

City of Santa Rosa

JUN 18 2018

Planning & Economic
Development Department

ODOR CONTROL PLAN

WOLF HOUSE PROPERTIES

443 DUTTON, SANTA ROSA



PROJECT INFORMATION

a.	APN	125-111-039-000
b.	Physical Address	443 Dutton, Santa Rosa, CA 95401
c.	Mailing Address	443 Dutton, Santa Rosa, CA 95401
d.	District	5
e.	Neighborhood	Roseland
f.	Zoning	CG (Commercial General)
g.	Facility Type	Approximately 2,050 Square Foot Concrete Tilt Up
h.	Permit Type	Cannabis Retail
i.	Canopy	N/A – No cultivation
j.	Business Entity Name	Wolf House Properties
k.	Facility Hours of Operation	9:00 AM TO 9:00 PM
l.	Emergency Contact Information	Project Manager: Johnny Nolan/ (415) 341-3527

1 INTRODUCTION

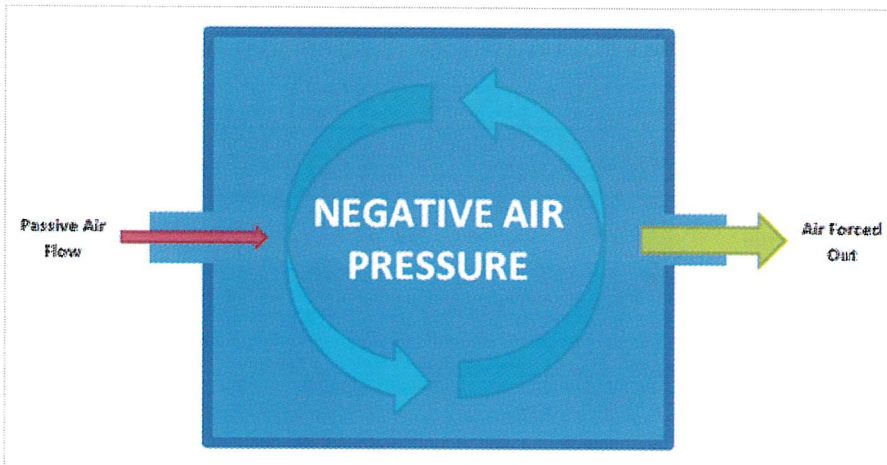
The locations of possible odor emitting activities include the secured storage room, rest rooms, and sales floor.

The primary method to combat unwanted smells leaving a cannabis retail facility is through negative air pressure. With negative air pressure we can control the flow of air movement in our dispensary facility. All air entering the facility will pass through a MERV 14 filter system and all air leaving the facility will pass through a MERV 13 and carbon filter system.

From the odor control plan, attached, it can be seen that most areas of the facility are under negative pressure (crosshatched). The main retail space is under negative pressure so that door opening creates an inward air flow.

2 PRESSURIZATION

In a negative air pressure room, the air pressure in the room is lower than the pressure outside the room. Generally this is achieved by extracting and filtering air out of the room. In most situations, air enters through filters near the floor and then is sucked out through filters from the room at ceiling level.



To establish negative pressure in a room that has a normally functioning ventilation system, the room supply and exhaust air flows are first balanced to achieve an exhaust flow of either 10% or 50 cubic feet per minute (cfm) greater than the supply (whichever is greatest).

Negative air pressure rooms are also used in industries that manufacture pharmaceutical products, do biochemical testing, and also in hospitals to quarantine contagious patients. Any air that flows out of the room has to first pass through a carbon filter, ensuring that no odor can escape.

See pressure control plan – Attachment 1.

3 CARBON FILTRATION

Air Box 2 Stealth Edition 800 CFM 6" Flanges

~~US\$ 365.95~~ Technical Specifications

The heavy-duty Air Box 2 will successfully eliminates odors for up to 18 months

Carbon filter should be changed often; please replace filters every 12 month (**all of them**) for better results

- Easy to install, easy to use, easy to maintain
- Adaptable to any duct/filtering system
- Replaceable high-flow carbon filters
- 100% premium virgin coconut charcoal
- 100% air tight, continuous worry-free operation
- 100% of the filter surface area is used
- For commercial or residential applications
- Made in the USA



Carbon filters eliminate the odor of cannabis.

