



# PC03S

DAVE LENNOX SIGNATURE® COLLECTION

PureAir™ S Air Purification System | 60 Hz

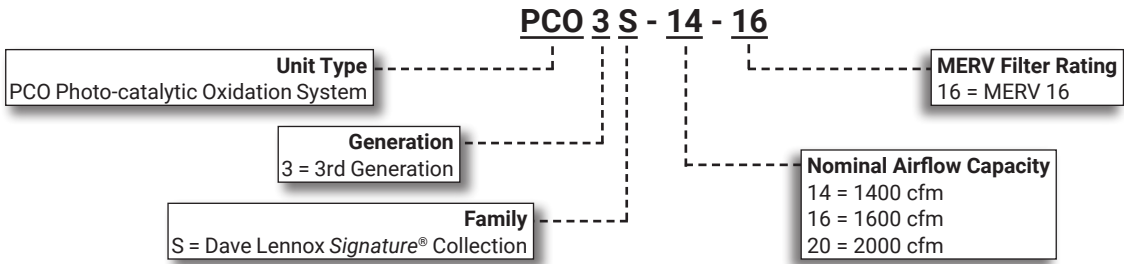
RESIDENTIAL

PRODUCT SPECIFICATIONS (EHB)



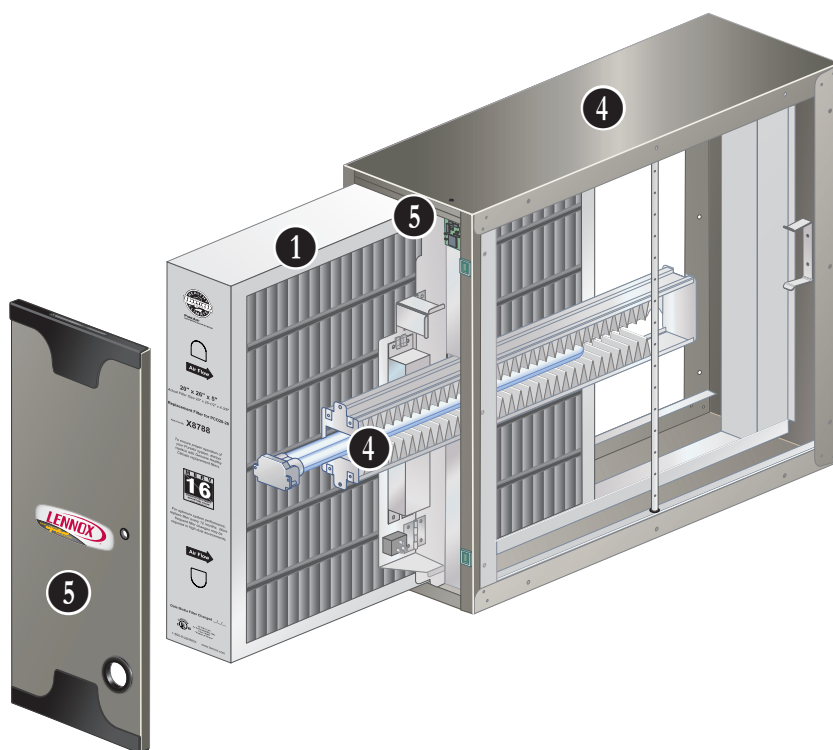
S40 Smart Wi-Fi  
Communicating Thermostat  
(Not Furnished)

## MODEL NUMBER IDENTIFICATION



## FEATURE HIGHLIGHTS

1. Carbon Clean 16® (MERV 16) Media Air Filter
2. UVA Lamp / PureAir™ Cartridge
3. Communication Control
4. Pre-Painted Steel Cabinet
5. Removable Front Access Panel



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## APPROVALS AND WARRANTY

### APPROVALS

- ETL safety listing report 3061144A
- Conforms to UL STD 1598
- Certified to CSA STD C22.2 no. 250.0

### WARRANTY

- All covered components:
  - Limited ten years in residential installations
  - Limited one year in non-residential installations

**NOTE** - UVA Lamp / PureAir Cartridge, and pleated Carbon Clean 16® (MERV 16) media filters are routine maintenance items and are not covered under the warranty.

