

O X Y G E N 8

VENTUM LITE

Installation, Operation, & Maintenance Manual

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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 a potentially 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.



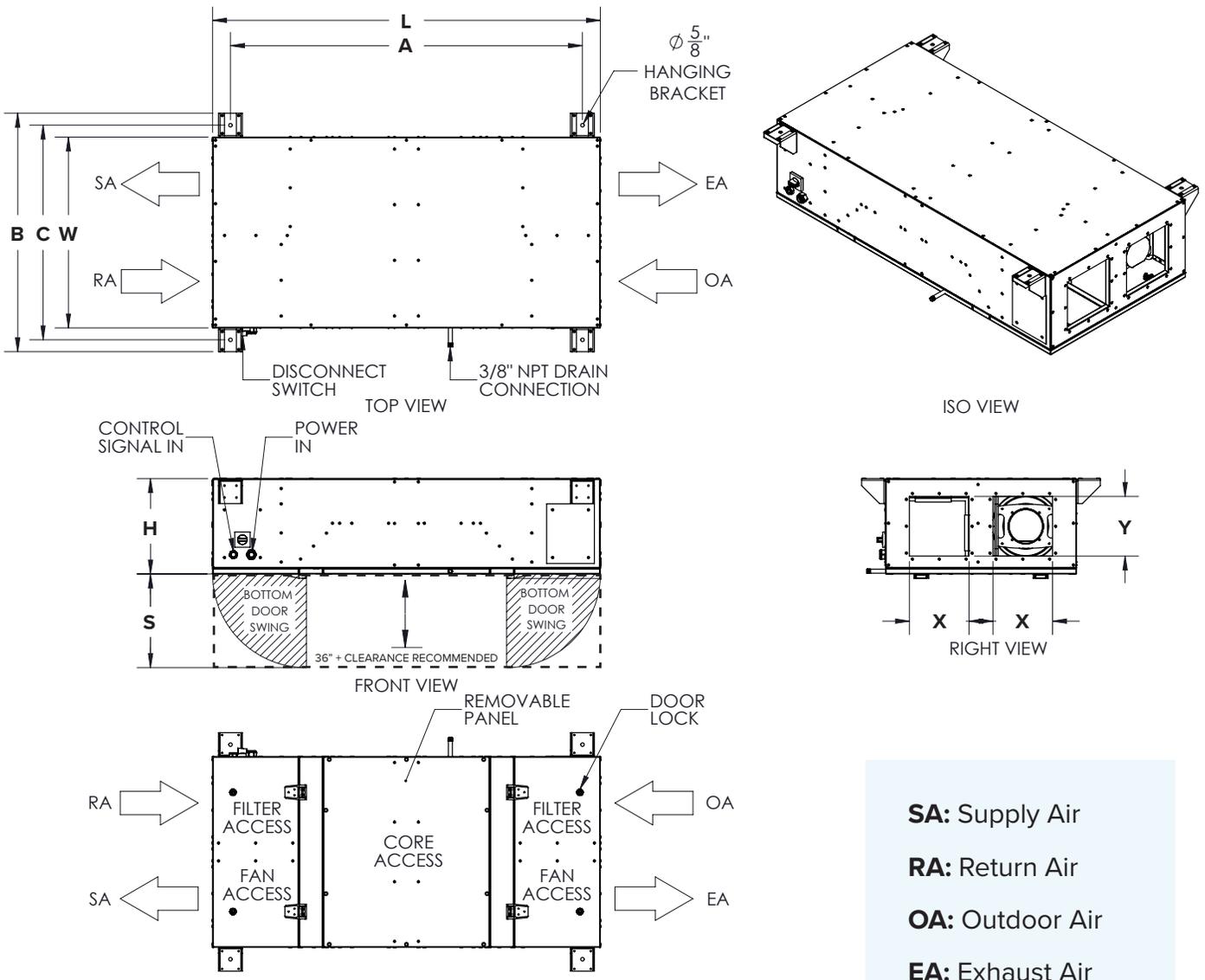
Danger: This sign indicates a potentially hazardous situation, which could result in death or serious injury if not avoided.

2.0 UNIT SPECIFICATIONS

2.1 Dimensions

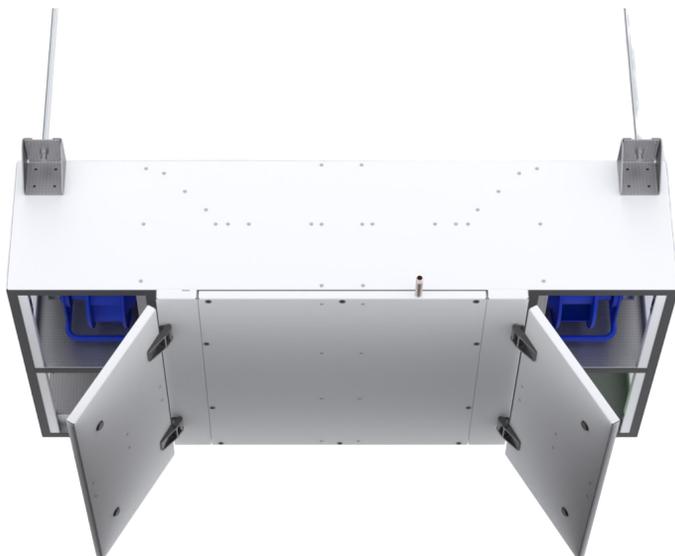
Model	Cabinet Dimensions			Mounting Dimensions			Clearance	Duct Dims	
	L	W	H	A	B	C	S	X	Y
H04	65	32	16	59	40	36	15 3/4	10	10
H08	72	47	18	66	55	51	17 3/4	15	12
H12	72	62	18	66	70	66	17 3/4	24	12

**All dimensions are in inches.*

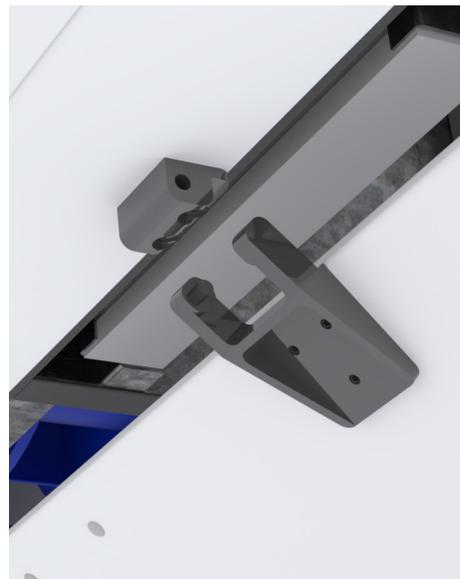


Note: 36" of clearance must be maintained perpendicular to the electrical box as per the national electric code (NEC). Unit dimensions are shown in inches. Overall unit dimensions are subject to change without notice

2.2 Access Requirements



Ceiling-mounted unit with doors open



Door with removed hinge pin

Access the fan and filter through the tool access bottom swing doors. Access the electrical enclosure through the RA filter section. Access the core by removing the bottom panel socked screws.

