



RESIDENTIAL
PRODUCT SPECIFICATIONS

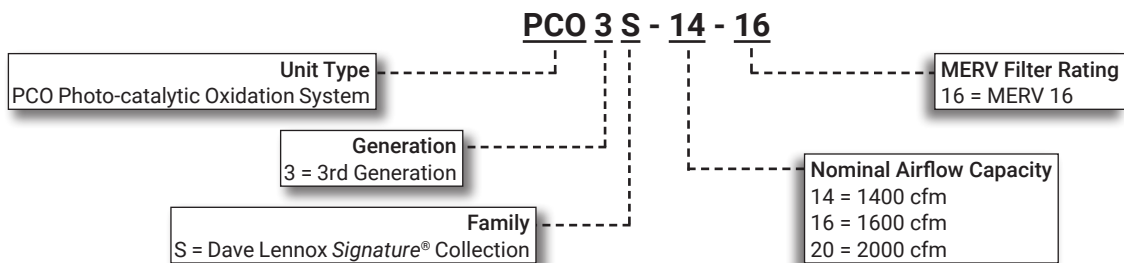
Bulletin No. 210857
October 2020
Supersedes April 2018



* iComfort® S30
Ultra Smart
Thermostat

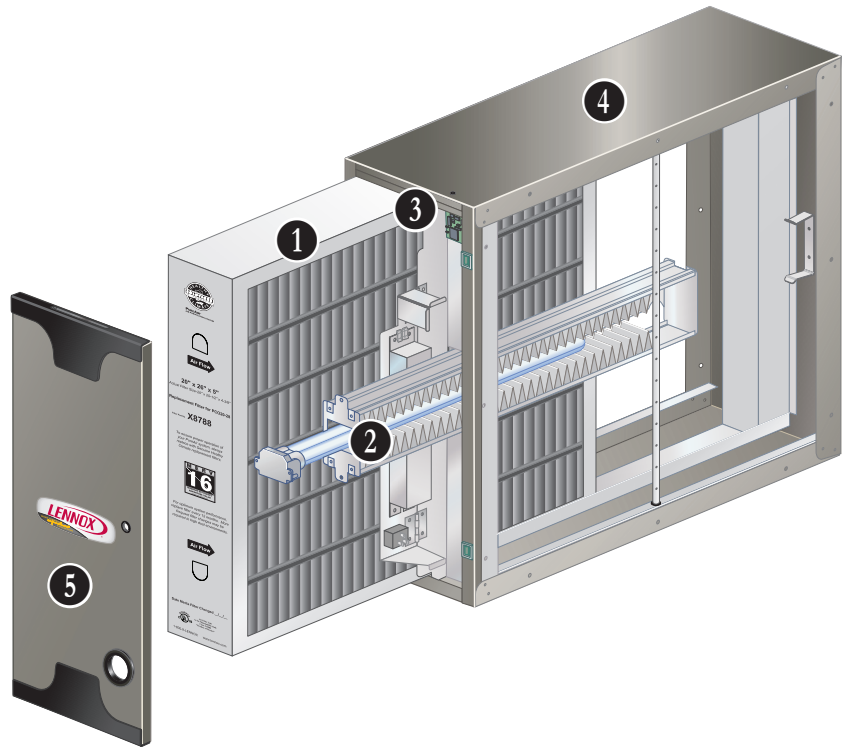
* Not furnished - Order separately.

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 Equipment Limited Warranty certificate included with unit for specific details.

FEATURES

COMMUNICATING FEATURES

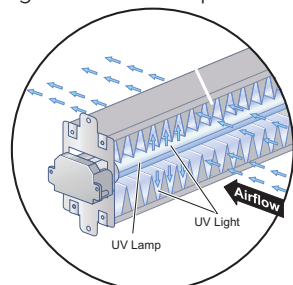
NOTE - For full communication benefits, the PureAir™ S Air Purification System must be used with an iComfort® S30 Ultra-Smart Wi-Fi Thermostat and an iComfort® communicating variable-speed indoor furnace or air handler.

- Multiple sensors in the cabinet automatically detect and send information to the iComfort® S30 Ultra 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

NOTE - The iComfort® S30 Ultra Smart Thermostat requires firmware version 3.4 or higher to take full advantage of the PureAir™ S Air Purification System features.

