

**EAC17 SERIES
ELECTRONIC AIR CLEANER
500 thru 2000 cfm (235 thru 945 L/s) Capacity****EAC17**Bulletin #485025
July 1998
Supersedes July 1991**Application**

- Designed for installation in the return air side of a forced air heating or heating-cooling system.
- Applicable to all types of central units – up-flow, lo-boy, horizontal or down-flow models. May be installed in a vertical or horizontal position adjacent to unit or remote in duct.
- Compact for easy installation, strong enough to support the weight of most up-flow furnaces.
- Rated according to ARI standard 680 and ASHRAE Standard 52-76.
- Electronic air cleaner is many more times more efficient in the removal of dirt, lint, pollen, etc. than conventional mechanical air filter. Accomplishes this high degree of cleaning without excessive pressure drop.
- Constant blower operation will achieve best air cleaning results.
- Recommended entering air temperature range is 40°F to 125°F (4°C to 52°C).
- Air cleaner should not be installed in supply air duct downstream from heating source where high temperatures would be encountered.
- 100% outdoor air should not be permitted to pass through the air cleaner.
- Whenever possible, air cleaner should be installed upstream from the humidifier as high humidity drastically effects efficiency of the air cleaner operation.
- When selecting a location, allow minimum of 15 in. (381 mm) clearance in front of access door for service access.

Cabinet

- Thin profile design allows installation in minimum space.
- Can be installed vertically or horizontally.
- Constructed of heavy gauge steel with a durable enamel paint finish.
- Predrilled mounting holes on each side of cabinet simplifies flush mounting to unit or duct work.
- When cells are inserted into cabinet, high voltage DC connections are made securely and positively.
- Removeable access door allows easy and quick access to cell area of air cleaner cabinet.
- Access door activates safety switch located in power cabinet.
- When access door is in place, safety switch turns on power to cells.
- Removal of access door automatically disconnects power to the cells eliminating the possibility of electrical shock when servicing.

Power Cabinet

- Located on top section of air cleaner frame, cabinet provides easy access to power components.
- Low voltage terminal strip is provided for connection of optional performance indicator.
- Cabinet contains power pack and on-off switch.
- Test button located on door shorts out collector plates producing an audible arc to indicate proper voltage to cells.
- Wiring junction box is located behind power pack with access through cover on top.
- Electrical inlets are located on either side and back of box.
- Built-in pressure switch cycles unit on and off with system blower.

**Twin Collecting Cells**

- Long life tungsten wires carry high voltage DC to set up a solid ionizing screen which places a positive charge on all particles entering the cells.
- Particles pass into collection plate section where alternately charged plates attract and hold them until removed by manual cleaning.
- Dual cells are of lightweight aluminum construction.
- Cell have wide plate spacing to minimize arcing and provide greater dirt holding capacity.
- Glazed porcelain insulators are out of air stream to prevent dirt build-up and make cleaning easier.
- Twin cells are lightweight and easily removed for cleaning.

Protective Dual Pre-Filters

- Lightweight aluminum metal mesh serves as a protective screen in stopping large amounts of dust, animal hair, insects and lint from entering electronic cell, thereby preventing clogging and minimizing arcing.
- Pre-filters are easily removed for cleaning.
- Pre-filters must be installed upstream from the electronic cells.

Warranty

- Air cleaner has a five year limited warranty.
- Aluminium pre-filters and ionizing wires have a limited warranty for one year.
- Refer to complete statement of warranty included with unit.

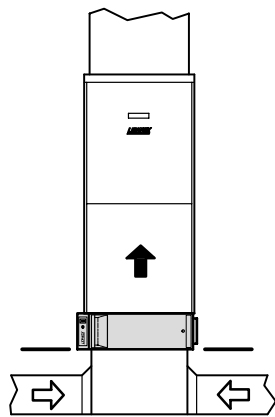
OPTIONAL ACCESSORIES (Must Be Ordered Extra)**W8600E Performance Indicator (Optional)**

- Optional wall mounted solid-state indicator (90E08) monitors air cleaner operations.
- Three LED's show various functions ("On" indicates air cleaner operation, "Wash" indicates need for cell cleaning and "Check" indicates service is required).
- Indicator matches T8600 series thermostat

