# GAS FURNACES

# EL280UH

**ELITE® SERIES** 

**Upflow / Horizontal - Two-Stage Heat** 

# PRODUCT SPECIFICATIONS

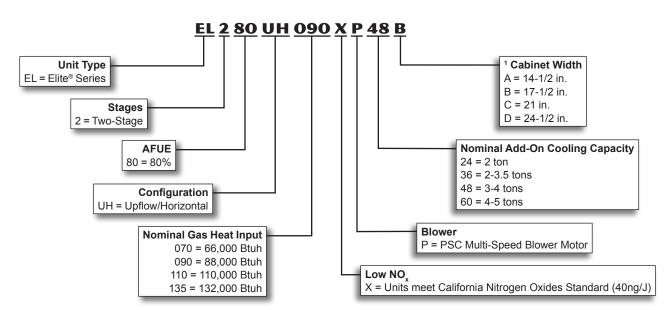
LENNOX

Bulletin No. 210631 August 2015 Supersedes June 2015



AFUE - 80% Input - 66,000 to 132,000 Btuh Nominal Add-on Cooling - 2 to 5 Tons

#### **MODEL NUMBER IDENTIFICATION**



<sup>&</sup>lt;sup>1</sup> Indoor coils with the same letter designation will physically match the furnace.

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#### NOTE - EL280UH FURNACES ARE NOT AVAILABLE IN CANADA!

#### **WARRANTY**

**Duralok™ Aluminized Steel Heat Exchanger -** Limited twenty year warranty in residential applications, ten years in non-residential applications.

**All other covered components -** Limited five year warranty in residential applications, one year in non-residential applications.

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

#### **APPROVALS**

Units are certified by AHRI.

Units tested and rated according to US DOE test procedures and FTC labeling regulations.

Approved by the California Energy Commission and meets California Nitrogen Oxides Standard (NOx) limits of 40 ng/J.

ISO 9001 Registered Manufacturing Quality System. Blower data from unit tests conducted in Lennox Laboratory air test chamber.



#### **APPLICATIONS**

Input capacities of 66,000, 88,000,110,000 and 132,000 Btuh.

Energy efficiency (AFUE) of 80%.

Compact cabinet for upflow, horizontal-left or horizontal-right applications.

Utility room, alcove, closet, crawl space, basement or attic installation.

Lennox add-on indoor coils, high-efficiency air cleaners and humidifiers can easily be added to furnace.

Shipped factory assembled with all controls installed and wired.

Ready for installation in upflow or horizontal right-hand position without any modifications. Horizontal left-hand requires repositioning of pressure switch. Removable bottom seal panel shipped in place for side return air is easily removed for bottom/end return air applications.

Each unit factory test operated to ensure proper operation.

**NOTE - FURNACES CANNOT BE TWINNED!** 

#### **HEATING SYSTEM**

# 1 Lennox Duralok™ Heat Exchanger Assembly



Heavy gauge aluminized steel heat exchanger.

Crimped seam clamshell type design.

Designed for normal expansion and contraction.

Minimum resistance to air flow.

Heat exchanger has

been laboratory life cycle tested in excess of industry standards.

Compact size of heat exchanger permits low overall design of furnace cabinet.

### 2 Inshot Burners

Aluminized steel inshot burners provide efficient, trouble-free operation.

Burner venturi mixes air and gas in correct proportion for proper combustion.

Burner assembly is removable from the unit as a single component for ease of service.

# 3 SureLight® Hot Surface Ignitor

Tough, reliable, long-life, trouble-free performance. Silicon nitride ignitor.

Cemented to steatite block for protection against current leakage.

Ignition leads constructed of nickel plated copper enclosed in high temperature Teflon® insulation for dependable operation.

# **4** Two-Stage Gas Control Valve

24 volt redundant combination two-stage gas control valve combines manual shut off switch (On-Off), automatic electric valve (dual) and gas pressure regulation into a compact combination control.

# **5** Two-Speed Combustion Air Inducer

Heavy duty, permanent split capacitor (PSC) two-speed blower prepurges heat exchanger and safely vents flue products.

Dual pressure switches (low fire/high fire) prove blower operation before allowing gas valve to open.

Operates only during heating cycle.