4 ONA GEL DISPERSION SYSTEM

In addition to the primary odor control method above, we employ a secondary odor control system called Ona. Ona odor neutralizing products consist of a complex formulation representing a variety of chemical compounds offering different functionalities, both structural and chemical. The technology behind Ona was initiated over 25 years ago.

The scientist who invented Ona became fascinated when he observed that terpenes, when diffused into the environment, reduce odors and unwanted emissions. Inspired by this finding, future evidence showed that the odors were not just masked but permanently removed. The result was a set of specialized formulations that neutralized a wide spectrum of organic and inorganic odors - effectively, efficiently and permanently. Ona formulations have been scientifically engineered to be environmentally safe.

Ona is manufactured under strict quality controls to ensure a safe and non-toxic product. The components used to make Ona are generally recognized as safe and have been commonly used in the food and cosmetic Industries with a long history of safety.



Many years were spent developing a blend of ONA Liquid and various suspension elements to result in a product that has excellent dispersion qualities. The ONA odor neutralizing agents are released in a controlled manner so that every drop of this excellent product is fully optimized.

ONA industrial strength odor neutralizers are safe and environmentally friendly to use around people, pets and plants. Our essential oil-based technology consumes nearly all types of odor molecules. Other products mask odors, but ONA destroys virtually all types of odors naturally. Guaranteed!

Applications include: smoking rooms, kitchens, bathrooms, garbage storage, indoor gardens, workshops, offices, warehouses, aeration vents or anywhere odors are present.

Directions: Ona neutralizes odors by evaporating and contacting the odor molecules. Remove lid and place container in an area with good air flow. Increase odor control by pouring gel into a tray to increase evaporation. Regulate odor control by increasing or decreasing the amount of Ona exposed. For high odor areas, use a dispenser such as the: Breeze, Storm, Odor Stop, Carbon-Air or Hurricane.

The ONA Storm is ideal for neutralizing airborne odors in larger facilities such as schools, gymnasiums and office buildings. The ONA Storm, with its adjustable airflow control, evenly distributes ONA for areas up to 10,000 square feet (1,100 square meters). The ONA Storm is specifically designed to be used with ONA gel.

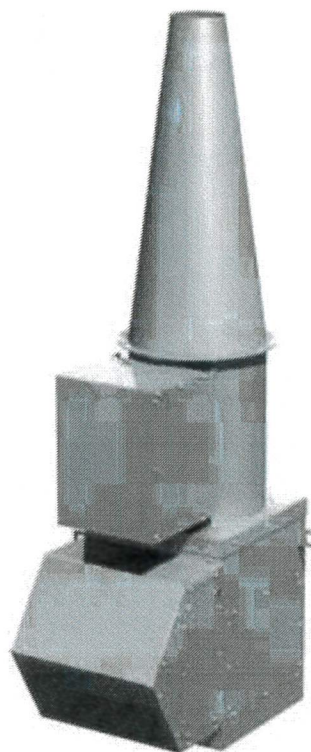
The ONA Storm is very practical as it can be set anywhere and has very low power requirements, maxing out at 90 watts.

225 CFM dispenser. Sits directly on a 5 gallon ONA gel container.

5 DISPERSION AND DILUTION

Exhaust fans (with carbon filtration) will be selected to provide high velocity discharge and mixing to further minimize the possibility of odors being detected locally:

