

LENNOX®

ENGINEERING DATA



INDOOR AIR QUALITY

HEPA

HEALTHY CLIMATE®

HEPA Bypass Air Filtration System

Bulletin No. 210397

August 2004

Supersedes July 2004

MODEL NUMBER IDENTIFICATION

HEPA - 20

Unit Type

HEPA = High Efficiency Particulate Air

Nominal Capacity

20 = 180 cfm (85 L/s)
40 = 320 cfm (150 L/s)
60 = 500 cfm (235 L/s)

FEATURES

WARRANTY

All covered components have a five year limited warranty in residential applications, one year in non-residential applications. Filter media is not covered.

Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

APPROVALS

UL Listed.

APPLICATIONS

Designed for installation in forced air systems or can be used independently.

When connected to the return air duct, the HEPA unit diverts some of the return air into the three-stage filter. Then the cleaned air is returned to the return air duct to be heated or cooled.

Designed to capture 99.97% of particulates 0.3 micron and larger of the air that passes through it.

Unit can be installed in any position.

Quiet operation.

Generates no ozone.

Constant blower operation will achieve the best air cleaning results with a continual flow of dirt laden air cleaned by the HEPA filter.

THREE-STAGE FILTRATION PROCESS

Used to create the most effective filtration system possible. Each filter is independent and can be changed individually.

Stage 1: Pre-filter - an inexpensive pre-filter to remove larger particulates from the air. This is important to prolong the life of the HEPA filter.

Stage 2: HEPA - removes 99.97% of particulates 0.3 micron and larger. The air which is now almost completely free of particulates then passes through the third stage filter.

Stage 3: Carbon - 1/2 in. (13 mm) thick carbon filter for removing chemicals and odors from the air. The Healthy Climate HEPA Bypass Filtration System also has an optional heavy duty granular carbon canister available for maximum removal of chemicals and odors.

The clean air is then expelled from the unit to be introduced into the air you breathe.

CABINET

Constructed of painted, heavy-gauge galvanized steel.

Completely insulated cabinet for quiet operation. The insulation also reduces heat loss and gain.

OPTIONAL ACCESSORIES/MAINTAINENCE ITEMS - MUST BE ORDERED EXTRA

CONTROLS

Interlock Kit

Allows HEPA filter system to operate only when air handler/furnace blower is operating.

FILTERS

Pre-filter

Dust and other large particles will collect on the pre-filter over time. The color of the filter will change as particulates build up on the pre-filter. Change the pre-filter when you can see the particulate build up starting to clog the pre-filter. Estimated life: 12 months.

HEPA

As the HEPA filter captures particulates, it will darken. See Installation Instructions for replacement examples. Estimated life: 2-5 years.

Carbon

The inner carbon filter will rarely look used. This filter captures odors and gasses, yet will not change the filter's appearance. Replace filter when it no longer seems to capture odors, or once every three months, whichever applies first. Optional carbon canister can be used in place of the carbon filter. Estimated life: six months.

NOTE - Filter life is based on average air particulate content. Some filters may need to be changed more often due to high dust, humidity, or chemicals found in the indoor air.

Visit us at www.lennox.com

For the latest technical information, www.davenet.com

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

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HOUSE SIZE VS. AIR CHANGES PER HOUR

*Area - ft ² (m ²)	Volume - ft ³ (m ³)	Model No.		
		HEPA-20	HEPA-40	HEPA-60
1,000 (92.9)	8,000 (226.5)	1.3	2.4	3.8
1,200 (111.5)	9,600 (271.8)	1.1	2	3.1
1,500 (139.4)	12,000 (339.8)	0.9	1.6	2.5
1,800 (167.2)	14,400 (407.8)	---	1.3	2.1
2,000 (185.8)	16,000 (453.1)	---	1.2	1.9
2,500 (232.3)	20,000 (566.3)	---	1	1.5
3,000 (278.7)	24,000 (679.6)	---	---	1.3
3,500 (325.2)	28,000 (792.9)	---	---	1.1

* Chart based on homes with 8 ft. ceilings.

Notes:

Industry experience indicates that one (1) air change per hour generally provides adequate air cleaning. Actual results will depend on multiple factors such as outdoor particulate levels, infiltration rate, indoor activities, etc. The chart is based on an infiltration rate of 0.3 air changes per hour, which is typical for residential construction. Infiltration typically brings in more particulates and thus increases the air changes per hour needed for HEPA bypass filtration. Other particulate sources in the house will require higher air changes per hour.

The chart is based on continuous operation of the HEPA bypass filter. If the HEPA filter is cycled, the capacity of the filter needs to be increased. For example, if the HEPA filter is ON only half the time, then the capacity of the unit needs to be doubled or additional units need to be installed.

The more air changes per hour provided, the more effective a HEPA bypass filter will be. People with sensitivities may desire a higher number of air changes per hour for cleaner air.