Direct access allows inducer assembly to be rotated 90° clockwise or counterclockwise to facilitate easy vent attachment.

# 6 Flame Rollout Switches (2)

Manual reset switches are factory installed on burner box.

Switch provides protection from abnormal operating conditions.

#### **Limit Controls**

Automatic reset, primary and secondary limits are accurately located.

Primary limit factory installed on vestibule panel on all units, secondary limit factory installed on blower housing.

#### **Optional Accessories**

#### **High Altitude Pressure Switch Kit**

Required on most units for proper unit operation at altitudes from 4501 to 10,000 ft.

#### Natural Gas to LPG/Propane Conversion Kit

Required for field changeover from natural gas to LPG/ Propane.

### LPG/Propane to Natural Gas Conversion Kit

Required for field changeover from LPG/Propane to natural gas.

#### **Vent Adaptor (Upflow Applications Only)**

Allows venting through a masonry chimney without the need of a flue liner.

Manual reset temperature sensor protects against abnormal operating conditions.

Sensor wiring may be routed from either side of adaptor.

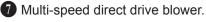
Minimum winter design temperatures:



- −10°F when used with interior masonry chimneys.
- +5°F when used with exterior masonry chimneys.

Refer to Winter Design Temperatures Map on page 6 for application information. Also refer to the installation instructions for detailed information.

### **BLOWER**



Statically and dynamically balanced.

Resiliently mounted.

Blower assembly easily removed for servicing.

Blower speeds are easily changed on the integrated furnace control. See blower performance tables.

# **8** CONTROLS

# SureLight® Integrated Two-Stage Furnace Control Board

Contains all necessary controls and relays to operate furnace.

Combustion air inducer is operated by the integrated furnace control. Prior to ignition, a pre-purge cycle for 15 seconds is initiated. After the main burners are turned off, a post-purge cycle for 5 seconds is run.

Flame sensor assures safe and reliable operation.

Should loss of flame occur the integrated furnace control will initiate 4 re-attempts at ignition before locking out unit operation for 60 minutes.

Watchguard type circuit automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance calls for service.

Jumper settings for single or two stage thermostat operation.

Two selectable 2nd stage recognition times (10 and 15 minutes) are available on the board when the furnace is used with a single stage thermostat. When used with a two stage thermostat, furnace will only initiate second stage operation with a second stage thermostat demand.

Fan control consists of adjustable blower timed-off delay (60, 90, 120, 180 seconds - factory setting 90 seconds) and fixed blower timed-on delay (30 seconds heating, 2 seconds cooling).

For air-conditioning applications, blower is automatically energized on thermostat demand for cooling.

Two accessory terminals furnished for additional power supply requirements for 120 volt (less than 1 amp) power humidifiers and powered air cleaners. A separate 24V accessory terminal is also provided for low voltage accessories.

Ignition control has single red LED to indicate status and as an aid in troubleshooting.

#### 24 Volt Transformer

Furnished and factory installed outside of the control box. 40VA transformer has circuit breaker wired in series.

#### Field Wiring Make-Up Box

Furnished for line voltage wiring.

Factory installed internally on left side of furnace.

Box may be installed on right side of furnace.

#### **Optional Accessories**

#### **Thermostat**

Thermostat (programmable/non-programmable) is not furnished with unit.

See Thermostat Product Specifications bulletins in Controls Section and Lennox Price Book for selection.

#### **Night Service Kit**

Contains most commonly used service parts:

- Furnace Control
- · Ignitor
- · Flame sensor
- Gas valve
- Transformer

#### **Universal Service Kit - Switches**

Kit contains:

- Primary limits (for each model)
- Pressure switches (for each model)
- · Flame rollout switches (for each model)
- Secondary limits (for each model)

#### CABINET

Low-profile, narrow width cabinet allows easy installation.

Heavy-gauge, cold rolled steel construction.

Pre-painted cabinet finish.

Flue outlet on top of cabinet for upflow applications, can be relocated to either side of cabinet for horizontal applications.

Flanges provided on supply air opening for ease of plenum connection or alignment with indoor coil.

Fully insulated cabinet with foil faced insulation on sides and back of heating compartment and mat faced insulation in blower compartment.

Sealed blower compartment. Inner blower compartment access panel seals blower compartment from air leakage.