**NOTE** - Refer to Lennox® Basic Limited Warranty at [www.Lennox.com](http://www.Lennox.com) for additional details.

## FEATURES

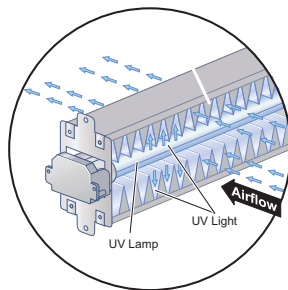
### COMMUNICATING FEATURES

**NOTE** - For full communication benefits, the PureAir™ S Air Purification System must be used with a Lennox® S40 Smart Wi-Fi Thermostat and a Lennox® communicating variable-speed indoor furnace or air handler.

- Multiple sensors in the cabinet automatically detect and send information to the Lennox® S40 Smart Thermostat for:
  - Dirty air filter status
  - Air filter life notification (%)
  - UVA lamp operational status (On or Off)
  - UVA lamp life notification (%)
- Unit uses 4-wire, 18-gauge standard thermostat wiring connection to Lennox communicating indoor unit control

### OPERATION

- Return air first passes through the Carbon Clean 16® (MERV 16) media filter
- The filter removes more than 95% of the particles and bioaerosols (dander, pollen, bacteria, molds, spores, etc.) as they flow through the PCO3S
- The filtered air then passes through the UVA Lamp / PureAir Cartridge
- The UVA lamp activates the catalyst on the cartridge that captures and destroys odors and chemical vapors as they flow through the system
- The adsorbed pollutants (accumulated gases, liquids, or solids) on the surface of the catalyst are oxidized to carbon dioxide and water
- Rather than just absorbing gaseous pollutants (as in carbon systems), the PCO3S provides a reduction of absolute toxicity
- Contaminants are destroyed rather than transferred
- The PureAir Cartridge is self-cleaning with respect to the organic material adsorbed on the catalyst surface



- No toxic chemicals are used in the PCO3S

### APPLICATIONS

- The PureAir™ S Air Purification System combines multiple air purification technologies into a single, state-of-the-art, air purifier
- The system's primary function is to improve the indoor air quality by:
  - **Filtration** - The Carbon Clean 16® (MERV 16) media filter captures more than 95% of particles 0.3 microns and larger and more than 90% of particles 0.01 microns and larger
  - **Photo-catalytic Oxidation** - The UVA lamp activates the photo-catalyst on the PureAir Cartridge that captures and destroys odors and chemical vapors as they flow through the PCO3S
- The system reduces the toxicity of the treated air stream
- The PCO3S is a multi-position unit that can be installed in the return air side of all types of HVAC whole-house systems
- The unit easily adapts to upflow, downflow or horizontal unit applications
- No ozone is produced by the PCO3S; in fact, ozone is reduced by the PCO3S
- Only requires annual maintenance

## FEATURES

### **INSTALLATION CONSIDERATIONS**

- The PCO3S must be installed in the return air duct upstream of the supply air blower
- Allow a 30 in. service clearance in front of the access door
- The control box, pleated filter and the PureAir UVA Lamp Cartridge must be removable
- The PCO3S should be installed in a horizontal position with the access panel facing to the front or rear
- The PCO3S must be connected to either a 120V or 230V power receptacle
- If 230V power supply is used, an optional 230V power cord must be ordered separately
- See Optional Accessories table
- Unit must be powered continuously (the lamp is always on) for destruction of contaminants adsorbed on the catalyst surface and for extended lamp life
- It is recommended that the air handler be set to run continuously, except during periods of high humidity (more than 50%)
- If used in conjunction with an optional UV germicidal light, the following guidelines must be followed:
  - When a germicidal light is used with the PCO3S in direct line of sight, maintain a minimum distance of 6 ft. from the PCO3S
  - If duct system has a 90° bend or turn in the duct between the PCO3S and germicidal light, a minimum distance of 3 ft. from the PCO3S should be maintained
- Please refer to the Installation Instructions for additional information

