☐ SCR Controlled
- ☐ Non-Fused Disconnect Switch
- ☐ Single-point power electric heater option for single heaters

3 Installation Options

- ☐ Horizontal (Ceiling Mount) – Brackets included
- ☐ Orientation: Right Hand or Left Hand
- ☐ Access Option: Bottom Door

4 Warranty

- ☐ Parts-Only Warranty 24 Months from date of Shipment.
- ☐ Cores-24 months from dates of shipment

FAQ

General

What material is the Oxygen8 casing made of?
Painted 18GA single-wall steel panel exterior with fiberglass board insulation.

Do you offer non-fused disconnect?
Yes, it is standard. We use a switch disconnect with internal breakers.

Do you offer single point power?
Yes, for unit and electric pre-heat.

Is the optional shutoff damper powered by the unit?
No.

How are the dampers controlled?
Shutoff damper control is provided by a third-party BAS/BMS connection taking a 24V on/off input.

Is a filter sensor provided with the unit?
Dirty filter monitoring would need to be accomplished by a third-party.

Do you provide mounting brackets?
Yes, Oxygen8 will provide hanging brackets for mounting equipment.

Does Ventum Lite HRV require a drain connection?
Yes, all Ventum Lite HRVs come with a drain pan built into the removable bottom panel. Ventum Lite ERV does not require a drain pan.

Does the unit come with any standard accessories or sensors?
No.

Notes

Notes

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