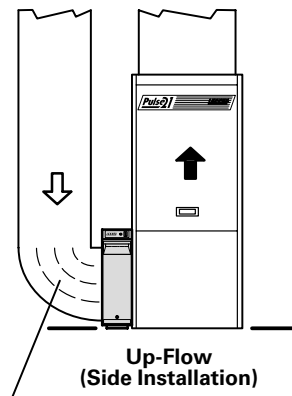
SPECIFICATIONS

Model No.	EAC17-14	EAC17-14SQ	EAC17-20
Electronic cell no. & size – in. (mm)	(2) 12-1/2 x 16 x 4-1/2 (318 x 406 x 114)	(2) 10 x 20 x 4-1/2 (254 x 508 x 114)	(2) 12-1/2 x 20 x 4-1/2 (318 x 508 x 114)
Cell weight	6 lbs. (3 kg) each	7 lbs (3 kg) each	8 lbs (4 kg) each
Pre-filter no. & size – in. (mm)	(2) 13 x 16 x 5/16 (330 x 406 x 8)		
Air volume range – cfm (L/s)	500 – 1400 (235 – 660)		800 – 2000 (380 – 945)
Shipping weight – lbs. (kg) 1 pkg	33 (15)	33 (15)	38 (17)
Electrical characteristics	120v – 60 hertz – 1 phase		
Power consumption	40 watts maximum		

TYPICAL APPLICATIONS

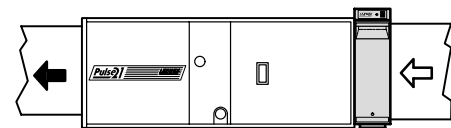


Up-Flow

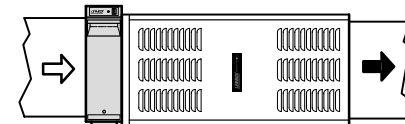


Up-Flow
(Side Installation)

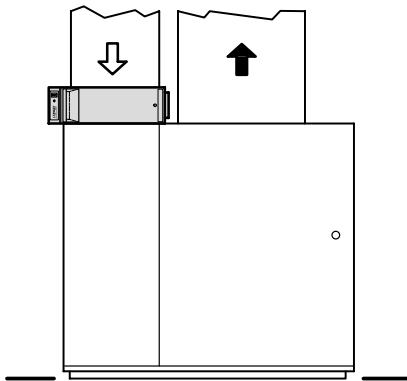
NOTE – At sharp turns, turning vanes are recommended, installed before the air cleaner.



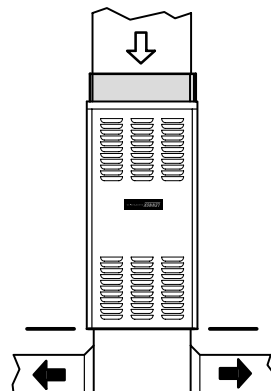
Horizontal



Horizontal

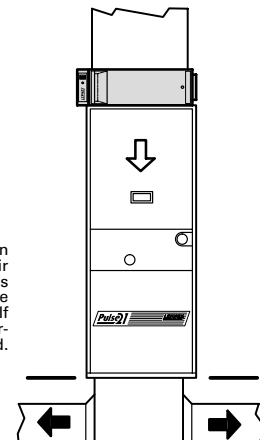


Lo-Boy



Down-Flow

NOTE – Due to flue location on down-flow furnaces, front of air cleaner (with controls and access panel) must be installed to side or rear of furnace cabinet. If installed in a confined space, service clearance may be restricted.



Down-Flow

AIR RESISTANCE

Air Volume		Total Resistance					
		EAC17-14		EAC17-14SQ		EAC17-20	
cfm	L/s	in. wg.	Pa	in. wg.	Pa	in. wg.	Pa
500	235	.03	7	.02	6	----	----
600	285	.04	10	.03	7	----	----
800	380	.06	15	.06	15	.04	10
1000	470	.09	22	.09	22	.06	15
1200	565	.13	32	.13	32	.08	20
1400	660	.17	42	.15	37	.09	22
1600	755	----	----	----	----	.13	32
1800	850	----	----	----	----	.16	40
2000	945	----	----	----	----	.20	50

NOTE – Standard central system filter is removed and not included in table.