Unit Size	Performance Range (cfm)		Nozzle Size Range	
	Minimum	Maximum	Minimum	Maximum
9	270	1,705	4	9
10	420	1,960	5	10
12	600	2,640	6	13
13	810	3,160	7	14
16	1,050	7,080	8	18
18	1,320	7,880	9	19
22	1,650	10,560	10	22
24	2,760	14,760	13	27
30	3,690	19,640	15	30
36	5,310	24,000	17	38
Nozzle Data		Effective Stack Height*		
Size (in)	Outlet Area (ft ²)	Outlet Velocity (ft/min.)		
		3000	3500	4000
4	0.0873	13.4	14.0	14.5
5	0.1364	14.3	15.0	15.7
6	0.1963	15.1	16.0	16.8
7	0.2673	16.0	17.0	18.0
8	0.3491	16.8	18.0	19.1
9	0.4418	17.7	18.9	20.2
10	0.5454	18.5	19.9	21.4
11	0.6600	19.4	20.9	22.5
12	0.7854	20.2	21.9	23.6
13	0.9218	21.1	22.9	24.8
14	1.0690	21.9	23.9	25.9
15	1.2272	22.8	24.9	27.0
16	1.3963	23.6	25.9	28.2
17	1.5763	24.5	26.9	29.3
18	1.7671	25.3	27.9	30.5
19	1.9689	26.2	28.9	31.6
20	2.1817	27.0	29.9	32.7
22	2.6398	28.8	31.9	35.0
24	3.1416	30.5	33.9	37.3
26	3.6870	32.2	35.9	39.5
27	3.9761	33.0	36.8	40.7
28	4.2761	33.9	37.8	41.8
30	4.9087	35.6	39.8	44.1
32	5.5851	37.3	41.8	46.4
34	6.3050	39.0	43.8	48.6
36	7.0686	40.7	45.8	50.9
38	7.8758	42.4	47.8	53.2

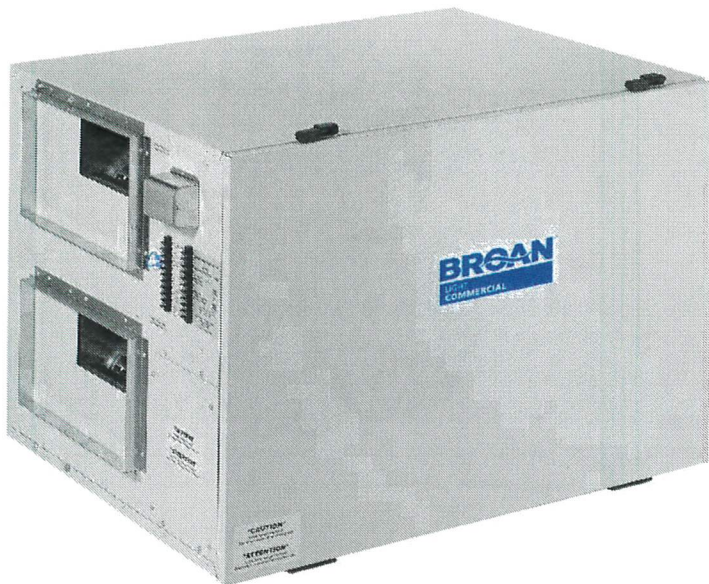


6 BALANCED VENTILATION

HEAT RECOVERY VENTILATORS

MODEL: BROAN - B6LCDPRN

Light commercial High Efficiency Heat Recovery Ventilator, 690 CFM at 0.4 in. w.g.



7 ADMINISTRATIVE ODOR MITIGATION PRACTICES

A. Procedural activities

All products are securely stored in packaging and within odor preventing containers. Doors shall be kept shut except when access is needed.

B. Staff training procedures

We contract with a maintenance specialist to perform the regularly scheduled maintenance of the HVAC unit including changing carbon filters to ensure zero emissions on site. The manager and assistant manager are required to keep the door to the product storage and handling rooms securely closed and locked at all times unless direct access is necessary.