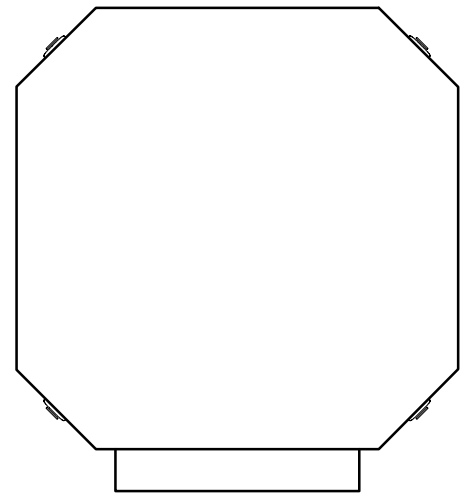
SPECIFICATIONS

General Data	Model No.	HEPA-20	HEPA-40	HEPA-60
Nominal Air Flow at 120VAC and 0 in. w.g. (0 Pa) external static pressure - cfm (L/s)		180 (85)	320 (150)	500 (235)
Electrical characteristics		120V-60hz-1 ph		
Power Consumption		125 watts	125 watts	225 watts
Amp Draw		1	1	1.8
Connections - in. (mm)	inlet - round	8 (203)	10 (254)	10 (254)
	outlet - round	6 (152)	8 (203)	8 (203)
Operating Temperature Range		30 - 95°F (-1 - 35°C)	30 - 95°F (-1 - 35°C)	30 - 95°F (-1 - 35°C)
Shipping weight	lbs. (kg) 1 package	30 (14)	44 (20)	49 (22)

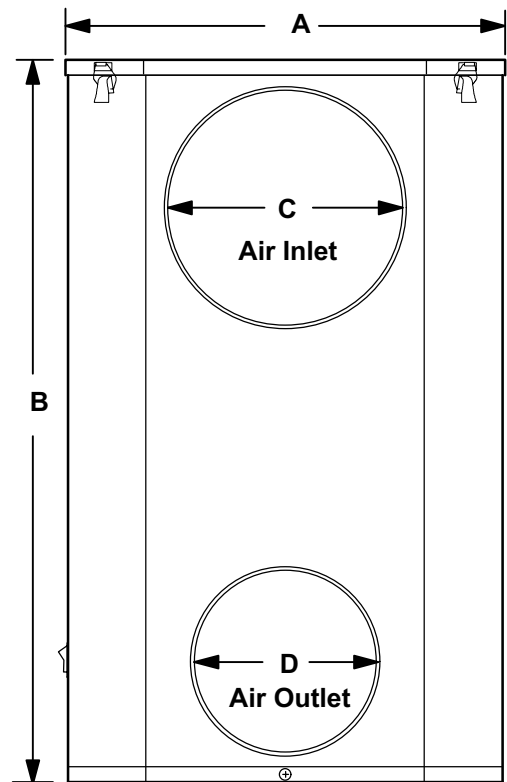
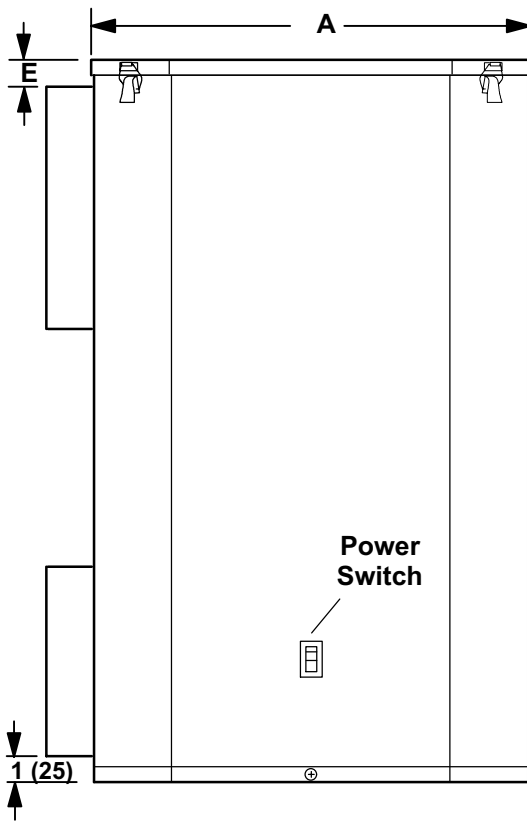
OPTIONAL ACCESSORIES / MAINTENANCE ITEMS - MUST BE ORDERED EXTRA

Interlock Kit		X2680	X2680	X2680
Carbon Canister		94X98	98X75	98X75
Replacement Filter Media	HEPA	92X17	92X10	92X10
	Pre-filter	X4137	X4138	X4138
	Carbon Filter	X2678	92X09	92X09