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 iComfort® Ultra-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

iComfort® S30 Ultra-Smart Wi-Fi Thermostat (part of the iComfort® Residential Communicating Control System)

NOTE - For full feature benefits, the PureAir S Air Purification System must be used with an S30 Ultra Smart Thermostat.

- Recognizes and connects to all iComfort® 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 iComfort® Communicating products to simplify system setup
- Wi-Fi remote temperature monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets
- Smart home automation compatible with Apple HomeKit™, Amazon Alexa®, Google Assistant and IFTTT
- Service alerts and reminders sent via text message or e-mail
- Service Dashboard features online real-time monitoring of installed iComfort® 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 iComfort® Communicating) can easily be added and controlled by the iComfort® S30 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 4-wire, 18-gauge standard thermostat wiring
- High Definition Color Display with Subbase, Smart Hub Controller, wallplate (for retrofit installations) furnished for easy installation

NOTE - See the iComfort® S30 Thermostat Product Specifications bulletin in the Controls section 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
- iComfort® 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 XC25 Variable Capacity Air Conditioners

- ENERGY STAR® qualified
- Up to 26.00 SEER cooling efficiency
- iComfort® Communicating control
- Precise Comfort® Technology
- SilentComfort™ Technology
- Quiet operation, as low as 59 dB
- R-410A refrigerant
- Dependable and efficient variable capacity scroll compressor
- SmartHinge™ louvered coil protection



- Also available - XC21 Two-Stage, SL18XC1 Single-Stage and XC20 or EL18XC1 Variable Capacity Air Conditioner

Dave Lennox *Signature*® Collection XP25 Variable Capacity Heat Pumps

- ENERGY STAR® qualified



- Up to 23.50 SEER and 10.20 HSPF heating efficiency
- iComfort® Communicating control
- Precise Comfort® Technology
- SilentComfort™ Technology
- Quiet operation, as low as 58 dB
- R-410A refrigerant
- Dependable and efficient variable capacity scroll compressor

- SmartHinge™ louvered coil protection
- Also available - XP21 Two-Stage, SL18XP1 Single-Stage or XP20 Variable Capacity Heat Pump

Dave Lennox *Signature*® Collection CBA38MV Variable-Speed Air Handlers

- 4-way multi-position design
- iComfort® Communicating control
- Variable-speed blower motor
- R-410A 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 ³ 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	20 x 21 x 5	16 x 26 x 5	20 x 26 x 5
	Actual	20 x 20-5/8 x 4-3/8	16-3/8 x 25-1/2 x 4-3/8	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 ¹ 230V - 1 phase - 60 hz (less than 1 amp)		
Power Consumption	120 Volt	58	58	58
	¹ 230 Volt	58	58	58