Cabinet door can be removed without any tools Complete service access.

Safety interlock switch automatically shuts off power to unit when inner blower compartment access panel is removed.

(1) Gas piping and electrical inlets are provided in both sides of cabinet.

#### **Return Air Entry:**

For bottom/end return-air entry for upflow/horizontal applications, remove furnished bottom seal panel from cabinet.

For side return-air entry (upflow applications only), corners are marked on either side of cabinet for return air cut-outs.

See dimension drawings.

# NOTE - 60C and 60D size units that require second stage air volumes over 1800 cfm must have one of the following:

- Single side return air with transition, to accommodate 20 x 25 x 1 in. cleanable air filter. Required to maintain proper air velocity.
- Single side return air with Optional Return Air Base
- 3. Bottom return air.
- 4. Return air from both sides.
- 5. Bottom and one side return air.

See Blower Performance Tables for additional information.

#### Coil Match-Up

All furnaces exactly match C33, C35, CX34 and CX35 cased upflow indoor coils and CH33 and CH35 horizontal indoor coils with same letter designation in model number. No adaptor required. Engaging holes furnished on cabinet for alignment.

C33 uncased coils match furnaces without any overhang but require an optional adaptor base or field fabricated transition to match furnace opening.

See C33 coil bulletin for additional information.

#### Low Leakage Cabinet

All models have less than 2% air leakage and meet ANSI/ASHRAE Standard 193-2010 "Method of Test for Determining the Air Tightness of HVAC Equipment".

#### **Optional Accessories**

#### **Horizontal Suspension Kit**

Provides suspension of unit and indoor coil in horizontal applications.

Allows complete service access.

Consists of corner mounted hanging brackets with vibration isolators, return air end support rail and hardware for assembly.

Metal hanging straps must be field provided.

#### **Return Air Base**

A field fabricated transition or Return Air Base is required when using an IAQ product higher than 14-3/16 in. installed next to the unit and serviced from the front. IAQ products higher than 20 in. require a field fabricated transition.

Base must be used for 60C and 60D models with air volumes over 1800 cfm in upflow applications when only one side return is required.

Cabinet is shipped flat for easy field assembly and is pre-painted steel to match the furnace.

See Dimension Drawing.

#### FILTER (not furnished)

Filter and provisions for external mounting must be field provided.

#### **Optional Accessories**

# Air Filter and Rack Kit for Horizontal Return Air (End) Applications

Washable or vacuum cleanable polyurethane frame type filter and external end return air rack available for field installation.

Rack has filter door for easy filter servicing.

Flanges on rack allow easy duct connection.

See dimension drawing.

#### Air Filter and Rack Kit for Upflow Side Return Air

Applications - Not for use with Return Air Base

Washable or vacuum cleanable polyurethane frame type filter and external side return air rack available for field installation.

Available in single and ten pack kits.

Rack has filter door for easy filter servicing.

Flanges on rack allow easy duct connection.

Field installs on either side of unit cabinet. See dimension drawing.

#### 99% WINTER DESIGN TEMPERATURES FOR THE CONTIGUOUS UNITED STATES



This map is a necessarily generalized guide to temperatures in the contiguous Unites States. Temperatures shown for areas such as mountainous regions and large urban centers may not be accurate. The data used to develop this map was taken from the 1993 ASHRAE Fundamentals Handbook (Chapter 24, Table 1: Climate Conditions for the United States).

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#### **INSTALLATION CLEARANCES - INCHES (MM)**

#### **UPFLOW POSITION**

OI I LOW I COITION		
Vent Type	Type B1	Type C
Sides	0 (0)	1 0 (0)
Rear	0 (0)	0 (0)
Тор	1 (25)	1 (25)
Front	2-1/4 (57)	2-1/4 (57)
Front (service/alcove)	24 (610)	24 (610)
Floor	Combustible	Combustible
Flue	1 (25)	6 (152)

NOTE – Air for combustion must conform to the methods outlined in the National Fuel Gas Code (NFPA 54/ANSI-Z223.1).

NOTE – In the U.S. flue sizing must conform to the methods outlined in the current National Fuel Gas Code (NFPA 54/ANSI-Z223.1) or applicable provisions of local building codes.