### **COMPONENTS**

#### **1 Carbon Clean 16® (MERV 16) Media Air Filter**

- Disposable pleated MERV 16 filter (Minimum Efficiency Reporting Value based on ASHRAE 52.2)
- MERV (Minimum Efficiency Reporting Value) is a rating by ASHRAE that measures the removal of airborne contaminants
- The MERV rating of a filter describes the size of the holes in the filter that allow air to pass through
- The higher the MERV rating, the smaller the holes in the filter providing enhanced filtration
- The dirtier the filter, the better the filtration, however, the filters need to be replaced annually to prevent excess pressure drop and for maximum efficiency
- More frequent filter changes may be required in situations with high dust or dirt loads
- Particles and bioaerosols are captured on the filter
- Recommended annual replacement

#### **2 UVA Lamp / PureAir Cartridge**

##### **UVA Lamp**

- 55 watt florescent, low power consumption, UVA output
- Recommended annual replacement
- Packaged separately for field installation
- Thumbscrews on lamp holder allow quick and easy access for servicing

##### **PureAir™ Cartridge**

- Titanium dioxide coated
- Cartridge is packaged separately.
- Recommended annual replacement

#### **3 Communication Control**

- Communicates status of the filter and UVA lamp conditions to the Lennox® Smart Wi-Fi Thermostat

##### **Control Box Assembly**

- Contains electrical power receptacle, electronic ballast with internal surge protector for UVA lamp
- Control box is hinged to allow easy access to the ballast and UVA Lamp / PureAir Cartridge for servicing

### **CABINET**

#### **4 Pre-painted steel cabinet**

- Multi-position
- PCO3S-14-16 cabinet is sized for most Lennox air handler applications
- PCO3S-16-16 and PCO3S-20-16 cabinets are sized for most Lennox gas furnace applications
- See dimension drawing and Cabinet Match-Up table

#### **5 Front panel is removable for service access**

- Air flow direction may be reversed by rotating the unit top for bottom
- View port on front panel for verifying UVA lamp operation
- Three-prong, detachable 6-foot power cord for plug-in to 120V electrical connection
- Optional power cord for 230V operation is available and must be ordered extra

### **SAFETY FEATURES**

**NOTE** - Power cord must be completely removed from the front of the unit before the cover can be removed for servicing.

## FEATURED CONTROL

### S40 Smart Wi-Fi Thermostat (part of the Lennox® Residential Communicating Control System)

- Recognizes and connects to all Lennox® Communicating products to automatically configure and control the heating/cooling system (based on user-specified settings) for the highest level of comfort, performance and efficiency
- Recognizes model and serial number information for Lennox® Communicating products to simplify system setup
- Lennox Smart Room Sensors, Lennox Wireless Extenders and Lennox Smart Air Quality Monitor can be added to the system
- Smart home automation compatible with Amazon Alexa®, Google Assistant, Control4® and Building36®
- Sends service alerts and reminders
- Lennox Smart Thermostat App features Wi-Fi remote temperature monitoring and adjustment through a home wireless network apps for smartphones or tablets
- Lennox Smart Technician App allows installer to manage systems in the home



- Service Dashboard features online real-time monitoring and advanced diagnostics of installed Lennox® Communicating systems
- Simple easy-to-use touchscreen allows complete system configuration
- Scheduled maintenance alerts, system warnings and troubleshooting are also displayed on thermostat screen
- Easy to read 7 inch high definition color display (measured diagonally)
- Conventional outdoor units (not Lennox® Communicating) can easily be added and controlled by the S40 Thermostat
- Installer setup screens allow quick and simple system configuration without a manual, Installer can also run tests on complete system or individual components for easy maintenance and troubleshooting
- Serial communications bus (RSBus), with less wiring than a conventional heating/cooling system, allows system communication
- Uses standard 4-wire unshielded thermostat wiring
- High Definition Color Display with Subbase and wallplate furnished for easy installation