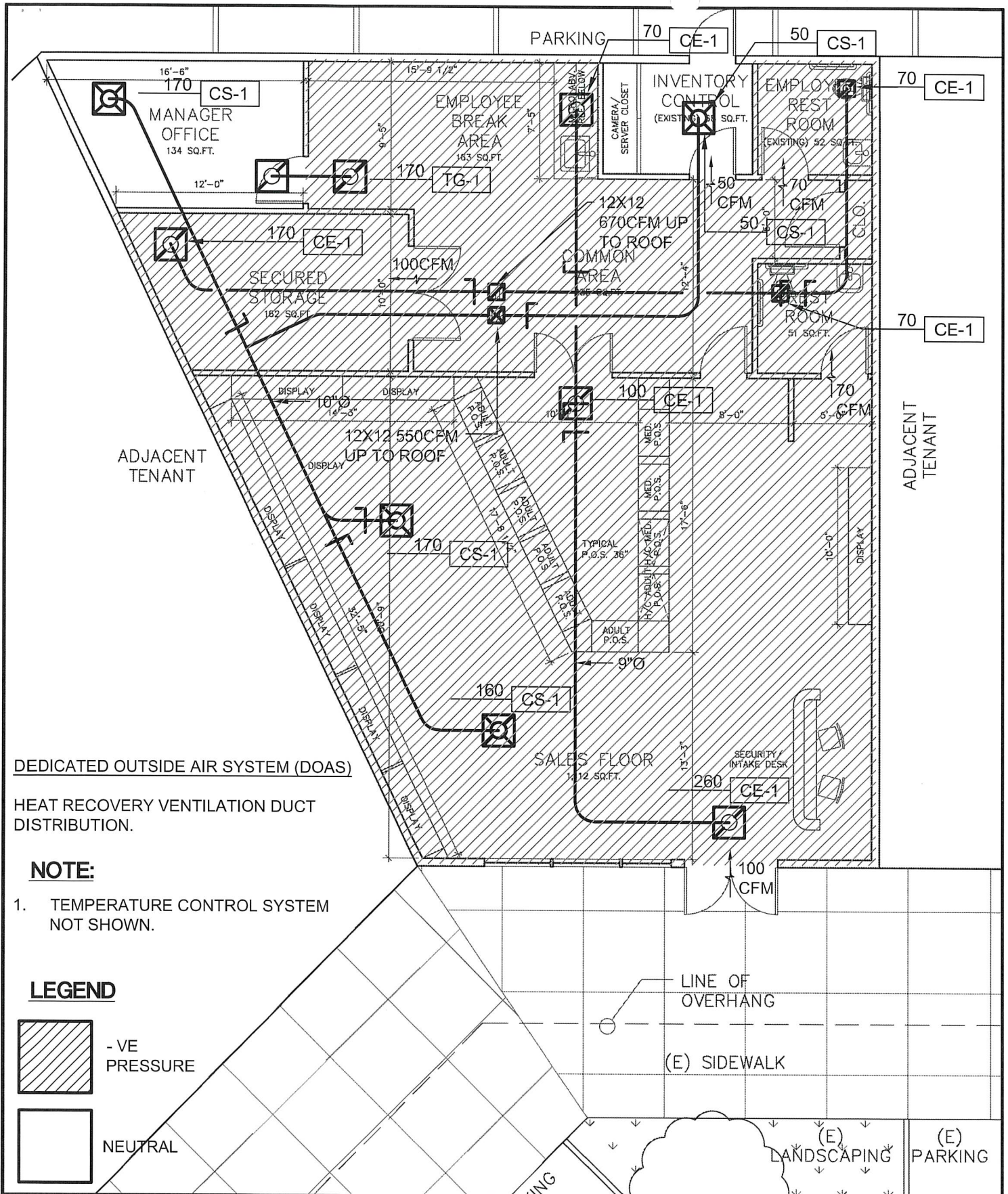
C. Recordkeeping systems and forms

Maintenance logs are kept up to date.

(all based on industry-specific best control technologies and best management practices)

Attachment 1 – Odor Control Floor Plan

End of Plan



GUTTMANN & BLAEVOET
CONSULTING ENGINEERS

2351 Powell Street
 San Francisco, CA. 94133-1449
 P 415 625 0730 415 625 0735
 E gtb@gb-eng.com

Sheet Title:

443 Dutton

ODOR CONTROL
FLOOR PLAN

Scale:

1/8"=1'-0"

Drawn by:

CAD DEPT

Checked by:

ENGR STAFF

Date:

03-29-2018

Job No.

FTO-001

Sheet Number:

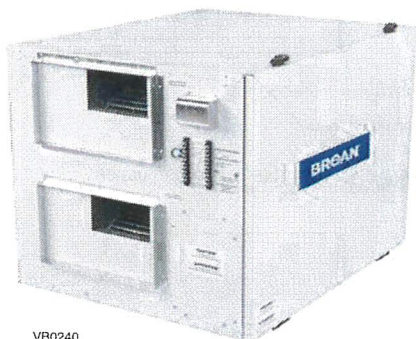
M1.00



BROAN B6LC

Part no. B6LC

560 to 690 CFM (0.4 in. w.g.)



