OXYGEN8

VENTUM LITE

Operations & Maintenance

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1.0 GENERAL INFORMATION

This manual includes important instructions for safe connection of the Energy Recovery Ventilator (ERV). Before connecting the unit, please read carefully and follow the instructions.

The manufacturer reserves the right to make changes, including changes in the technical documentation, without previous 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.

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

Warning: This sign indicates a situation that may result in equipment or property damage accidents.

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

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_X
XXX_XX_XX_X

VENTUM_H04_HRV_S_I_R_S1_DP_NA_20
81_13_08_A

Sales Drawings:
VENTUM_H04_HRV_S_I_R_S1_DP_NA_A

Size
H04

Heat Exchanger
Latent - ERV
Sensible - HRV

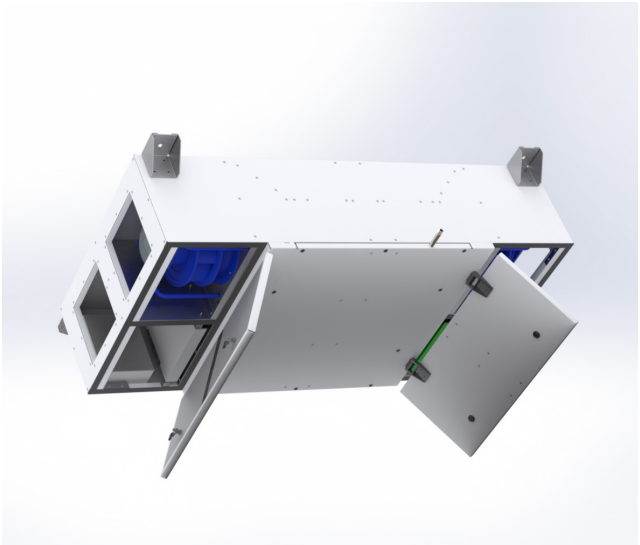
Location
Indoor - I

Standard/Bypass
Standard - S

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
Unit - 2 years from shipment date

Mounting
Ceiling mount only

Options

Shut Off Damper
Outdoor and exhaust air dampers (unit or duct mounted)

Frost Control
Electric Preheat

Warranty
Extended parts warranty - 5 years from shipment date.

3.3 General Electrical

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

MCA: Minimum circuit ampacity
MROPD: Mazimum rating of over-current protective device
RFS: Recommended Fuse Size

3.4 Electrical - DOAS/ERV and Single Point Power Electric Heater

H04

NOMINAL VOLTAGE	AIR-FLOW [CFM]	HEATER CAPACITY [KW]	HEATER FLA [KW]	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