**NOTE** - See the Lennox® S40 Thermostat Product Specifications bulletin for more information.

## FEATURED INDOOR/OUTDOOR PRODUCTS

### Dave Lennox Signature® Collection SLP99V Variable-Capacity, Variable-Speed Furnaces

- ENERGY STAR® qualified.
- 99% AFUE energy efficiency
- Variable-capacity operation
- Multi-position design
- Lennox® Communicating control
- Precise Comfort® technology
- AirFlex™ technology
- Fully insulated cabinet
- SureLight® Control delivers operation reliability
- Silicon nitride igniter
- Also available - SL280V and EL296V Two-Stage, Variable-Speed Gas Furnaces



### Dave Lennox Signature® Collection SL25KCV Variable Capacity Air Conditioners

- ENERGY STAR® qualified
- Up to 26.00 SEER2 cooling efficiency
- Lennox® Communicating control
- Precise Comfort® Technology
- SilentComfort™ Technology
- Quiet operation, as low as 58 dBA
- R-454B refrigerant
- Dependable and efficient variable capacity scroll compressor
- Louvered coil protection



- Also available - EL22KCV and EL18KCV Variable Capacity Air Conditioner

### Dave Lennox Signature® Collection SL22KLV Variable Capacity Heat Pumps

- ENERGY STAR® qualified
- Up to 21.1 SEER2 and 10.5 HSPF2 heating efficiency
- Lennox® Communicating control
- Precise Comfort® Technology
- SilentComfort™ Technology
- Quiet operation, as low as 58 dBA
- R-454B refrigerant
- Dependable and efficient variable capacity scroll compressor
- Louvered coil protection
- Also available - EL19KCV Variable Capacity Heat Pump



### Dave Lennox Signature® Collection CBK48MVT Variable-Speed Air Handlers

- 4-way multi-position design
- Lennox® Communicating control
- Variable-speed blower motor
- R-454B refrigerant compatible
- Automatic comfort control for lower, summertime humidity levels
- Anti-microbial drain pan resists the growth of mold and mildew



## MAINTENANCE SUPPLIES

### Annual Maintenance Kit

- A maintenance kit is available for the PCO3S-14-16, PCO3S-16-16 and PCO3S-20-16
- Each kit consists of:
  - Carbon Clean 16® (MERV 16) Media Air Filter (1)
  - Replacement UVA Lamp (1)
  - Replacement PureAir™ Cartridge (1)

### Carbon Clean 16® (MERV 16) Media Air Filter

- Recommended annual replacement of the filter

## OPTIONAL ACCESSORIES

### Power Cord For 230 Volt Operation

- Six foot power cord with NEMA 620P male plug on one end and IEC 320 receptacle on other end
- Allows 230 volt operation without any additional modifications

## SPECIFICATIONS

Model No.	PCO3S-14-16	PCO3S-16-16	PCO3S-20-16
Nominal airflow capacity - cfm	1400	1600	2000
Pressure drop (new unit) - in. w.g.	0.25	0.31	0.31
Pressure drop (end of recommended life) - in. w.g.	0.42	0.42	0.42
Ethanol destruction rate - mg/min. (single pass rated flow destruction rate @ 500 µg/m <sup>3</sup> ethanol)	2.5	3.0	4.0
Operating Environment	0°F to 140°F outside of duct 10 to 60 percent relative humidity (Optimal performance at 50 percent relative humidity)		
Number of lamps	1	1	1
Filter Efficiency	MERV 16	MERV 16	MERV 16
Filter size - H x D x W - in.	Nominal Actual	20 x 21 x 5 16 x 26 x 5	20 x 26 x 5 20 x 25-1/2 x 4-3/8
Filter life	Up to 12 months	Up to 12 months	Up to 12 months
Shipping Weight - lbs.	27	25	27
Electrical Data	120V or <sup>1</sup> 230V - 1 phase - 60 hz (less than 1 amp)		
Power Consumption	120 Volt	58	58
	<sup>1</sup> 230 Volt	58	58