VB0240

FOR LIGHT COMMERCIAL APPLICATIONS

High CFM ventilation for small business owners concerned about indoor air quality (excess moisture, smoke, odors and cleanliness).

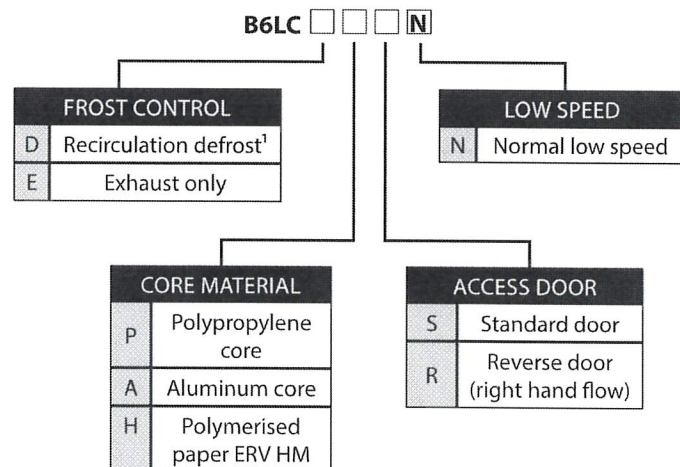
Suitable for installation above a suspended ceiling, mechanical room or suspended from a ceiling, this model delivers year-round comfort and sensible heat recovery with virtually no cross leakage. On this unit, the heat exchange efficiency can reach up to 66%.

- Only 24.5" high for false ceiling installation
- Defrost system
- Two-speed control
- Low voltage remote switch

REPAIRS AND MAINTENANCE

All parts of the B6LC such as the large access door and the entire motor sub-assembly can be removed for ease of maintenance. Furthermore, the electronic circuit board reduces electro-mechanical parts, minimizing repair time.

ORDERING EXAMPLE



¹ When ordered, the recirculation defrost damper module is factory installed.

HEAT RECOVERY VENTILATOR AND ENERGY RECOVERY VENTILATOR

Control

- Built-in electronic circuit board ready to receive the VT1W main wall control.

Heat Recovery Cores/Energy Recovery Cores

Dimensions: 12" x 12" x 13.125"

Exchange surface: 200 ft²

Weight: HRV Polypropylene: 9.2 lb. ; Aluminum: 13.9 lb.
ERV Polymerised paper: 11.2 lb.

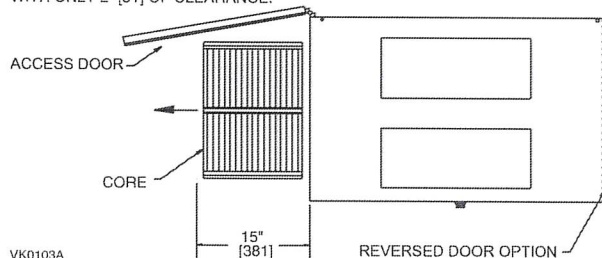
Type: Plate to plate core

Quantity: 2

Material: HRV polypropylene or aluminum
ERV polymerised paper

Warranty: HRV 15 years; ERV 5 years

A MINIMUM OF 15" [381] CLEARANCE FROM ANY OBSTRUCTION IS REQUIRED FOR REMOVAL OF CORES, FANS, ETC. THE ACCESS DOOR CAN BE REMOVED FROM CABINET WITH ONLY 2" [51] OF CLEARANCE.



VK0103A

Option

- Medium efficiency air supply filters

Recirculation or exhaust defrost

OUTDOOR TEMPERATURE		DEFROST CYCLE (IN MINUTES)
°C	°F	DEFROST/OPERATION
WARMER THAN -5	WARMER THAN 23	NO DEFROST
-5 TO -15	23 TO 5	12/60
-15 TO -30	5 TO -21	12/24
-30 & LESS	-21 & LESS	12/12