<sup>1</sup> Left side requires 4 in. if single wall vent is used on 14-1/2 in. cabinets, 2 in. on 17-1/2 in. cabinets.

# HORIZONTAL POSITION

Vent Type	Type B1	Type C
End	1 2	1 2
Rear	0 (0)	0 (0)
Тор	1 0 (0)	1 0 (0)
Front	2-1/4 (57)	2-1/4 (57)
Front (service)	24 (610)	24 (610)
Floor	Combustible	Combustible
Flue	1 (25)	6 (152)

NOTE – Air for combustion must conform to the methods outlined in the National Fuel Gas Code (NFPA 54/ANSI-Z223.1).

NOTE – In the U.S. flue sizing must conform to the methods outlined in the current National Fuel Gas Code (NFPA 54/ANSI-Z223.1) or applicable provisions of local building codes.

<sup>1</sup> Line contact installation permissible between jacket top or sides and building joists.

SPECIFICATIO	NS					
Gas		Model No.	EL280UH070P24A	EL280UH070P36A	EL280UH090P36B	
Heating		Model No Low Nox		EL280UH070XP36A		
Performance		<sup>1</sup> AFUE	80%	80%	80%	
	High	Input - Btuh	66,000	66,000	88,000	
	Fire	Output - Btuh	52,000	53,000	70,000	
		Temperature rise range - °F	40 - 70	30 - 60	35 - 65	
		Gas Manifold Pressure (in. w.g.)  Nat. Gas / LPG/Propane	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0	
	Low	Input - Btuh	43,000	43,000	57,000	
	Fire	Output - Btuh	35,000	35,000	46,000	
		Temperature rise range - °F	25 - 55	20 - 50	25 - 55	
		Gas Manifold Pressure (in. w.g.)  Nat. Gas / LPG/Propane	1.7 / 4.9	1.7 / 4.9	1.7 / 4.9	
High static - in. w.g.		Heating	0.5	0.5	0.5	
		Cooling	0.5	0.5	0.5	
Connections		Flue connection - in. round	4	4	4	
in.		Gas pipe size IPS	1/2	1/2	1/2	
Indoor	Whe	eel nominal diameter x width - in.	10 x 7	10 x 8	10 x 9	
Blower		Motor output - hp	1/5	1/3	1/3	
		Tons of add-on cooling	1.5 - 2	2 - 3.5	2 - 3.5	
		Air Volume Range - cfm	492 - 1073	775 - 1620	785 - 1760	
<b>Electrical Data</b>		Voltage	12	0 volts - 60 hertz - 1 pha	ise	
		Blower motor full load amps	3.1	6.1	6.1	
		Maximum overcurrent protection	15	15	15	
<b>Shipping Data</b>		lbs 1 package	122	126	141	

NOTE - Filters and provisions for mounting are not furnished and must be field provided.

<sup>&</sup>lt;sup>1</sup> Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

Gas		Model No.	EL280UH090P48B	EL280UH110P48C	
Heating		Model No Low Nox	EL280UH090XP48B		
Performance		¹ AFUE	80%	80%	
	High	Input - Btuh	88,000	110,000	
	Fire	Output - Btuh	69,000	86,000	
		Temperature rise range - °F	30 - 60	35 - 65	
	(	Gas Manifold Pressure (in. w.g.)  Nat. Gas / LPG/Propane	3.5 / 10.0	3.5 / 10.0	
	Low	Input - Btuh	57,000	72,000	
	Fire	Output - Btuh	46,000	58,000	
		Temperature rise range - °F	20 - 50	25 - 55	
	Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane		1.7 / 4.9	1.7 / 4.9	
High static - in. w.g.		Heating	0.5	0.5	
		Cooling	0.5	0.5	
Connections		Flue connection - in. round	4	4	
n.		Gas pipe size IPS	1/2	1/2	
ndoor	Whe	el nominal diameter x width - in.	10 x 10	10 x 10	
Blower		Motor output - hp	1/2	1/2	
		Tons of add-on cooling	3 - 4	3 - 4	
		Air Volume Range - cfm	1020 - 2030	1050 - 2125	
Electrical Data		Voltage	120 volts - 60	hertz - 1 phase	
		Blower motor full load amps	8.2	8.2	
	N	Maximum overcurrent protection	15	15	
Shipping Data		lbs 1 package	144	161	

NOTE - Filters and provisions for mounting are not furnished and must be field provided.

Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

SPECIFICATIO	NS			
Gas		Model No.	EL280UH110P60C	EL280UH135P60D
Heating		Model No Low Nox	EL280UH110XP60C	
Performance		<sup>1</sup> AFUE	80%	80%
	High	Input - Btuh	110,000	132,000
	Fire	Output - Btuh	87,000	106,000
		Temperature rise range - °F	30 - 60	35 - 65
	(	Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane	3.5 / 10.0	3.5 / 10.0
	Low	Input - Btuh	72,000	86,000
	Fire	Output - Btuh	58,000	70,000
		Temperature rise range - °F	20 - 50	25 - 55
	(	Gas Manifold Pressure (in. w.g.)  Nat. Gas / LPG/Propane	1.7 / 4.9	1.7 / 4.9
High static - in. w.g.		Heating	0.5	0.5
		Cooling	0.5	0.5
Connections		Flue connection - in. round	4	<sup>2</sup> 4
n.		Gas pipe size IPS	1/2	1/2
Indoor	Whe	el nominal diameter x width - in.	11-1/2 x 10	11 x 11
Blower		Motor output - hp	1	1
		Tons of add-on cooling	4 - 5	4 - 5
		Air Volume Range - cfm	1470 - 2520	1435 - 2750
Electrical Data		Voltage	120 volts - 60	hertz - 1 phase
		Blower motor full load amps	10	11.5
	N	Maximum overcurrent protection	15	15
Shipping Data		lbs 1 package	169	188

 $<sup>\</sup>ensuremath{\mathsf{NOTE}}$  - Filters and provisions for mounting are not furnished and must be field provided.

<sup>&</sup>lt;sup>1</sup> Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces

<sup>&</sup>lt;sup>2</sup> Flue connection on the unit is 4 in. diameter. Most applications will require 5 in. venting and field supplied 4 x 5 in. adaptor. See Venting Tables in the Installation Instructions for detailed information.

#### **OPTIONAL ACCESSORIES - ORDER SEPARATELY**

NOTE - FURNACES CANNOT BE TWINNED!

			"A" Width Models	"B" Width Models	"C" Width Models	"D" Width Models
CABINET ACCESSORIES	•	'		1		
Horizontal Suspension Kit	- Horizontal only		51W10	51W10	51W10	51W10
Return Air Base - Upflow o	nly		65W75	50W98	50W99	51W00
FILTERS		'		'	'	'
<sup>1</sup> Air Filter and Rack Kit	Horizontal (en	d)	87L95	87L96	87L97	87L98
		Size of filter - in.	14 x 25 x 1	18 x 25 x 1	20 x 25 x 1	25 x 25 x 1
	Side Return	Single	44J22	44J22	44J22	44J22
		Ten Pack	66K63	66K63	66K63	66K63
		Size of filter - in.	16 x 25 x 1			
SERVICE KITS		'		'	'	'
Night Service Kit			84W46	84W46	84W46	84W46
Universal Service Kit - Swit	ches		89W19	89W19	89W19	89W19
VENTING		'		•		
Vent Adaptor - 6 in. conn.	size upflow applic	ations only	18M79	18M79	18M79	18M79

<sup>&</sup>lt;sup>1</sup> Cleanable polyurethane, frame-type filter.

GAS H	GAS HEAT ACCESSORIES - ORDER SEPARATELY												
Input	F	High Altitude Pressure Switch		Natural Gas to LPG/Propane Kit	LPG/Propane to Natural Gas Kit	Natural Gas High Altitude Orifice Kit	LPG/Propane High Altitude Orifice Kit						
	0 - 4500 ft.	0 - 4500 ft. 4501 - 7500 ft.		0 - 7500 ft.	0 - 7500 ft.	7501 - 10,000 ft.	7501 - 10,000 ft.						
070	No Change	91W53	73W35	11K51	77W09	73W37	77W11						
090	No Change	91W53	73W35	11K51	77W09	73W37	77W11						
110	No Change	91W53	73W35	11K51	77W09	73W37	77W11						
135	No Change	73W33	73W34	11K51	77W09	73W37	77W11						

#### **HIGH ALTITUDE DERATE**

NOTE - Units may be installed at altitudes up to 4500 ft. above sea level without any modifications.