MAINTENANCE SUPPLIES - ORDER SEPARATELY

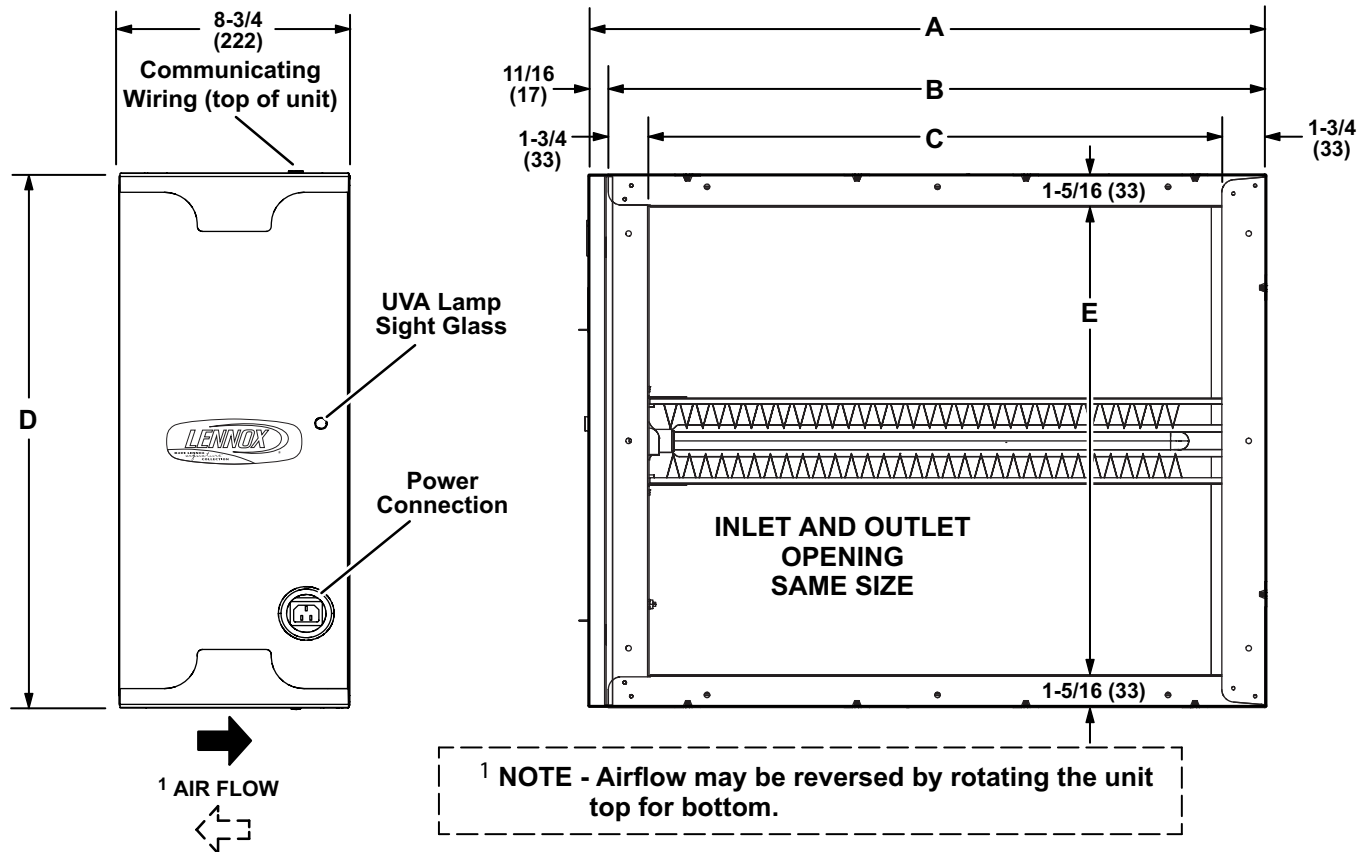
		Y6616	Y6612	Y6608
Annual Maintenance Kit (includes 1 of each below per kit)	Single kit	Y6616	Y6612	Y6608
	Four kit pack	Y6618	Y6614	Y6610
Carbon Clean 16® (MERV 16) Pleated Filter	Size - H x D x W - in.	20 x 21 x 5	16 x 26 x 5	20 x 26 x 5
UVA Lamp	Number of lamps	1	1	1
PureAir™ Cartridge	Size - H x D 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

	91X44	91X44	91X44
Power Cord for 230V Operation	91X44	91X44	91X44

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%

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

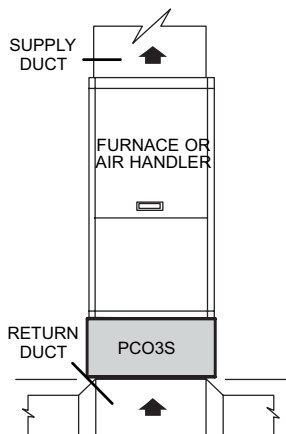
CABINET MATCH-UP - PCO3S WITH FURNACE / AIR HANDLER