Requirements and standards

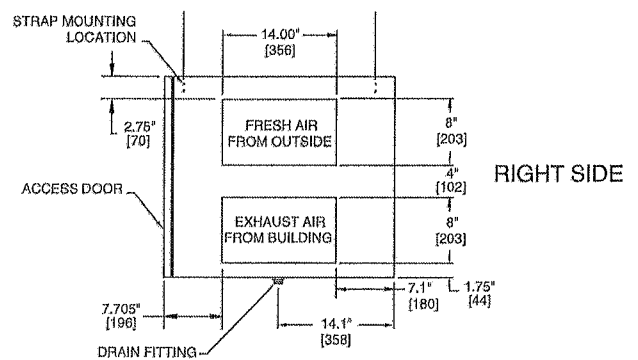
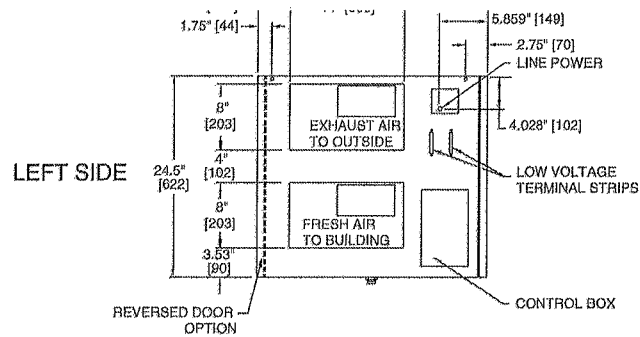
- Complies with the CSA C22.2, no. 113 Standard applicable to ventilators
- Complies with UL Standard 1812 - ducted Heat Recovery Ventilators or Energy Recovery Cores

Warranty

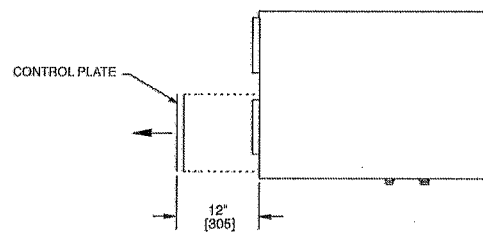
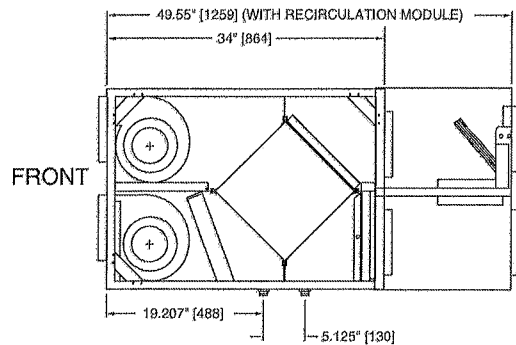
The B6LC unit is fully protected by a 2-year warranty on parts, the best in the industry, and the heat recovery cores are covered by a 15-year warranty.

Available at:

DIMENSIONS AND SERVICE CLEARANCES: B6LC



A MINIMUM OF 12" [305] CLEARANCE FROM ANY OBSTRUCTION IS REQUIRED FOR REMOVAL OF CONTROL BOX.



VK0050A

NOTE: FOR UNITS WITH THE REVERSED DOOR OPTION, INTERIOR COMPONENTS WILL APPEAR AS A MIRROR IMAGE OF THE ABOVE DIAGRAM.

NOTE: Dimensions in brackets are in millimeters.

PERFORMANCES

							HRV and ERV			
External Static Pressure		Power Consumed Watt	HRV High		ERV High		Medium		Low	
in. w.g.	Pascal		cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0.1	25	778	720	340	716	338	660	311	595	281
0.2	50	774	710	335	701	331	646	305	586	276
0.3	75	765	698	329	683	322	632	298	576	272
0.4	100	750	685	323	664	313	617	291	564	266
0.5	125	730	670	316	642	303	600	283	550	259
0.6	150	706	650	307	618	292	580	274	528	249
0.7	175	676	625	295	590	278	547	258	500	236
0.8	200	641	590	278	550	259	505	238	455	215
0.9	225	600	540	255	495	233	450	212	400	189
1.0	250	555	470	222	400	189				

ENERGY PERFORMANCE

POLYPROPYLENE CORE				EFFECTIVENESS		
SUPPLY TEMPERATURE		NET AIR FLOW		SENSIBLE	LATENT	TOTAL
°F	°C	CFM	L/S	%	%	%
HEATING						
35	1.7	400	189	57	0	38
35	1.7	300	142	63	0	42
COOLING						
95	35	400	189	55	0	21
95	35	300	142	60	0	23