AIR CLEANING EFFICIENCY

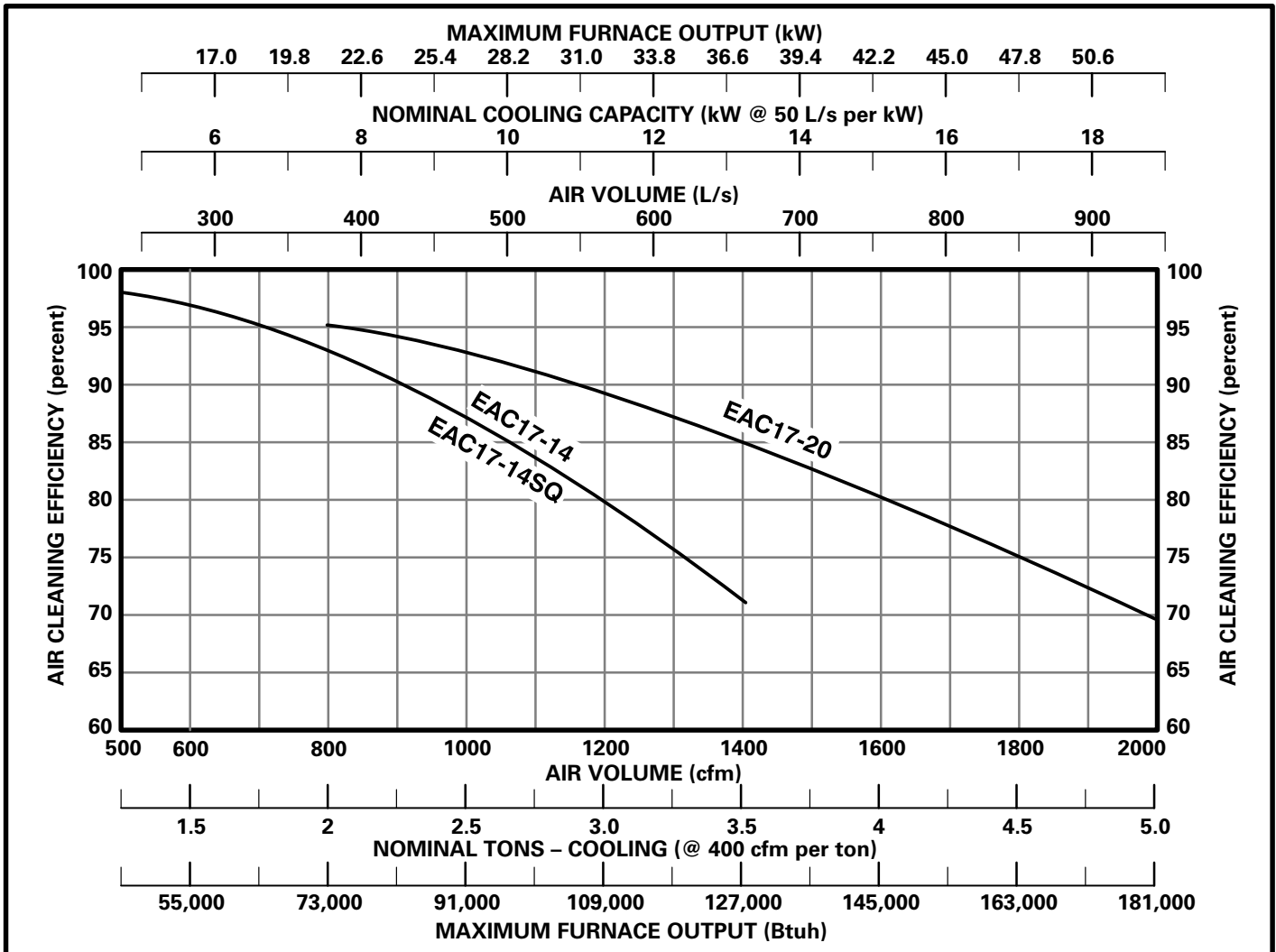
On the average, an electronic air cleaner will remove fifteen (15) times as much dust, dirt, lint and mold spores from the air as an ordinary furnace filter. On smaller particles, the percentage removed vs. standard filters is significantly greater.

An electronic air cleaner will remove airborne particles as small as 0.01 microns in diameter. The chart below lists sizes of common airborne particles trapped and removed from recirculated air by electronic air cleaners.

Types of Airborne Particles	Particle Size (*Microns)	Percentage of Particles Removed	
		Mechanical Filter (fiberglass Media)	Electronic Air Cleaner
Lint	10 – 110	100	100
Pollen	10 – 150	60	100
Fog & Mist	1 – 50	20 – 40	80 – 95
Fly Ash	0.1 – 50	20 – 30	75 – 85
Dust	0.1 – 50	15 – 30	75 – 85
Fungus Spores	1 – 10	20 – 30	80 – 85
Bacteria	0.1 – 10	15 – 25	75 – 85
Fumes (Oil Smoke)	0.1 – 1	0	75
Tobacco Smoke	.009 – 1	0	75
Virus	.001 – 0.1	0	75