ALSO SEE ILLUSTRATIONS ON NEXT PAGE FOR ADDITIONAL DETAILS

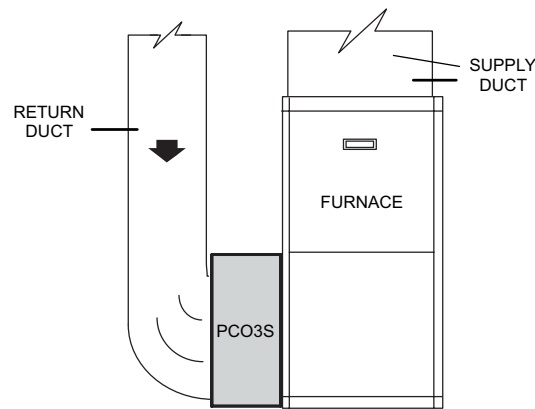
FURNACES	PCO3S Model Number			Comment
	PCO3S-14-16	PCO3S-16-16	PCO3S-20-16	
"A" Width Furnace with Side Return Air		•		No duct transition required.
"A" Width Furnace with Bottom Return Air		•		28-1/2" x 3" side seal strip or duct transition needed.
"B" Width Furnace with Side Return Air		•		No duct transition 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)			•	Option 1 - No duct transition required, use Return Air Base (98M58). Option 2 - 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			•	Option 1 - No duct transition required, use Return Air Base (98M59). Option 2 - 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" CBA38MV-018/024-030	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 22-5/8" CBA38MV-030-036	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 24-5/8" CBA38MV-042-048-060			•	21" x 3" side seal strip or duct transition needed.

CABINET MATCH-UPS - PCO3 WITH FURNACE / AIR HANDLER

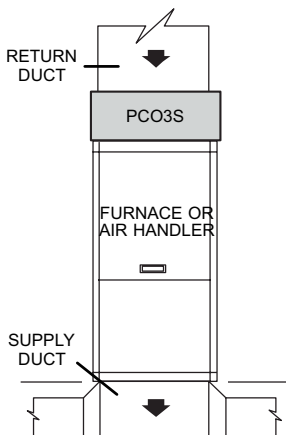
UPFLOW FURNACE/AIR HANDLER (Bottom Return Air)



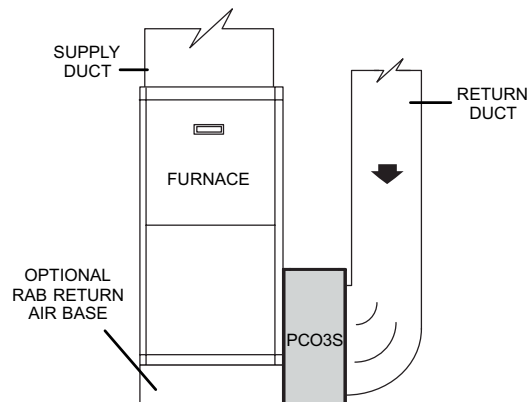
UPFLOW FURNACE (Side Return Air - up to 4 ton)



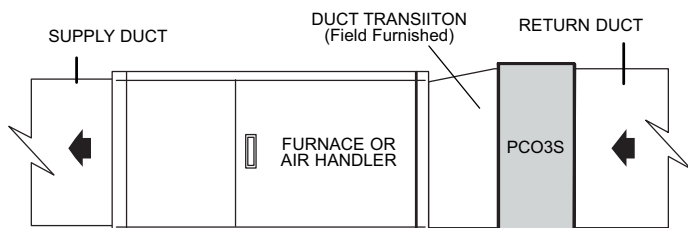
DOWNFLOW FURNACE/AIR HANDLER



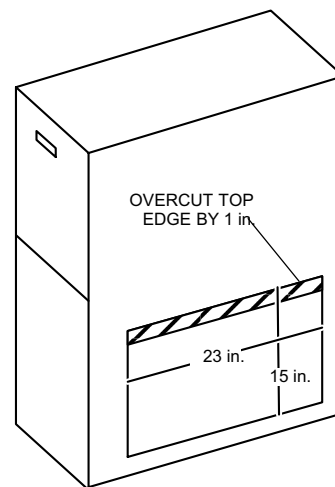
UPFLOW FURNACE (Option 1 - Side Return Air - 5 ton) (With Optional RAB Return Air Base)



HORIZONTAL FURNACE/AIR HANDLER



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



REVISIONS

Sections	Description of Change
Approvals and Warranty	Corrected warranty for residential.



Visit us at www.lennox.com

For the latest technical information, www.LennoxPros.com

Contact us at 1-800-4-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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