3.5 Core, Fan and Air Performance

ERV Performance

MODEL	AIRFLOW (CFM)	SRE (%)	LRE (%)	TRE (%)
H04	450	75.7	63.3	68.0

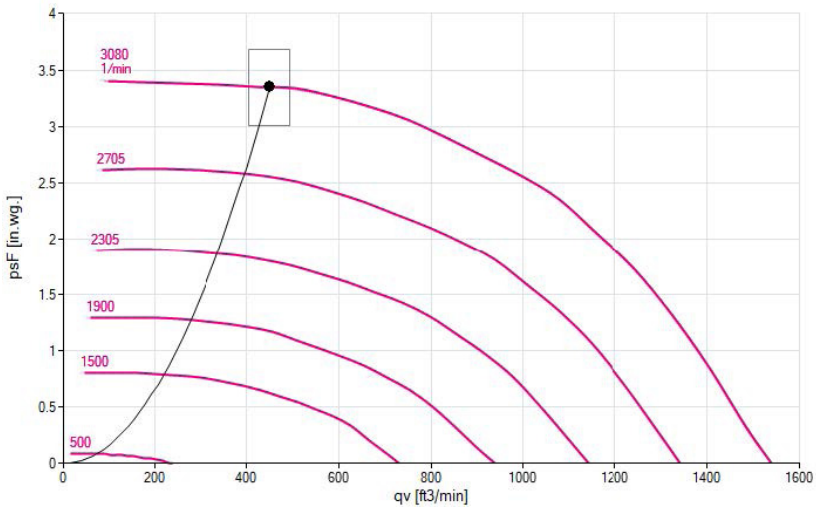
*Coming soon

HRV Performance

MODEL	AIRFLOW (CFM)	SRE (%)
H04	450	82.5

*Model Sizes coming soon

Air Performance



H04 - 450 CFM - 208-240 /1~

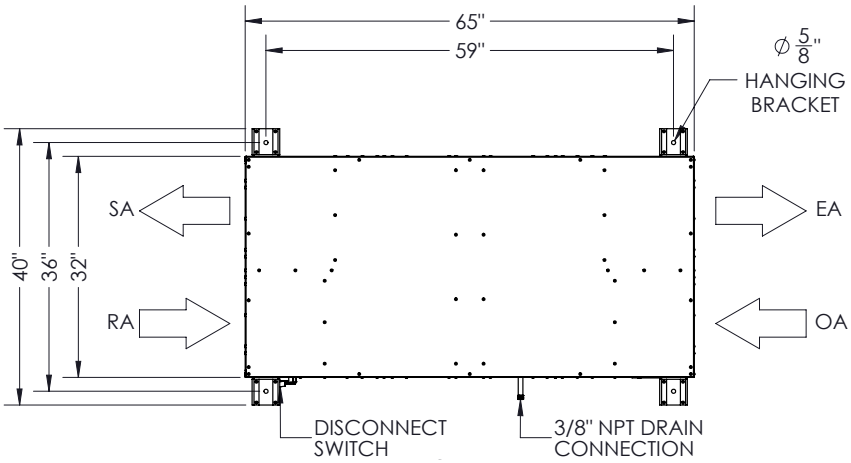
3.6 Dimensions

SA: Supply Air

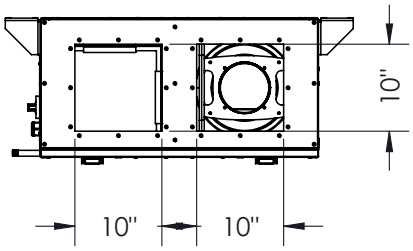
RA: Return Air

OA: Outdoor Air

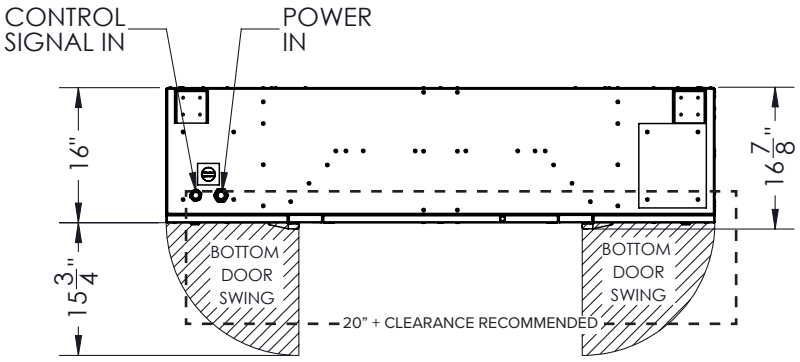
EA: Exhaust Air



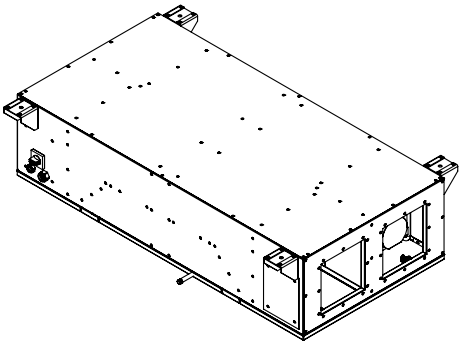
TOP VIEW



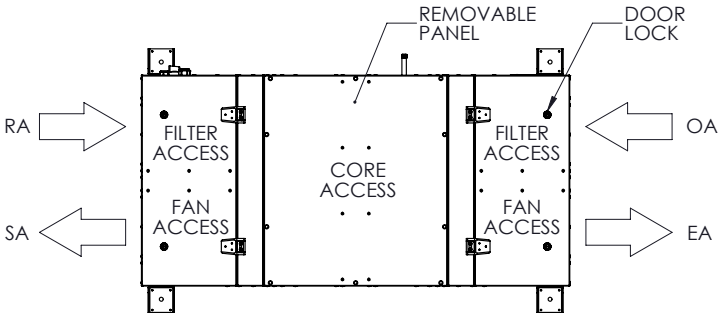
RIGHT VIEW



FRONT VIEW



ISO VIEW



BOTTOM VIEW

Note: 36” of clearance must be maintained perpendicular to the electrical box as per the national electric code (NEC). Unit dimensions are shown in inches. Overall unit dimensions are subject to change without notice.

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

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.

Danger:
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 solventcleaning 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

5.1 Fans

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.

5.2 Counter-flow Core Cleaning

We recommend washing our exchanger at least once per year, using tap water. If the exchanger becomes heavily soiled, a mild detergent such as Dawn®, Palmolive® or equivalent dish soap may be used. While cleaning other adjacent components in the HVAC system, it is possible for our exchanger to come in contact with harsher detergents. The following is a list of coil cleaners and all-purpose cleaners that have been tested with our exchangers and their compatibility. Generally, contact with any coil cleaning product is not recommended and specifically hydroxide-based cleaners should be avoided. If contact does occur, our exchanger should be rinsed immediately as it may void the warranty.

It is recommended to vacuum the core faces and blow out cores with low-pressure air once per year or as necessary and washing of the cores once every 5 years or as required.

CLEANER	RECOMMENDATION
VIPER EXPANDING FOAM	OK
CALSPRAY-NU-BRITE	AVOID CONTACT
CALSPRAY-EVAP FOAM	OK
HD CALCLEAN 1:40	OK
HD CALCLEAN 1:5	AVOID CONTACT
FANTASTIK W/ BLEACH	AVOID CONTACT
FANTASTIK ORIGINAL	AVOID CONTACT

Core Cleaning Instructions

1. Obtain access to a source of regular tap water. Do not use a high-pressure water source (pressure washer).

2. Remove our exchanger from the system if possible, to facilitate access to all exchanger faces, otherwise wash in place. Ensure adequate drainage is available for waste water.

3. ONLY if the exchanger is heavily soiled, prepare a solution of less than 1:100 parts water to dish soap. Otherwise, clean water is sufficient.

4. Orient the plates vertically for drainage and pour solution (or clean water) through our exchanger, both supply and exhaust paths, ensuring exposure of all layers.

5. Thoroughly rinse with clean tap water if a soapy solution was used until no more bubbles appear in the exiting water.

6. Allow our exchanger to dry (with plates still oriented vertically) until there is no more water\dripping out, then return to service.

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

5.4 Fuse Replacement

SIZE	240/60/1	208/60/1	QUANTITY
H04	3/4, 15A	3/4, 15A	1