## MAINTENANCE SUPPLIES - ORDER SEPARATELY

Annual Maintenance Kit (includes 1 of each below per kit)	Single kit	Y6616	Y6612	Y6608
	Four kit pack	N/A	Y6614	Y6610
Carbon Clean 16® (MERV 16) Pleated Filter	Size - H x D x W - in.	20 x 21 x 5	16 x 26 x 5	20 x 26 x 5
UVA Lamp	Number of lamps	1	1	1
PureAir™ Cartridge	Size - H x D x W - in.	1-7/8 x 20 x 1	1-7/8 x 20 x 1	1-7/8 x 20 x 1
Carbon Clean 16® (MERV 16) Pleated Filter		Y6606	Y6605	Y6604
PureAir Cartridge		Y6621	Y6607	Y6607

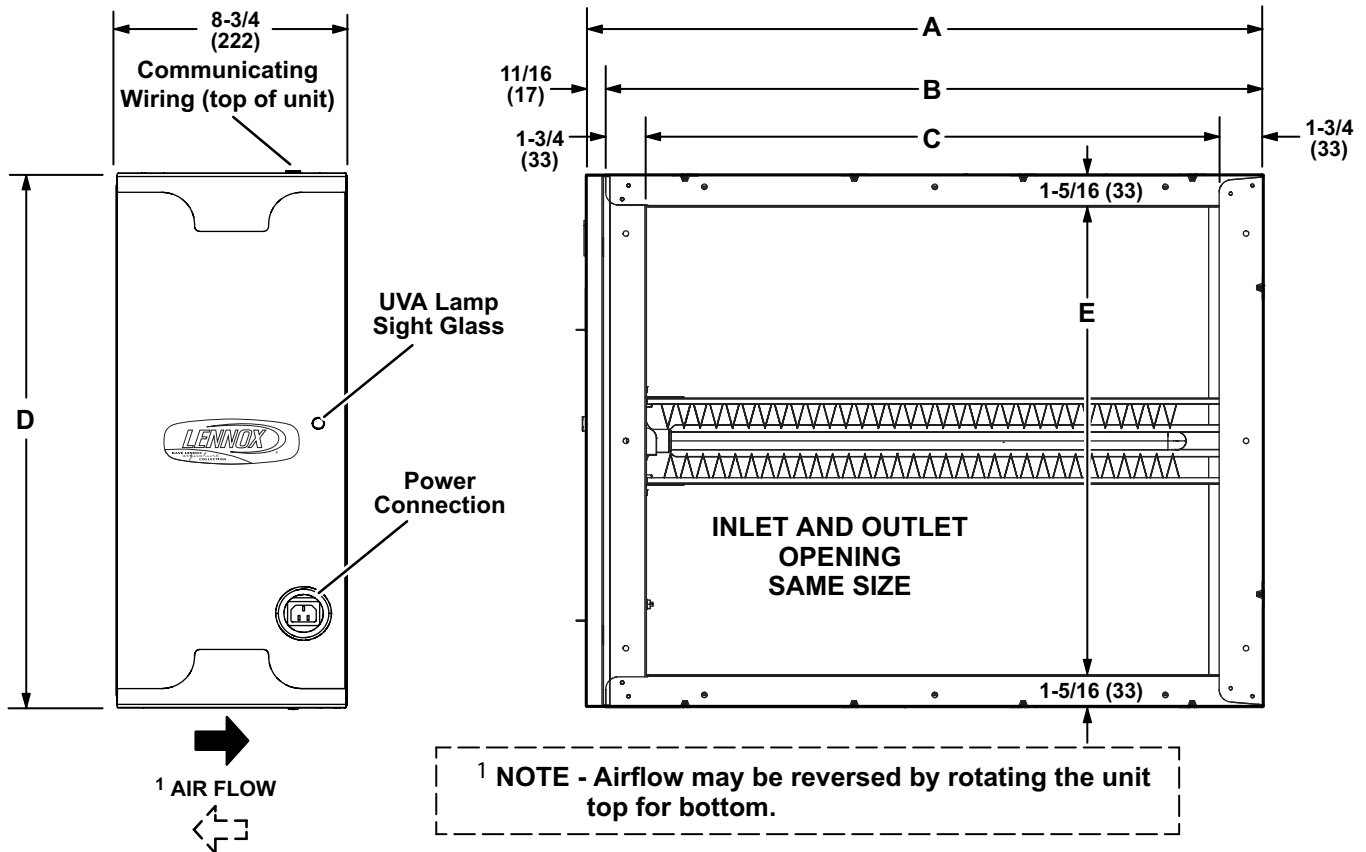
## OPTIONAL ACCESSORIES - ORDER SEPARATELY

Power Cord for 230V Operation	91X44	91X44	91X44
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<sup>1</sup> 1 Optional 230V power cord is required and must be ordered extra.