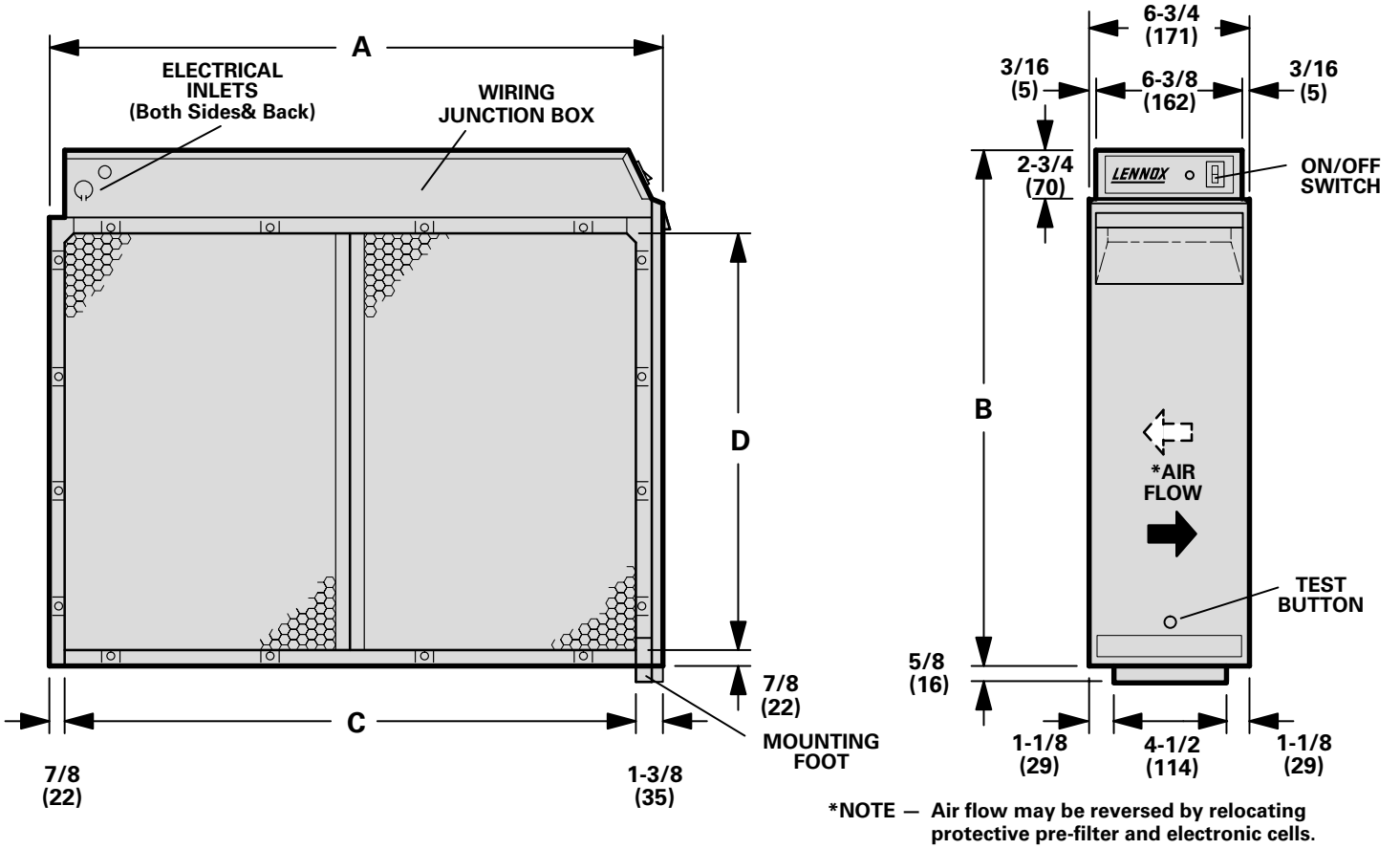
*One micron = 1/25,400th of an inch.
 Particles 10 microns and larger are visible to the naked eye.
 Particles 10 to 0.1 microns are visible with microscope.
 Particles below 0.1 microns are visible with electron microscope.

EFFICIENCY DATA



*Ratings based on methods prescribed by American Society of Heating, Refrigerating, and Air Conditioning Engineers – (ASHRAE) standard 52-76 using atmospheric air without the addition of artificial dust.

DIMENSIONS – inches (mm)



SIDE VIEW

FRONT VIEW

Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
EAC17-14	25-1/2	648	19	483	23-1/4	591	14-1/2	368
EAC17-14SQ	20-1/2	521	23	584	18-1/4	464	18-1/2	470
EAC17-20	25-1/2	648	23	584	23-1/4	591	18-1/2	470