OXYGEN 8

OPERATION & MAINTENANCE
VENTUM LITE

Table of Contents

1.0 General Information

This manual includes important instructions for safe installation, operations and maintenance of the Heat Recovery Ventilator (HRV) or Energy Recovery Ventilator (ERV). Before installing HRV/ERV, please read carefully and follow all of the instructions below! The manufacturer reserves the right to make changes to this manual without prior notification. Please keep this manual for future reference. Consider this manual a permanent part of the product.

This manual will show the manufacturers recommended installation method. Please note that local codes and regulations may override these recommendations.

The installation must follow local codes and standards. The National Electric Code (NEC), the National Fire Protection Agency (NFPA), and the Canadian Electrical Code (CEC) must be followed.

Installation of this product must be performed by a qualified and accredited professional in conformance with local and national codes, standards and licensing requirements.

Warnings and Caution

Warnings and cautions appear at the appropriate sections throughout this manual. Please read these sections carefully.

Warning

This sign indicates a potentially hazardous situation, which could result in death or serious injury if not avoided.

Caution

This sign indicates a potentially hazardous situation, which may result in minor or moderate injury if not avoided. It may also alert against unsafe practices.

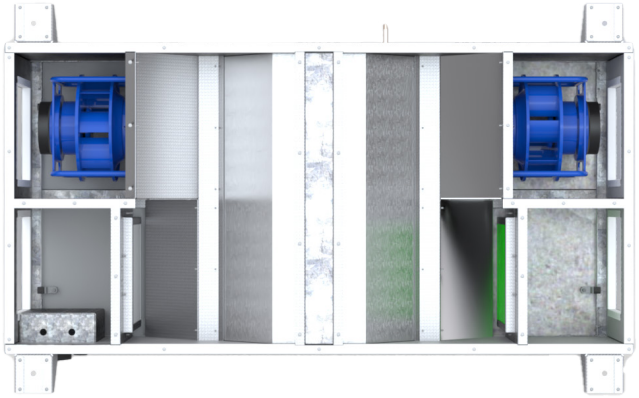
Caution

This label indicates a situation that may result in equipment or property damage only accidents.

2.0 Configuration Chart

The following is a complete description of the packaged ERV/HRV model numbers and nomenclature.

Main Code: VENTUM_XXX_XXX_X_X_X_XX_XX_XX_XXXX_XX_XX_X
VENTUM_H04_HRV_S_I_R_S1_DP_NA_2081_13_08_A
Sales Drawings: VENTUM_H04_HRV_S_I_R_S1_DP_NA_A



Size

H04, H08, H12

Heat Exchanger

Latent - ERV
Sensible - HRV

Standard/Bypass

Standard - S

Location

Indoor - I

Handing

Right Hand - R
Left Hand - L

Fan Position

FP1 [Fans Front] - S1
FP2 [Fans Rear] - S2

Condensate Drain Pan in Exhaust Air Path

Not Included - ND
Included - DP

Coupled Accessories

None - NA

Power

208/60/1 - 2081
240/60/1 - 2401

Outdoor Air Filter

MERV8 - 08
MERV11 - 11
MERV13 - 13
MERV14 - 14

Return Air Filter

MERV8 - 08
MERV11 - 11
MERV13 - 13
MERV14 - 14

Version (Generation)

A, B, C....

3.0 Specifications

3.1 System Overview

Standard units come complete with ERV or HRV energy recovery option, EC fans, 2" filters, Terminal Strip for Fan Speed Control, and casing as outlined in the spec below.

3.2 General Specifications

Standard Features

Certification

AHRI and UL Certified

Casing

18 GA pre-painted white single wall, 1" Fiberglass Board Insulation

Electrical and Controls

Terminal Strip for Fan Speed Control

Single point power available for use with duct mounted pre-heat

Filters

2" pleated OA MERV 13, RA MERV 8

Blowers and Motors

High-efficiency variable speed EC direct-drive motor

Backward inclined fan

Warranty

Core - 2 years from shipping

Unit - 2 years from shipping

Mounting

Ceiling mount only.