At altitudes above 4500 ft. units must be derated to match information in the shaded area shown below.

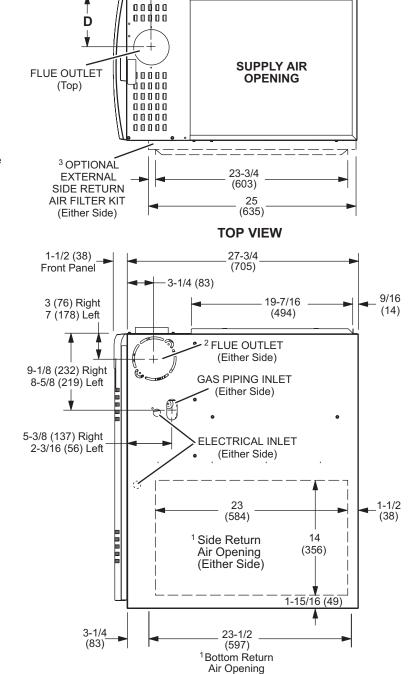
NOTE - This is the only permissible derate for these units.

					Gas Mani	fold Press	ure (Outle	et) in. w.g.	•			
		0 - 450	00 Feet			4501 -7	500 Feet		7501 - 10,000 ft.			
Input	Natura	atural Gas LPG/Propan		ropane	Natural Gas		LPG/Propane		<sup>1</sup> Natural Gas		LPG/Propane	
	High Fire	Low Fire	High Fire	Low Fire	High Fire	Low Fire	High Fire	Low Fire	High Fire	Low Fire	High Fire	Low Fire
070	3.5	1.7	10	4.9	3.2	1.5	10	4.9	3.5	1.7	10	4.9
090	3.5	1.7	10	4.9	3.2	1.5	10	4.9	3.5	1.7	10	4.9
110	3.5	1.7	10	4.9	3.2	1.5	10	4.9	3.5	1.7	10	4.9
135	3.5	1.7	10	4.9	2.8	1.5	10	4.9	3.5	1.7	10	4.9

<sup>&</sup>lt;sup>1</sup> Natural Gas High Alitude Orifice Kit required.

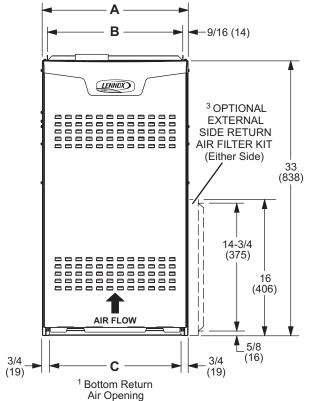
#### **DIMENSIONS - INCHES (MM) - UPFLOW POSITION**

- NOTE 60C and 60D size units that require air volumes over 1800 cfm (850 L/s) must have one of the following:
- 1. Single side return air with transition, to accommodate 20 x 25 x 1 in. (508 x 635 x 25 mm) cleanable air filter. Required to maintain proper air velocity.
- 2. Single side return air with optional Return Air Base
- 3. Bottom return air.
- 4. Return air from both sides.
- 5. Bottom and one side return air.
- See Blower Performance Tables for additional information.
- <sup>2</sup> Flue outlet may be horizontal but furnace must be vented vertically
- <sup>3</sup> Optional External Side Return Air Filter Kit is not for use with the optional Return Air Base.



SIDE VIEW

**◄** 3-1/8 (79)



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	Α		E	В		С		D	
Model No.	in.	mm	in.	mm	in.	mm	in.	mm	
EL280UH070P24A EL280UH070P36A	14-1/2	368	13-3/8	340	13	330	4-3/4	121	
EL280UH090P36B EL280UH090P48B	17-1/2	446	16-3/8	416	16	406	6-1/4	159	
EL280UH110P48C EL280UH110P60C	21	533	19-7/8	504	19-1/2	495	8	203	
EL280UH135P60D	24-1/2	622	23-3/8	594	23	584	9-3/4	248	