2.3 Lifting Requirements

Ventum Lite units can be lifted by mounting angles or under the removable bottom panel. Necessary care must be taken lifting from bottom panel to avoid scratching of external surfaces.

2.4 Unit and Component Weights.

Model	Fan lbs.	Core lbs.	Total Weight lbs.
H04	27	13	325
H08	30	22	450
H12	43	22	540

3.0 INSTALLATION

3.1 Unwrapping the Product

When removing the shrink wrap, be cautious with knives and sharp tools to prevent scratching the paint. The Distech ECY-STAT wall controller, if selected, will be found in the electrical box or fan compartment. It is secured there for transport and to easily find it on the job site. Pallets are two-way entry; therefore, fork extenders or 8-foot forks must be used when moving a palletized unit.

Units are palletized and protected by a skeletal crate of heat-treated wood. These crates are constructed using nails; therefore, to unpack the unit, carefully use a crowbar or reciprocating saw to detach each panel. Additional bracing used to prevent the unit from sliding on the pallet must also be removed.

Once external packaging is removed, carefully remove the stretch wrap and cardboard covering the unit. It is better to use scissors rather than a knife to avoid scratching the unit.

External Pipes are protected by wood boxes that are secured with Poly Strapping and must also be removed. If a unit has a baserail, it will be screwed down directly to the pallet.



Packaged Unit

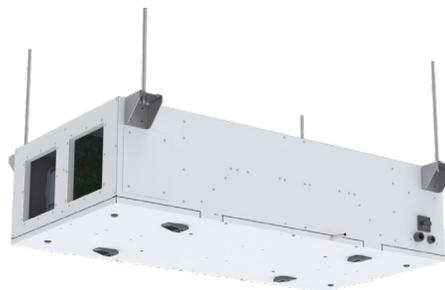


External Pipes Protected by Wood Boxes
(applies to condensate drain only)

3.2 Mounting

Ventum Lite is available exclusively for ceiling-hung horizontal applications. Units come standard with factory mounted brackets.

The hole in the outer brackets are designed for a ½” threaded rod to hang the units by.



4.0 ELECTRICAL

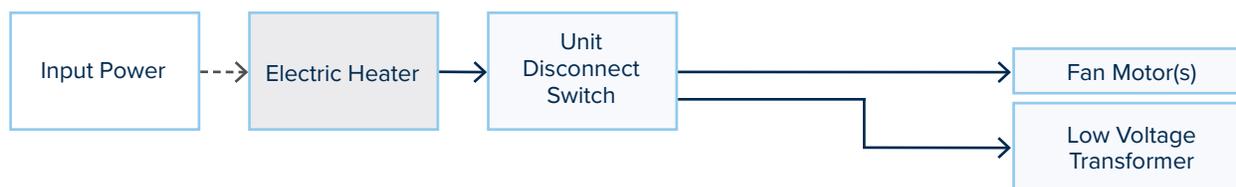
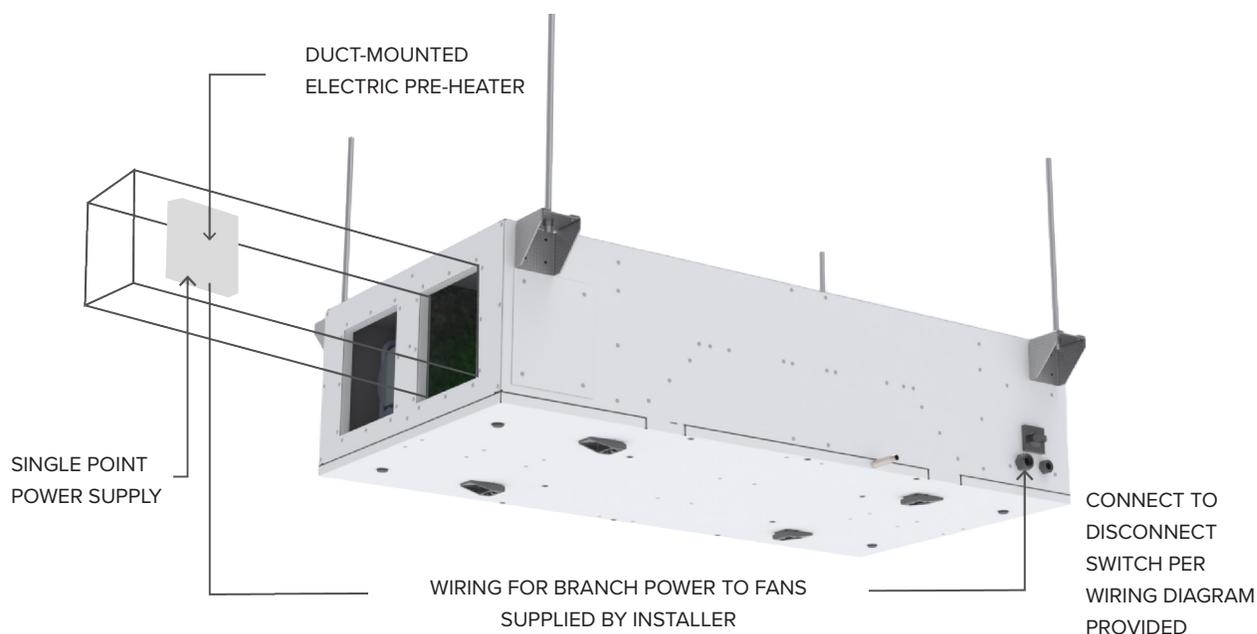
4.1 General Electrical

Unit Size	Nominal Voltage	Phase	Hz	Motor (kW)	Single Fan Input (A)	Total Fan Qty	Total FLA	MCA	MOP	SCCR
H04	208/240	1	60	0.53	3.50	2	7.29	7.88	15A	kAIC rms, symmetrical @600V MAX:5
H08	208/240	1	60	0.52	2.50	2	5.29	5.63	15A	
H12	208/240	1	60	0.70	3.10	2	7.29	7.78	15A	

*All Ventum Lite units have a short circuit current rating of 5 kAIC

4.2 Single Circuit Power H/ERV + Electric Heater

Optional electric pre-heaters come in standard duct-mounted sizes and capacities where the fan power comes off as a branch circuit from this single circuit power source.