DIMENSIONS - INCHES (MM)

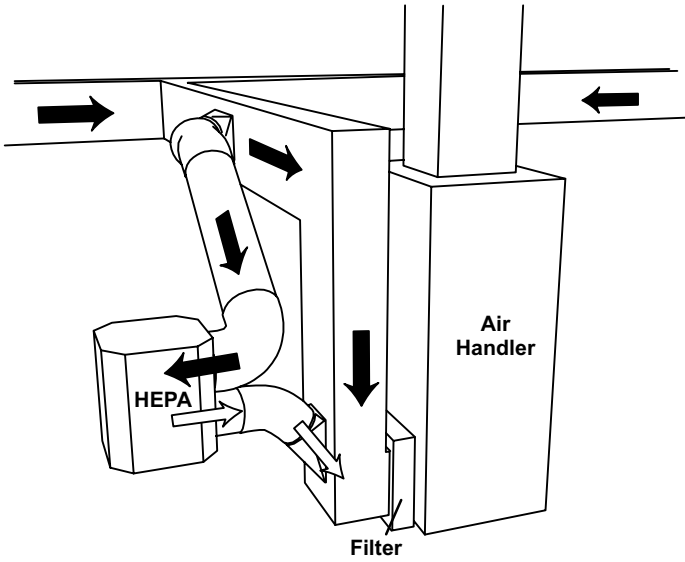


TOP VIEW

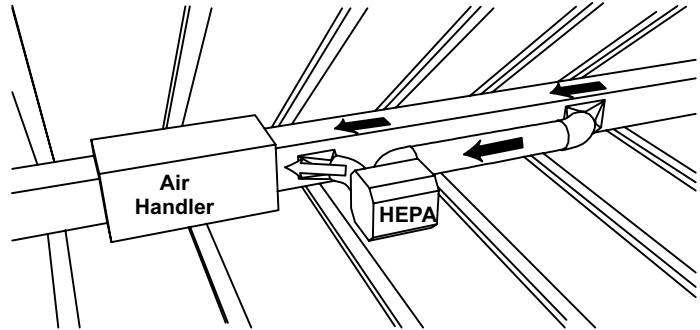


Model No.	A	B	C	D	E	F
HEPA-20	14 (356)	17-7/8 (454)	8 (203)	6 (152)	1 (25)	1-1/4 (32)
HEPA-40 HEPA-60	16-1/8 (410)	28 (711)	10 (254)	8 (203)	1-3/4 (44)	1-7/8 (48)

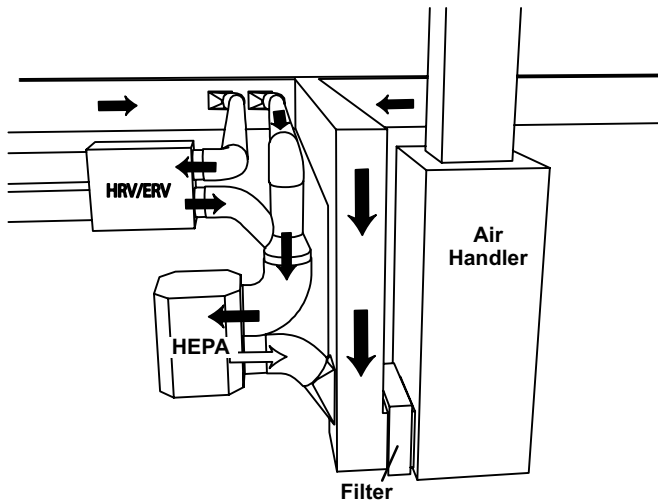
TYPICAL APPLICATIONS



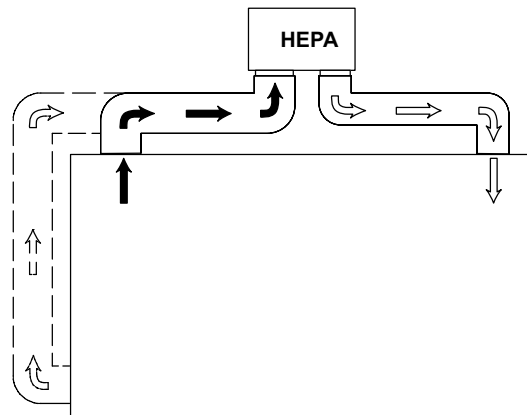
Typical Return to Return Application
For homes with up-flow forced air furnace or blower coil systems.



Typical Return to Return Application
For homes with horizontal forced air furnace or blower coil systems.



Return to Return Installation with an HRV/ERV
For homes with a forced air handler/furnace system and an HRV/ERV system.



Independent Operation
The HEPA system can be used independent of any other equipment. The inlet and outlet of the system can be ducted into the same room to create a cleaner environment.