#### **DIMENSIONS - INCHES (MM) - HORIZONTAL POSITION**

EL280UH135P60D

24-1/2

23-3/8

594

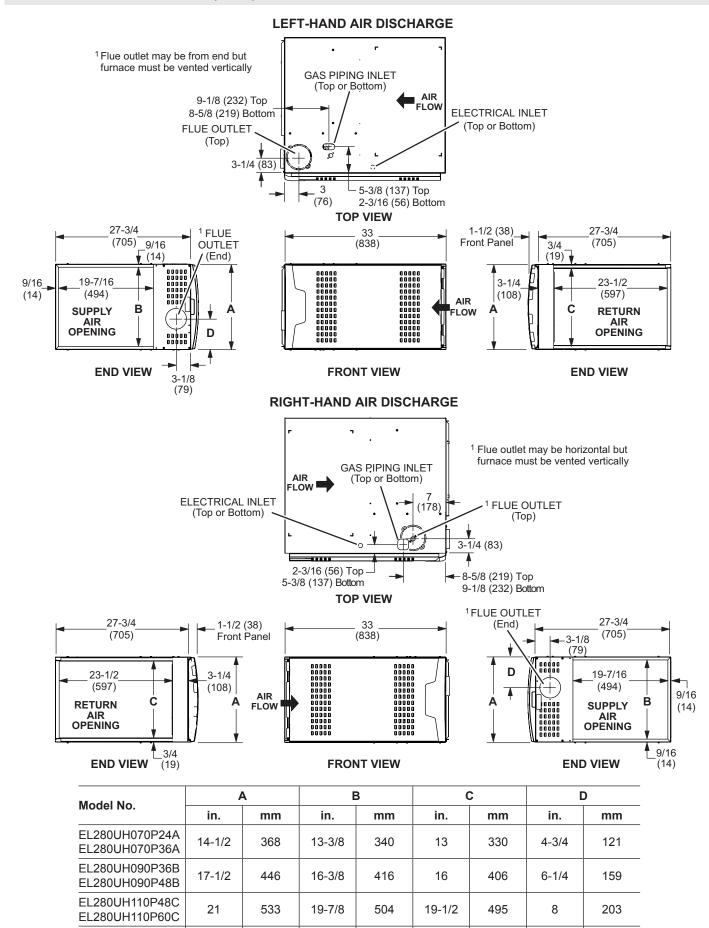
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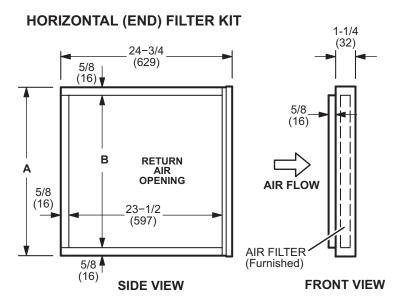
584

9-3/4

248

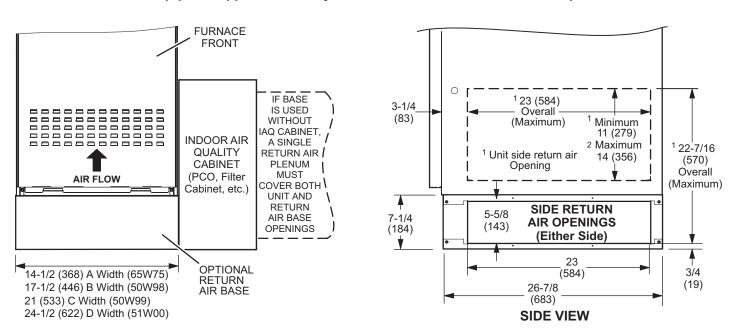
622





Furnace Cabinet Width	Catalog		<b>A</b>	E	3
	Number	in.	mm	in.	mm
Α	87L95	14	356	12-3/4	324
В	87L96	18	457	16-3/4	425
С	87L97	21	533	18-3/4	476
D	87L98	25	635	23-3/4	603

# Optional Return Air Base (Upflow Applications Only - For use with A, B, C and D cabinets)



NOTE- Optional Side Return Air Filter Kits are not for use with Optional Return Air Base.

<sup>&</sup>lt;sup>1</sup> Both the unit return air opening and the base return air opening must be covered by a single plenum or IAQ cabinet.

Minimum unit side return air opening dimensions for units requiring 1800 cfm or more of air (W x H): 23 x 11 in. (584 x 279 mm).

The opening can be cut as needed to accommodate plenum or IAQ cabinet while maintaining dimensions shown.