The following table provides example power supply ratings for single-circuit power configurations for Ventum Lite with an electric duct heater where the main power goes to the electric heater, and the H/ERV unit fan power is supplied as a branch circuit from the electric heater.

Unit	Electric Heater		Power Supply to Heater			Fan Motor Power		
	Heat Capacity [kW]	Heater FLA [A]	Voltage & Phases	MCA [A]	MOP [A]	Motor Output (kW)	Fan Qty.	H/ERV FLA [A]
H04	1	4.81	208/1/60	14.76	15	0.53	2	7.29
	2	9.62		20.78	25			
	4	19.24		32.80	35			
	6	28.86		44.83	45			
	8	38.48		48.10	50			
	10	48.10		68.88	70			
	1	4.17	240/1/60	13.96	15	0.53	2	7.29
	2	8.34		19.18	20			
	4	16.68		29.60	30			
	6	25.02		40.03	45			
8	33.36	41.70		45				
10	41.70	60.88		70				
H08	2	9.62	208/1/60	18.28	20	0.52	2	5.29
	4	19.24		30.30	35			
	7	33.67		48.34	50			
	10	48.10		66.38	70			
	14	67.34		84.18	90			
	18	86.58		114.48	125			
	2	8.34	240/1/60	16.68	20	0.52	2	5.29
	4	16.68		27.10	30			
	7	29.19		42.74	45			
	10	41.70		58.38	60			
14	58.38	72.98		80				
18	75.06	100.08		110				
H12	3	14.43	208/1/60	25.79	30	0.70	2	7.29
	6	28.26		48.83	45			
	10	48.10		67.88	70			
	15	72.15		97.94	100			
	21	101.01		126.26	150			
	27	129.87		170.09	175			
	3	12.51	240/1/60	23.39	25	0.70	2	7.29
	6	25.02		39.03	40			
	10	41.70		59.88	60			
	15	62.55		85.94	90			
21	87.57	109.46		110				
27	112.59	148.49		150				

For all models: SCCR kAIC rms, Symmetrical @600V MAX:5

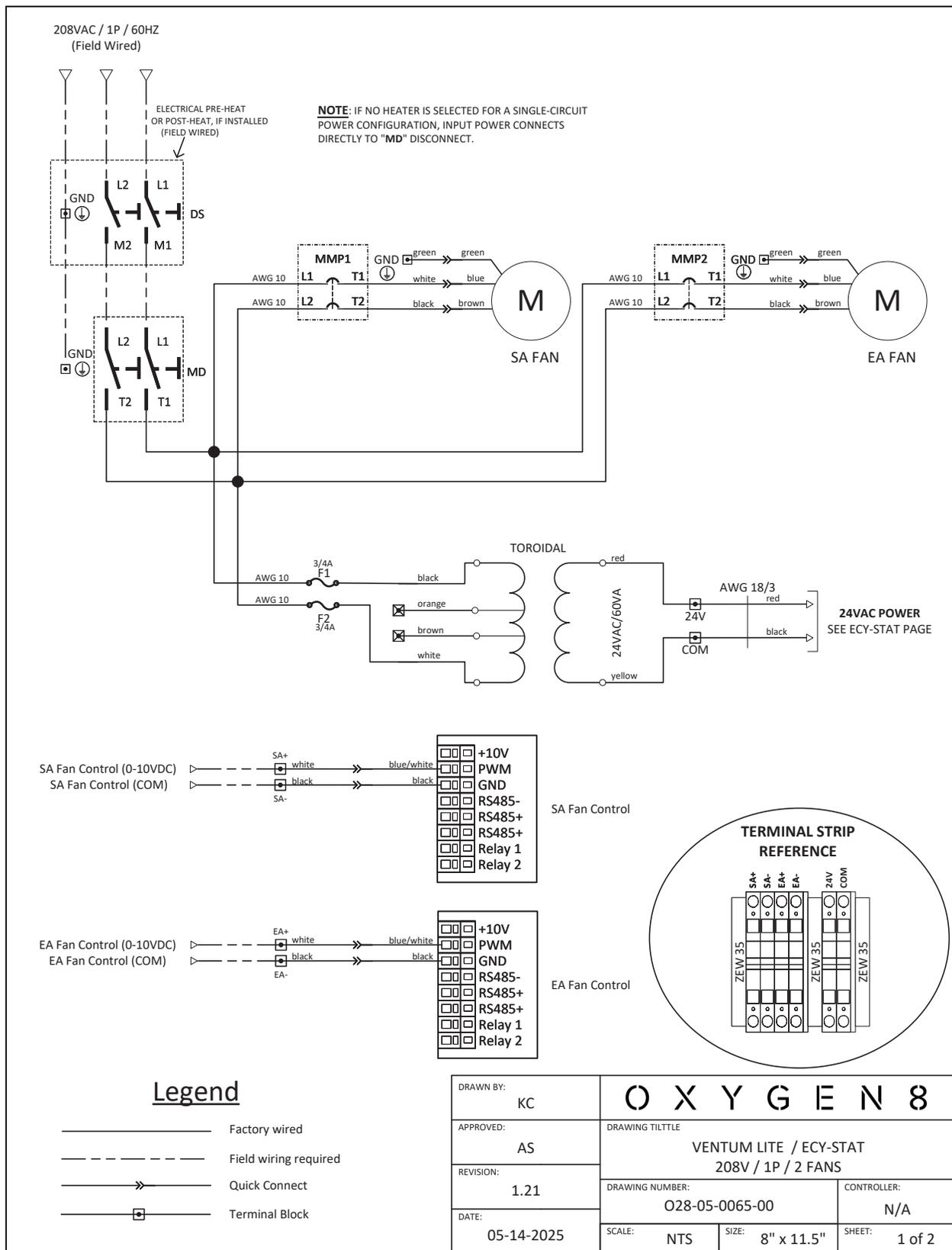
MCA Minimum Circuit Ampacity (A); Used to size wiring