ALUMINUM CORE				EFFECTIVENESS		
SUPPLY TEMPERATURE		NET AIR FLOW		SENSIBLE	LATENT	TOTAL
°F	°C	CFM	L/S	%	%	%
HEATING						
35	1.7	400	189	54	0	36
35	1.7	300	142	57	0	38
COOLING						
95	35	400	189	52	0	20
95	35	300	142	56	0	21

POLYMERIZED PAPER CORE (HM)				EFFECTIVENESS		
SUPPLY TEMPERATURE		NET AIR FLOW		SENSIBLE	LATENT	TOTAL
°F	°C	CFM	L/S	%	%	%
HEATING						
35	1.7	400	189	60	47	56
35	1.7	300	142	65	53	61
COOLING						
95	35	400	189	60	38	46
95	35	300	142	63	45	52

EFFECTIVENESS

UNIT PERFORMANCE, SENSIBLE EFFECTIVENESS				
HEATING SUPPLY TEMPERATURE 35°F / 1.7°C	AIRFLOW (CFM)			
	300	400	500	600
POLYPROPYLENE	69	64	59	55
ALUMINUM	62	59	56	55
POLYMERIZED PAPER (HM)	77	75	73	71

UNIT PERFORMANCE, TOTAL EFFECTIVENESS				
COOLING SUPPLY TEMPERATURE 95°F / 35°C	AIRFLOW (CFM)			
	300	400	500	600
POLYMERIZED PAPER (HM)	49	44	41	39

NOTE: All specifications are subject to change without notice.

ACOUSTIC NOISE POWER CHART (dBA) AT UNIT PORTS

Airflow	Fresh air to building port	Exhaust air from building port
685 CFM at 0.4 in. w.g.	76.9 dBA	61.3 dBA
586 CFM at 0.2 in. w.g.	66.1 dBA	52.5 dBA

The data shown on left chart come from measurement performed according to ISO 5136 Standard. These data represent the sound power directly measured at the fresh air distribution port and exhaust air from building port. To get the actual noise level in the room, consider noise attenuation resulting from total ductwork installation.

SPECIFICATIONS

- Model: B6LC
- Total assembled weight:
 - With polypropylene cores: 148 lb.
 - With aluminum cores: 170 lb.
 - With polymerised paper core: 157 lb.
- All duct connections: 8" x 14"
- Drains: 3/4" fittings
- Housing: 20 ga. pre-painted steel
- Filters: 4 reticulated washable foam filters (20 ppi) and 2 optional disposable 30% medium efficiency filters
- Mounting: Reinforced rubber straps
- Insulation: 3/4" foil faced and 1" acoustic fiberglass wool
- Supply & Exhaust Blower motors:
 - Motor type: PSC motors with sealed: sleeved bearings, 3 speeds (2 available to customer)
 - R.P.M.: 1625 - H.P.: 1/4
 - Fan type: Direct drive centrifugal blower 7 1/8" x 6"
 - Housing: Galvanised steel
- Fan Speed control:
 - Low, medium & high speed
 - 2 speeds available to user
 - Low or medium speed is selected at the time of installation
- Unit electrical characteristics:

Volts	Amps	Watts
125	5.7	640

Project:	REMARKS
Location:	
Model no.: B6LC	
Quantity:	
Submitted by:	Date:

BROAN



www.broan.com

Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-877-862-7626)

B6LCd170321

A. Staff Training

New staff members will be trained on odor mitigation practices within thirty (30) days of hire. Staff members will be trained on, among other things, operational controls including maintenance of the odor control systems (for those employees involved with maintaining such systems) and who to contact in the event there is a malfunction with the odor control system or odor is detected from outside the premises. Staff members will receive annual training on such topics thereafter.

B. Operational Controls

The applicant will contract with a maintenance specialist to perform the regularly scheduled maintenance of the HVAC unit including changing carbon filters to ensure zero emissions on site. Additionally, the Applicant will contact the maintenance specialist in the event that odor is detected from outside the premises or Applicant recognizes any maintenance issues with the odor mitigation system between scheduled maintenance dates. Furthermore, the Applicant will review the maintenance logs and take all action necessary to abate any odor and ensure the system operates properly.

City of Santa Rosa

AUG 8 2019

**Planning & Economic
Development Department**