## DIMENSIONS



Model No.	A		B		C		D		E	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
PCO3S-14-16	23-3/4	603	23	584	20-1/4	514	21-1/8	537	18-1/2	470
PCO3S-16-16	26-1/2	673	25-3/4	654	23	584	17-1/2	445	14-5/8	371
PCO3S-20-16	26-1/2	673	25-3/4	654	23	584	21-1/8	537	18-1/2	470

## AIR RESISTANCE

Air Volume cfm	PCO3S-14-16 in. w.g.	PCO3S-16-16 in. w.g.	PCO3S-20-16 in. w.g.
400	0.05	0.04	0.03
600	0.07	0.07	0.06
800	0.11	0.11	0.08
1000	0.15	0.15	0.11
1200	0.20	0.20	0.15
1400	0.25	0.25	0.18
1600	---	0.31	0.22
1800	---	---	0.27
2000	---	---	0.31

## MINIMUM FILTER EFFICIENCY

MERV Rating	1 Filter Efficiency (percentage)		
	E1 (0.3 to 1.0 microns)	E2 (1.0 to 3.0 microns)	E3 (3.0 to 10.0 microns)
MERV 16	95%	99%	99%

<sup>1</sup> 1 Values are based on lab tests conducted with conditions included in ASHRAE Standard 52.2.

## CABINET MATCH-UP - PCO3S WITH FURNACE / AIR HANDLER

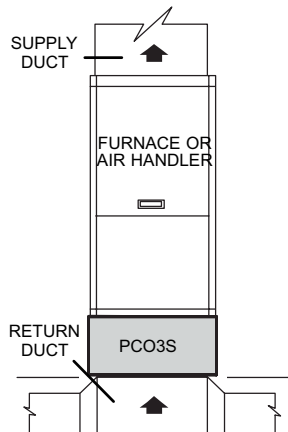
ALSO SEE ILLUSTRATIONS ON NEXT PAGE FOR ADDITIONAL DETAILS

FURNACES	PCO3S Model Number			Comment
	PCO3S-14-16	PCO3S-16-16	PCO3S-20-16	
"A" Width Furnace with Side Return Air		•		No duct transition required.
"A" Width Furnace with Bottom Return Air		•		28-1/2" x 3" side seal strip or duct transition needed.
"B" Width Furnace with Side Return Air		•		No duct transition required.
"B" Width Furnace with Bottom Return Air		•		No duct transition required.
"C" Width Furnace with Side Return Air (up to 4 ton)		•	•	No duct transition required, for high system static application use PCO3S-20-16.
"C" Width Furnace with Side Return Air (5 ton)			•	<b>Option 1</b> - No duct transition required, use Return Air Base ( <b>98M58</b> ). <b>Option 2</b> - Overcut top edge of side return opening by 1 in. to make opening 15 in. x 23 in. (H x W).
"C" Width Furnace with Bottom Return Air			•	No duct transition required.
"D" Width Furnace with Side Return Air			•	<b>Option 1</b> - No duct transition required, use Return Air Base ( <b>98M59</b> ). <b>Option 2</b> - Overcut top edge of side return opening by 1 in. to make opening 15 in. x 23 in. (H x W).
"D" Width Furnace with Bottom Return Air			•	26-1/2" x 3 1/2" side seal strip or duct transition needed.
AIR HANDLERS	PCO3S-14-16	PCO3S-16-16	PCO3S-20-16	Comment
Air Handler (W x D) - 21-1/4 x 20-5/8" CBK48MVT-018/024-030	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 22-5/8" CBK48MVT-030-036	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 24-5/8" CBK48MVT-042-048-060			•	21" x 3" side seal strip or duct transition needed.