MOP Maximum Overcurrent Protection Device (A); Used to size circuit breaker or fuse

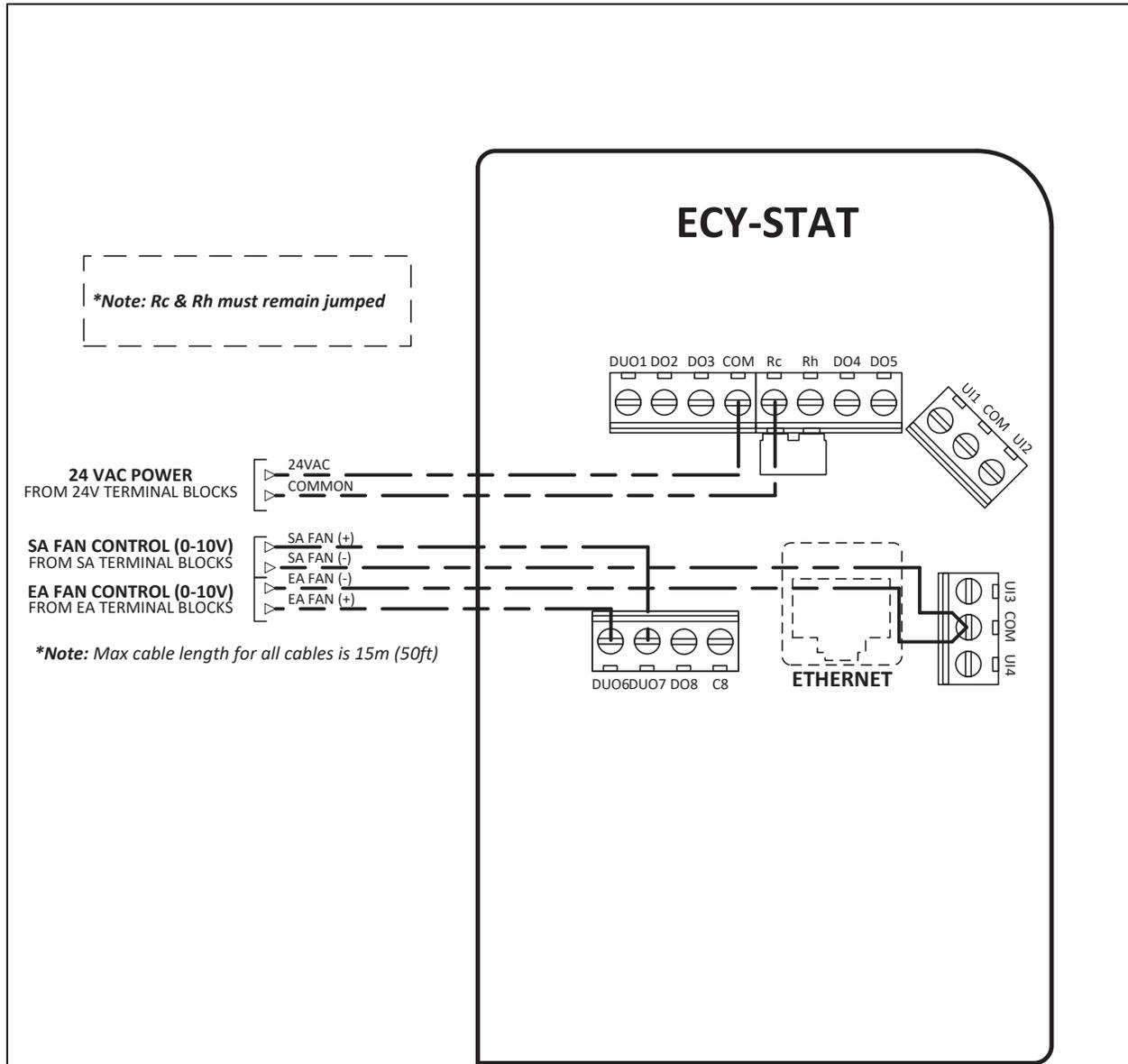
SCCR Short-Circuit Current Rating

Please refer to the project submittal for the precise project-specific electrical data. This table is only to serve as a general reference.

4.3 Ventum Lite ECY-STAT 208V/1P/2 FANS



4.4 Ventum Lite ECY-STAT 208V/1P/2 FANS



Legend

- Factory wired
- - - - - Field wiring required
- >—— Quick Connect
- Terminal Block

DRAWN BY: KC	O X Y G E N 8		
APPROVED: AS	DRAWING TITLE VENTUM LITE / ECY-STAT 208V / 1P / 2 FANS		
REVISION: 1.21	DRAWING NUMBER: O28-05-0065-00	CONTROLLER: N/A	
DATE: 04-21-2025	SCALE: NTS	SIZE: 8" x 11.5"	SHEET: 2 of 2