Options

Shut Off Damper

Outdoor and exhaust air dampers (unit or duct mounted)

Frost Control

Electric Preheat

Warranty

10-year add-on available

3.3 Electrical – DOAS/ERV

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

MCA: Minimum circuit ampacity

MROPD: Maximum rating of over-current protective device

RFS: Recommended Fuse Size

3.4 Electrical – DOAS/ERV and Single Point Electric Heater

H04

Nominal Voltage	Airflow [CFM]	Heater Capacity [kW]	Heater FLA [A]	SA Fan FLA [A]	EA Fan FLA [A]	Unit FLA [A]	SPP Total FLA [A]	SPP Total MCA [A]	SPP Total MROPD [A]	Recommended Fuse [A]
208/1/60	450	1	4.81	3.50	3.50	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	86.58	50
		10	48.10				55.10	68.88	115.23	70
240/1/60	450	1	4.17	3.50	3.50	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	33.36				32.02	40.03	63.30	45
		8	33.33				33.36	41.70	75.06	45
		10	41.70				48.70	60.88	100.83	70

H08

Nominal Voltage	Airflow [CFM]	Heater Capacity [kW]	Heater FLA [A]	SA Fan FLA [A]	EA Fan FLA [A]	Unit FLA [A]	SPP Total FLA [A]	SPP Total MCA [A]	SPP Total MROPD [A]	Recommended Fuse [A]
208/1/60	800	2	9.62	2.50	2.50	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	800	2	8.34	2.50	2.50	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

Nominal Voltage	Airflow [CFM]	Heater Capacity [kW]	Heater FLA [A]	SA Fan FLA [A]	EA Fan FLA [A]	Unit FLA [A]	SPP Total FLA [A]	SPP Total MCA [A]	SPP Total MROPD [A]	Recommended Fuse [A]
208/1/60	1200	3	14.43	3.10	3.10	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	1200	3	12.51	3.10	3.10	6.20	18.71	23.39	34.35	25
		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

3.5 Core, Fan and Air Performance

ERV Performance*

Model	Airflow (cfm)	SRE (%)	LRE (%)	TRE (%)
H04	450	75.7	63.3	68.0
H08*	800	77.1	66.2	70.4
H12*	1200	75.8	63.9	68.5

*Coming Soon

HRV Performance

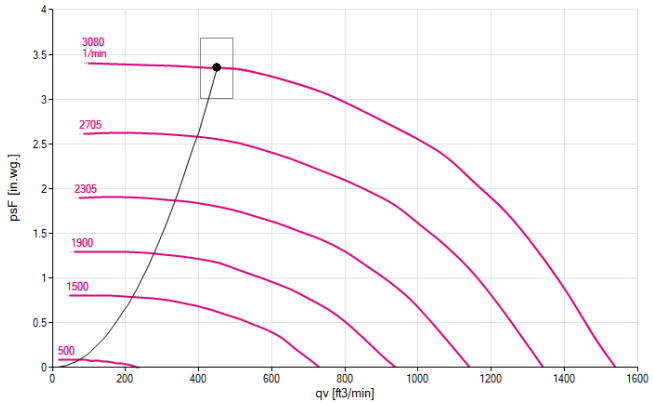
Model	Airflow (cfm)	SRE (%)
H04	450	82.5
H08*	800	82.1
H12*	1200	81.4

*Model Sizes Coming Soon

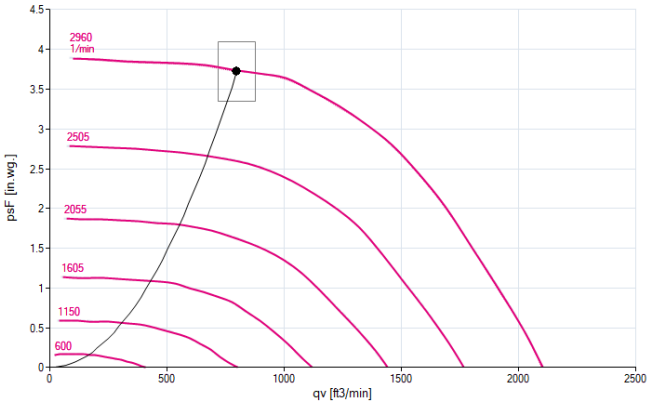
Fan Data

Model	CFM	Nominal Voltage	FLA (A)	KW	SP "Wg
H04	450	208-240 / 1~ / 60	3.5	0.53	1.36
H08	800	208-240 / 1~ / 60	2.5	0.52	1.21
H12	1200	208-240 / 1~ / 60	3.1	0.70	1.49