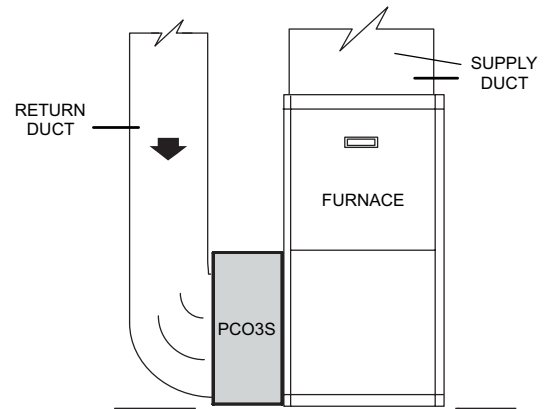


## CABINET MATCH-UPS - PCO3 WITH FURNACE / AIR HANDLER

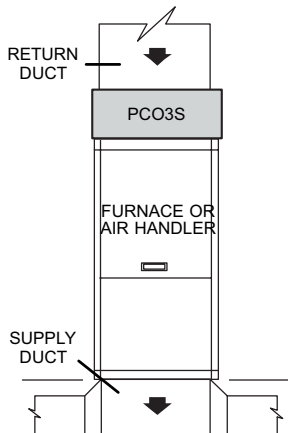
### UPFLOW FURNACE/AIR HANDLER (Bottom Return Air)



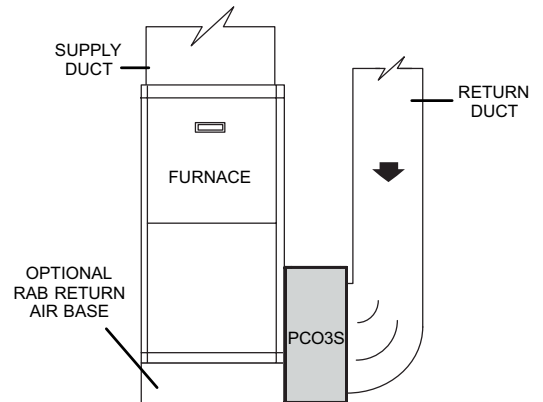
### UPFLOW FURNACE (Side Return Air – up to 4 ton)



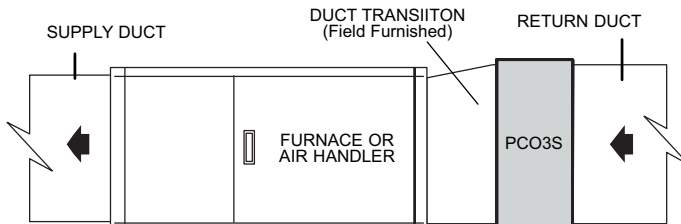
### DOWNFLOW FURNACE/AIR HANDLER



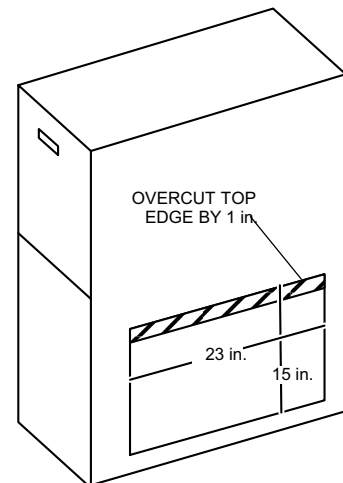
### UPFLOW FURNACE (Option 1 – Side Return Air – 5 ton) (With Optional RAB Return Air Base)



### HORIZONTAL FURNACE/AIR HANDLER



### UPFLOW FURNACE (Option 2 – Side Return Air – 5 ton) (Modified Return Air Opening)



## REVISIONS

Sections	Description of Change
Featured Indoor/Outdoor Products	Updated to reflect latest product offering.
Match-Ups	Updated to reflect new Air Handler models.



Visit us at [www.lennox.com](http://www.lennox.com)

For the latest technical information, [www.LennoxPros.com](http://www.LennoxPros.com)

Contact us at 1-800-9-LENNOX

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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