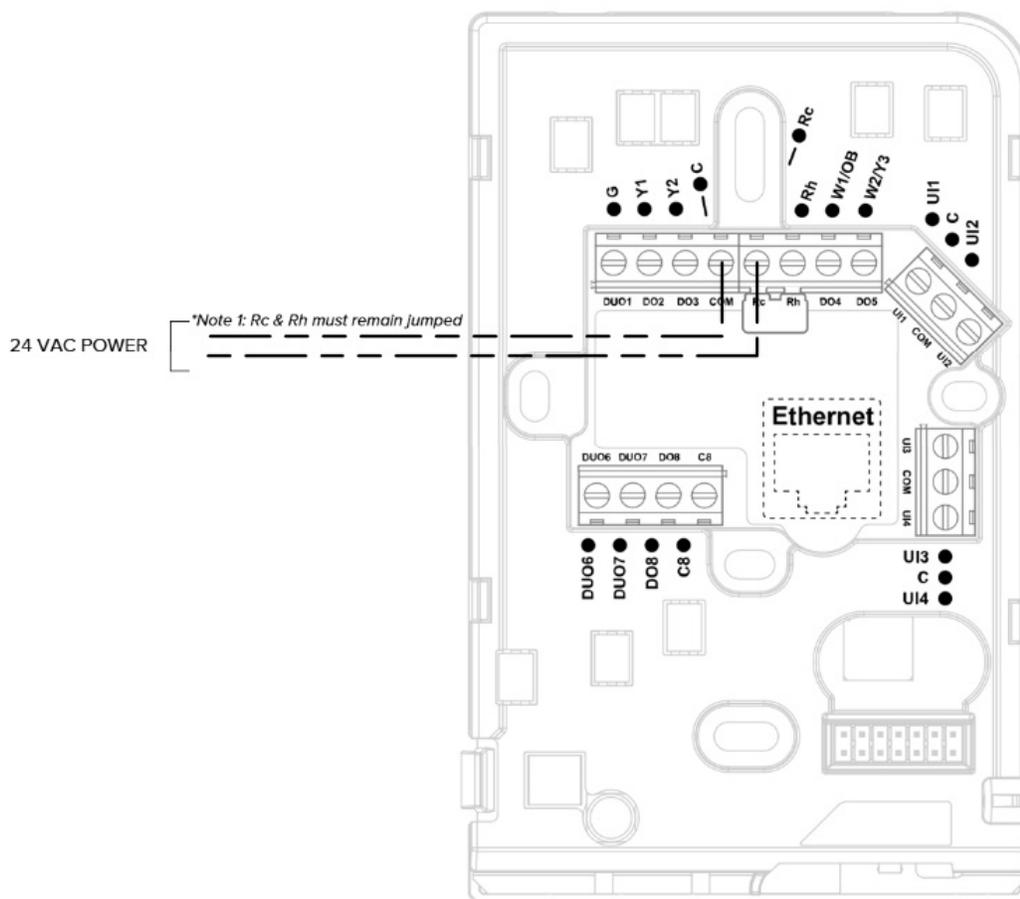
4.5 ECY-STAT Installation

This document defines everything that is needed to know about the ECY-STAT in Ventum Lite.

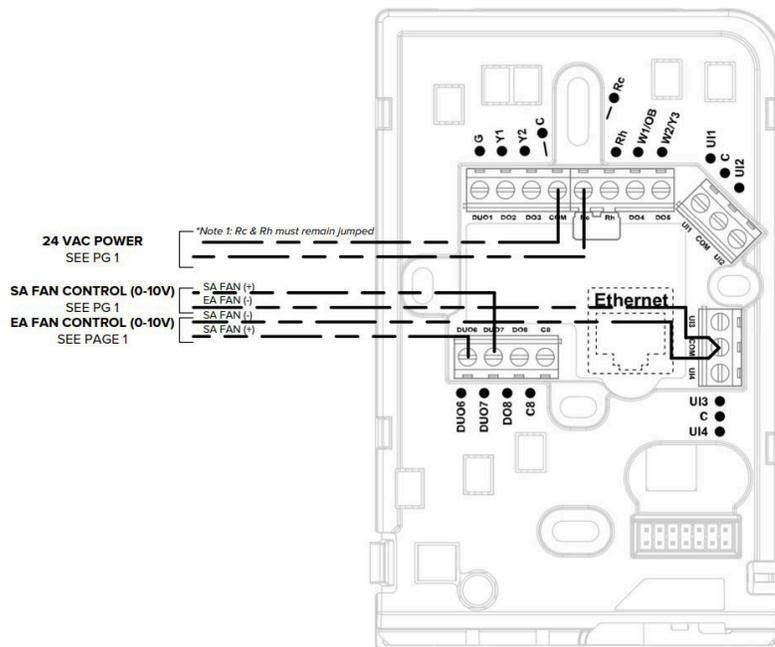
Tools & Supplies required for installation & startup:

- Flat head screwdriver
- Wire Strippers
- AWG 18 Wire
- 1 x 24 VAC Power Source
- PC

How to power the ECY-STAT:

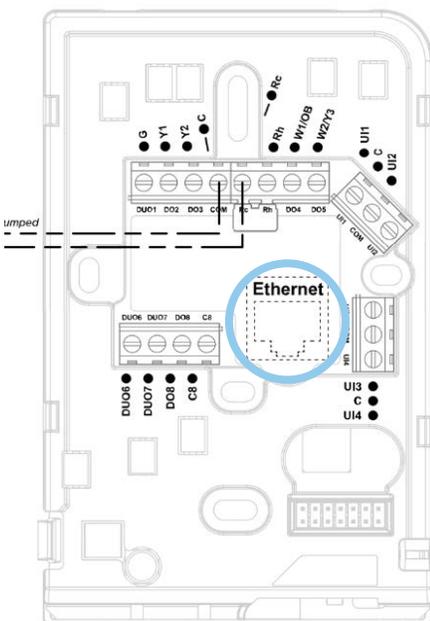


How to connect Ventum Lite Fans:



Web Interface Access:

- Connect laptop to the controller's Ethernet port with an Ethernet cable
- Open a web browser (Chrome recommended) and type: <https://192.168.1.11>
- Click "Advanced" and "Proceed to 192.168.1.11..."



D. User Login

(set by EOL):

Username: VentumL

Password: 2345#OxygenL

Admin Username: admin

Admin Password: 2345#Oxygen

You will be presented with the Home Screen.
Call Oxygen8 if you require any assistance.