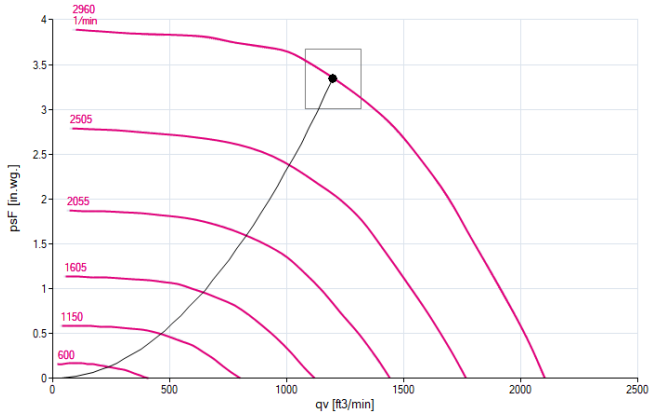
Air Performance



H04 - 450 CFM - 208-240 / 1~



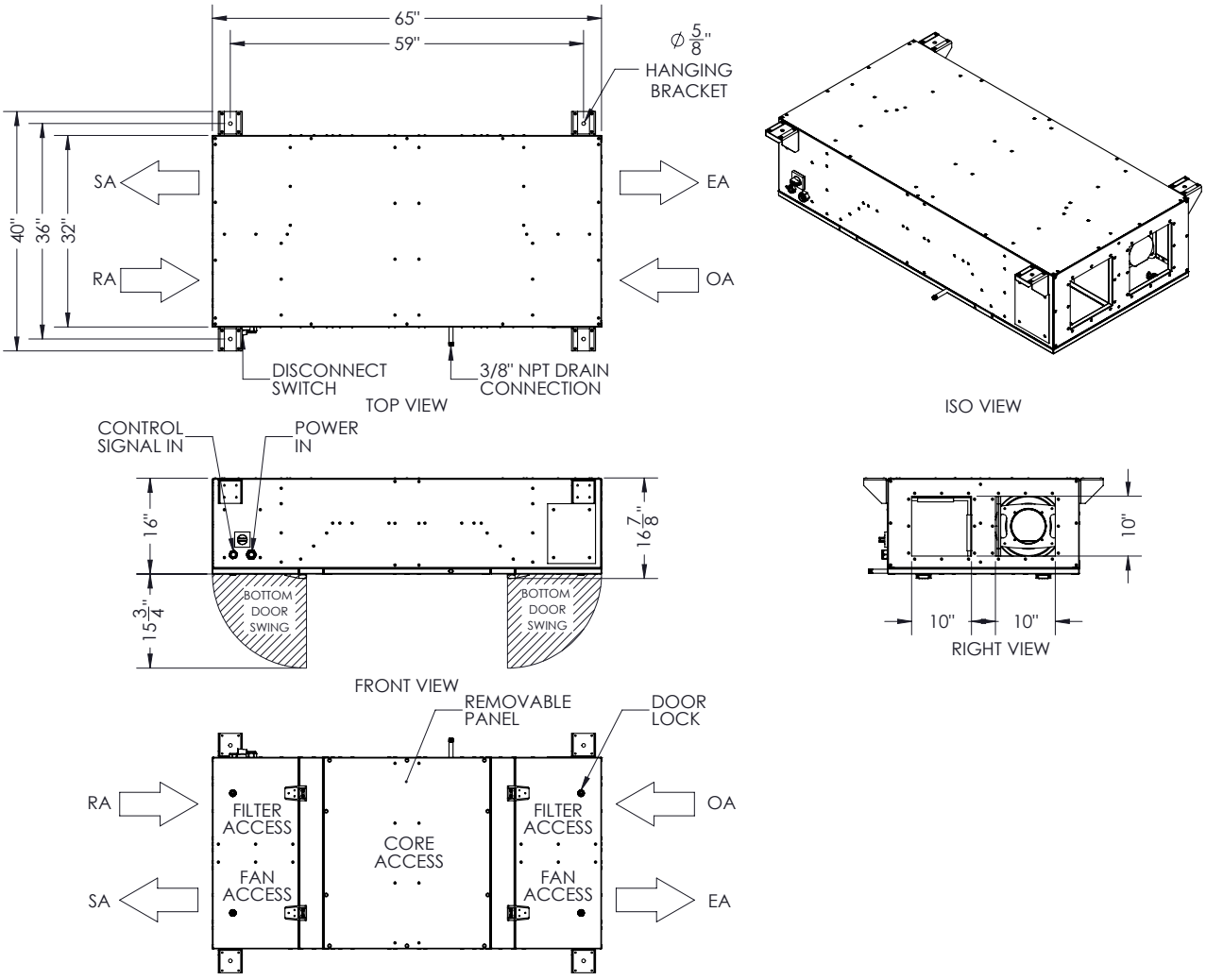
H08 - 800 CFM - 208-240 / ~1



H12 - 1200 CFM - 208-240 / 1~

3.6 Dimensions

H04



4.0 Operation

Fan Speed Control is attained via 0-10VDC Signal (by others) for each motor. The 0-10VDC wires are to be landed on the terminal block provided in the electrical enclosure of the unit.

5.0 Maintenance

5.1 Fans

Warning

Clean the fan's flow area:

- Wet cleaning under voltage may lead to an electric shock - danger to life!
- Do not use any aggressive, paint solvent cleaning agents when cleaning.
- Never use a high-pressure cleaner or spray jet to clean.
- Avoid letting water permeate into the motor and the electrical installation.
- After cleaning, the motor must be operated for 30 minutes at 80-100% of the max. rpm to let it dry out. This will allow any possibly penetrated water to evaporate.
- Ball-bearings service life

The fan or motor is maintenance-free due to the use of ball bearings with “lifetime lubrication”. Once the grease operating life F10h has been reached, it may be necessary to replace the bearing. The bearing service life expectation may change compared to the specified value, if operating conditions such as increased vibrations or shocks, increased or too low temperatures, humidity, dirt in the ball bearing or unfavorable control modes are present. A service life calculation for special applications can be provided on request.

Warning

During all work on fan in the hazardous area:

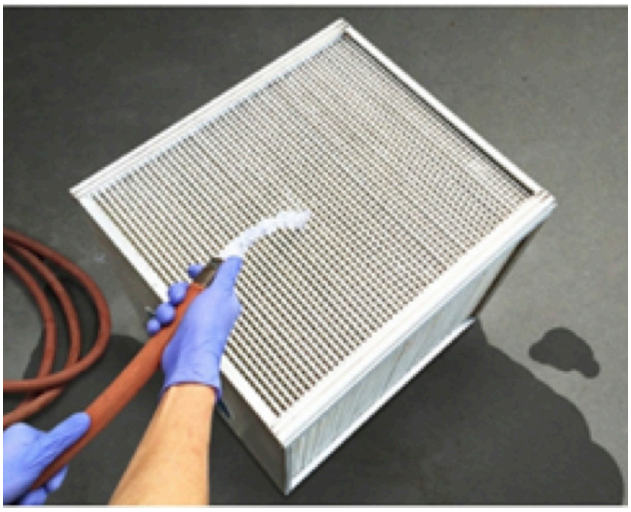
- Maintenance operation is only to be performed by trained service personnel.
- Observe the safety and labor regulations (DIN EN 50110, IEC 364).
- No maintenance work on running fan!
- Open the electrical circuit and secure against being switched back on.
- Verify the absence of voltage.
- The rotor must be standing still!

Always wear the appropriate PPE (safety shoes and gloves for handling).

Regular inspection, if necessary with cleaning, is required to prevent imbalance due to ingestion of particles.

5.2 Counter-flow Core Cleaning

Moderate dust build up can be washed away with warm tap water (max. 60°C/140°F) or vacuumed (if the core cannot be removed to be cleaned with water). With heavier buildup, a soft detergent can be used. We recommend a commercially available detergent for delicate clothing.



Core Cleaning Instructions

1. Remove the bottom panel.
2. Remove the core from the middle of the unit.
3. Slide the remaining cores over to the middle of the unit to remove.

5.3 Filters

If there are no dirty filter alarm monitoring systems in place by a third-party BAS/BMS, it is recommended that both RA and OA filters be replaced every 3-6 months.

Filter Sizing

Size	Airstream	Thickness (in)	Size (in)	MERV Rating
H04	RA	2	12 x 12	8
H04	OA	2	12 x 12	13
H08	RA	2	16 x 16	8
H08	OA	2	16 x 16	13
H12	RA	2	25 x 25	8
H12	OA	2	25 x 25	13

5.4 Fuse Replacement

Size	240/60/1	208/60/1	Quantity
H04	3/4, 15A	3/4, 15A	1
H08	3/4, 15A	3/4, 15A	1
H12	3/4, 15A	3/4, 15A	1