West Coast Team: 437-219-0088

East Coast Team: 416-317-4832

The screenshot shows the ECLYPSE™ login page. It features the following elements:

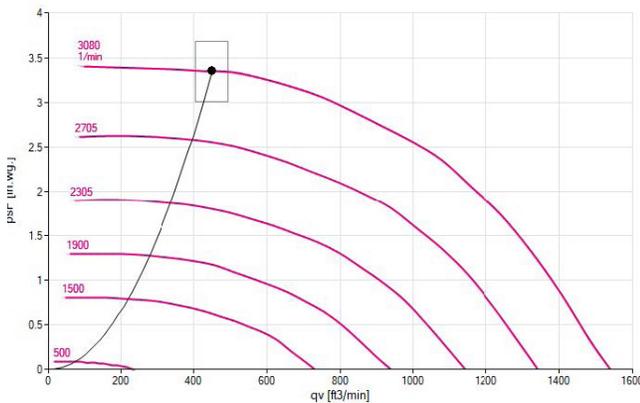
- Header:** ECLYPSE™ logo.
- Text:** "Log in to your account"
- Username Field:** Labeled "Username" with the text "VentumL" entered.
- Password Field:** Labeled "Password" with a masked password "*****".
- Log In Button:** A blue button with the text "Log In".

5.0 OPERATION

5.1 General Electrical

Model	Unit Dimensions			Capacity Airflow (CFM)	Performance at Max. Airflow				
	Length (in)	Width (in)	Height (in)		ERV			HRV	
				SRE (%)	LRE (%)	TRE (%)	SRE (%)	TRE (%)	
H04	65	32	16	150 - 450	75.7	63.3	68.0	82.5	55.8
H08	72	47	18	300 - 800	77.1	66.2	70.4	82.1	55.0
H12	72	62	18	500 - 1200	75.8	63.9	68.5	81.4	55.0

Air Performance



H04 - 450 CFM - 208-240 1~

Fan curves for H08 and H12 models available upon request. Please reach out to the Oxygen8 Applications team.

5.2 Controls by others

As a standard offering, Ventum Lite comes with a 24V power output for the Distech ECY-STAT wall-mounted timeclock.

If the ECY-STAT is not required, 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.

5.3 Controls Information

Speed Control – Can be set using the ECY-STAT touchscreen. Can also be overwritten using the Web HMI.

- Auto – Unit speed will depend on the schedule set on the web HMI.
- Stop – Unit fans will stop.
- Low Speed – Fans will run at the percentage set for low speed on the web HMI. (Default (30%).
- Mid Speed – Fans will run at the percentage set for mid speed on the web HMI. (Default (60%).
- High Speed – Fans will run at the percentage set for high speed on the web HMI. (Default (90%).

Hand mode:

- Fans can go into hand mode by clicking on them in the web HMI.
- Fans Speed % on hand mode can also be changed.
- When speeding up, the fans will slowly ramp up. When asked to stop or slow down, the fans will slow down immediately.

Schedule:

- Schedule can only be programmed through the web HMI.
- If no schedule has been set, the unit is defaulted to stop.
- 4 Options: Stop, Low Speed, Mid Speed, High Speed

Readings:

- Temperature – The ECY-STAT has a temperature reading installed within it and can be read using both the touchscreen and the web HMI.
- Humidity (%) – The ECY-STAT has a humidity sensor installed within it and can be read using both the touchscreen and the web HMI.

For the Ventum Lite to be in Auto mode and follow the schedule, through the ECY-Stat click on the “A” on the fan page as shown in Figure 1. To change the fan speed mode through Stop – High, select the 0 – 3 as shown in Figure 1. 0 being stop and 3 being high

Reference Pictures of the ECY-Stat:

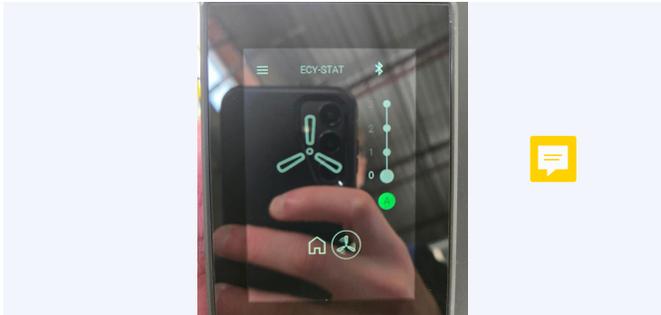


Figure 1 - Fan Mode Set on Auto on ECY-Stat

Reference Pictures of the Web HMI:

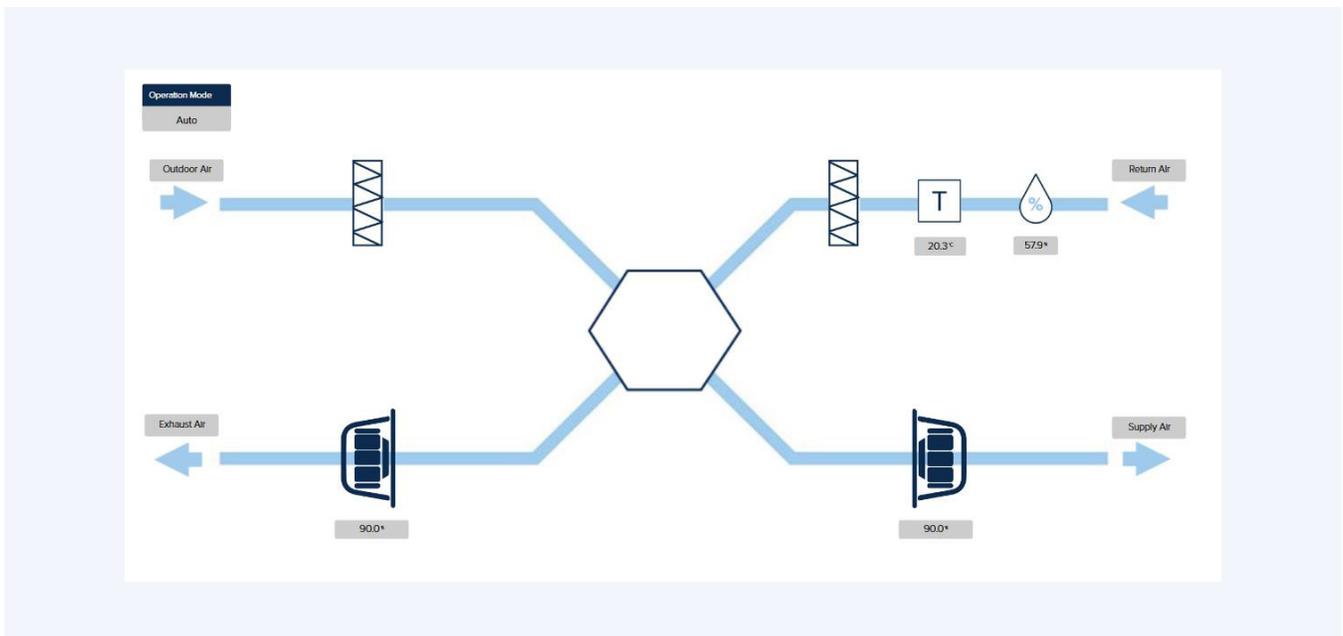


Figure 2 - Home Ventum Lite Screen

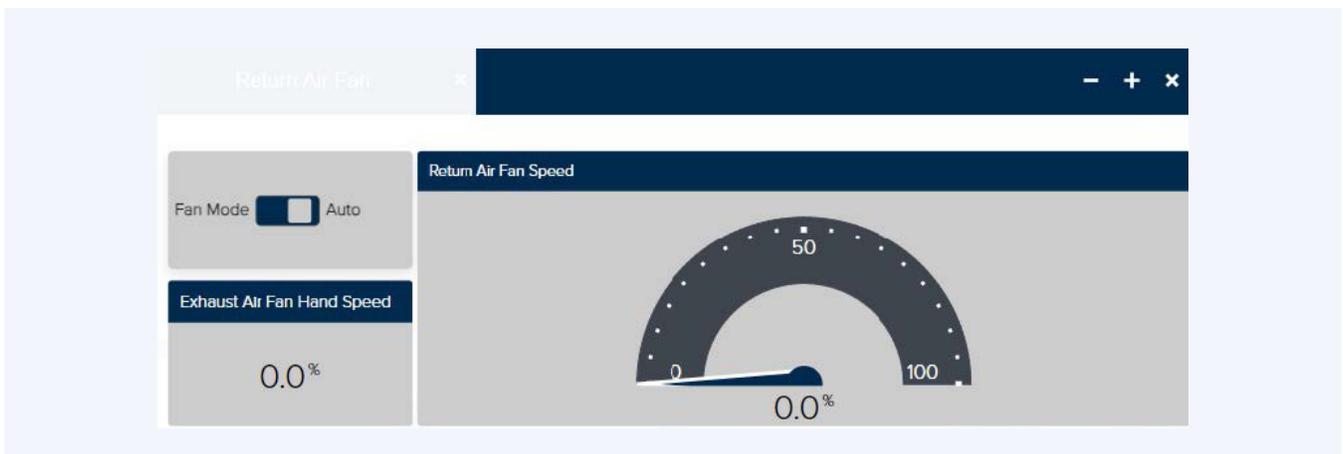


Figure 3 - Fan Hand Mode Configuration

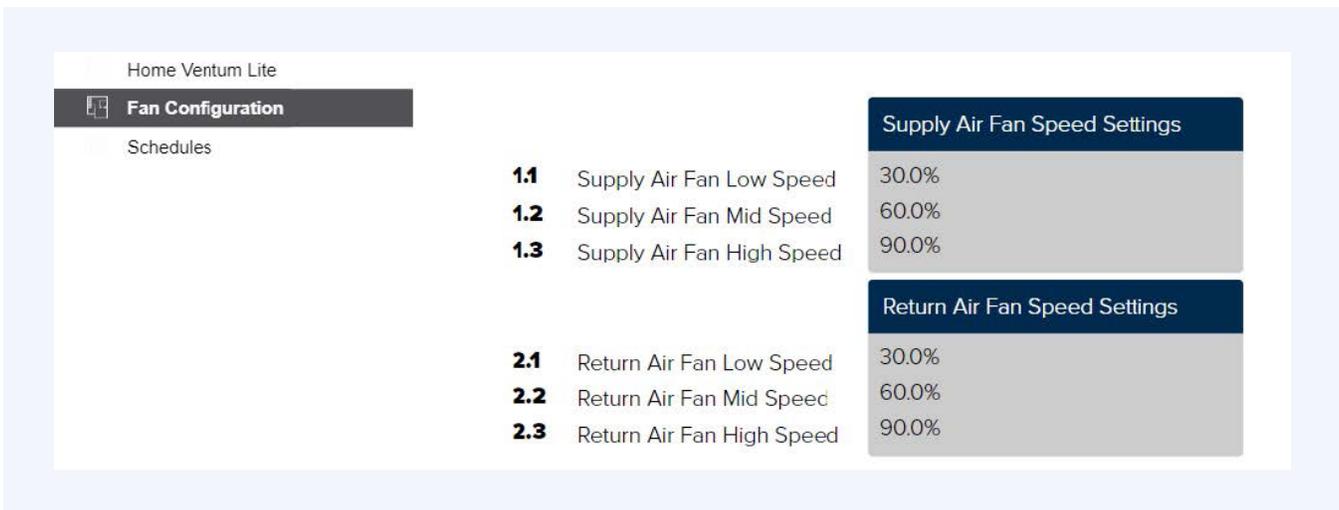


Figure 4 - Fan Configuration Tab

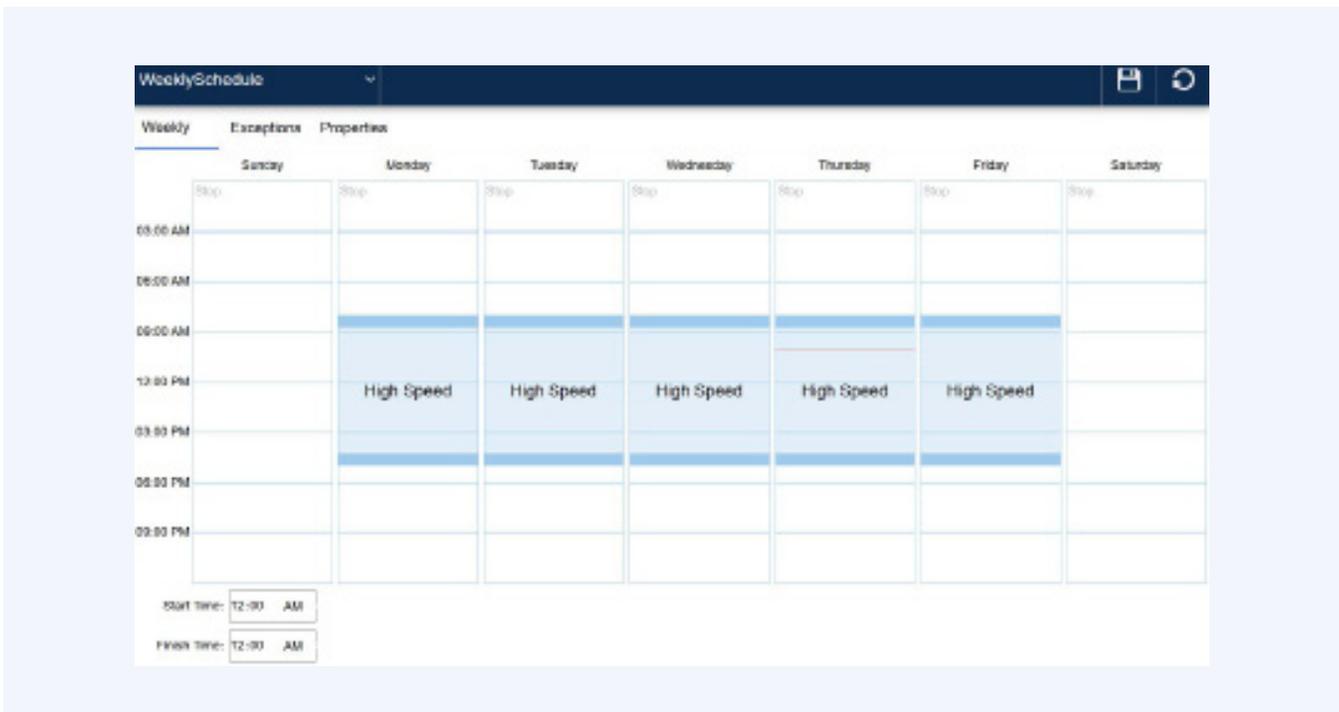


Figure 5 - Schedule Tab 8:00am – 5:00pm, Monday - Friday

6.0 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

6.1 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.

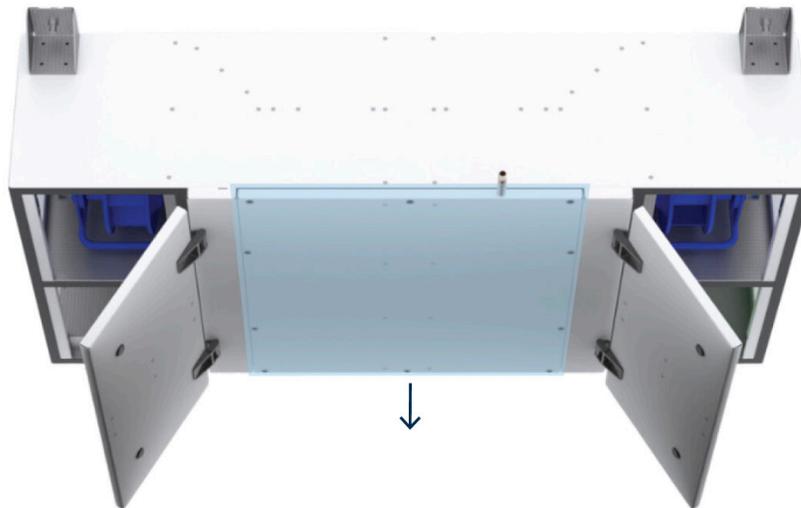
6.2 Core Removal

To remove the counterflow core(s) from the unit, first remove the highlighted panel with integrated drain pan from the unit. Fasteners around the perimeter of the panel will need to be unscrewed.

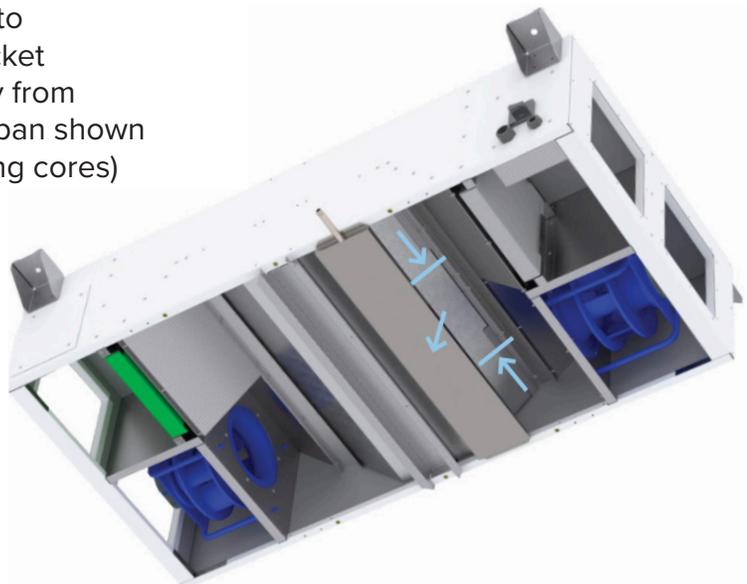


Caution: Heavy objects overhead will become loose after removed from the unit. Take care not to drop them on anyone or any fragile surroundings. Power to the unit must be disconnected prior to core removal.

1. First remove the highlighted panel with integrated drain pan from the unit. Fasteners around the perimeter of the panel will need to be unscrewed.



2. Remove cores by sliding them into the center between the corebracket notches and lowering them away from the unit, as shown below. (Drain pan shown will not be present when removing cores)



6.3 Counter-flow Core Cleaning

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.

We recommend washing 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. 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.

The following is a list of coil cleaners and all-purpose cleaners that have been tested with our exchangers and their compatibility.

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 Washing 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.

Note: Crossflow core shown for demonstration only; Counterflow core will be included in Ventum Lite units. Only Nova uses a crossflow core.

6.4 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

Model	Size (in)	Thickness (in)	MERV Rating	
			Return Airstream	Supply Airstream
H04	12 x 12	2	8	13
H08	16 x 16	2	8	13
H12	25 x 16	2	8	13

6.5 Fuse Replacement

The table on the right summarizes the low voltage transformer protection and current based on unit voltage and phases.

24V Transformer Ratings			
Fan power [V/Ph]	Fuse Size	FLA	Qty.
208/1	3/4	0.29	2
240/1	3/4	0.29	2