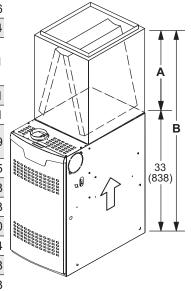
Side return air openings must be cut in the field. There are cutting guides stenciled on the cabinet for the side return air opening. The size of the opening must not extend beyond the markings on the furnace cabinet.

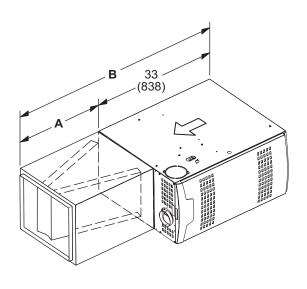
<sup>&</sup>lt;sup>2</sup> To minimize pressure drop, the largest opening height possible, up to 14 in. (356 mm), is preferred.

## **DIMENSIONS - INCHES (MM) - FURNACE/COIL COMBINED DIMENSIONS**

#### **UPFLOW POSITION**

UPFLOW POSIT	ION								-	
	Model No			Ca	sed			_	ased only)	
			Α		В		Α		В	,
CX34	C35/CX35	C33	in.	mm	in.	mm	in.	mm	in.	mm
		C33-18A	12-1/2	318	45-1/2	1156	9-3/4	248	42-3/4	1086
CX34-19A-6F		C33-19A	16-1/2	419	49-1/2	1257	9-3/4	248	42-3/4	1086
		C33-24A	16-1/2	419	49-1/2	1257	14	356	47	1194
	C35/CX35-18/24A-6F C35/CX35-18/24B-6F	C33-24B C33-24C	16-1/2	419	49-1/2	1257	13-7/8	352	46-7/8	1191
CX34-25A-6F	C35/CX35-24A-6F	C33-25A	18-1/2	470	51-1/2	1308	16-1/4	413	49-1/4	1251
CX34-25B-6F	C35/CX35-24B-6F	C33-25B	18-1/2	470	51-1/2	1308	15-7/8	403	48-7/8	1241
CX34-30B-6F CX34-30C-6F		C33-30B C33-30C	20-1/2	521	53-1/2	1359	17-3/4	451	50-3/4	1289
CX34-30A-6F		C33-30A	20-1/2	521	53-1/2	1359	18	457	51	1295
CX34-31A-6F	C35/CX35-30A-6F	C33-31A	22-1/2	572	55-1/2	1410	21-1/4	540	54-1/4	1378
CX34-31B-6F	C35/CX35-30B-6F	C33-31B	22-1/2	572	55-1/2	1410	20-1/4	514	53-1/4	1353
CX34-36A-6F	C35/CX35-30/36A-6F	C33-36A	24-1/2	622	57-1/2	1461	22-1/8	562	55-1/8	1400
CX34-36B-6F	C35/CX35-30/36B-6F	C33-36B	24-1/2	622	57-1/2	1461	21-7/8	556	54-7/8	1394
CX34-36C-6F	C35/CX35-30/36C-6F	C33-36C	24-1/2	622	57-1/2	1461	21-1/4	540	54-1/4	1378
CX34-38A-6F	C35/CX35-36A-6F	C33-38A	24-1/2	622	57-1/2	1461	22-1/4	565	55-1/4	1403
CX34-38B-6F	C35/CX35-36B-6F	C33-38B	24-1/2	622	57-1/2	1461	22	559	55	1397
CX34-42B-6F		C33-42B	24-1/2	622	57-1/2	1461	21-7/8	556	54-7/8	1394
CX34-43B-6F	C35/CX35-48B-6F	C33-43B	27-1/2	699	60-1/2	1537	26-1/4	667	59-1/4	1505
CX34-43C-6F	C35/CX35-48C-6F	C33-43C	27-1/2	699	60-1/2	1537	25-3/4	654	58-3/4	1492
		C33-44C	24-1/2	622	57-1/2	1461	21-1/2	546	54-1/2	1384
CX34-44/48B-6F		C33-48B	24-1/2	622	57-1/2	1461	22-1/8	562	55-1/8	1400
CX34-44/48C-6F		C33-48C	24-1/2	622	57-1/2	1461	21-1/2	546	54-1/2	1384
CX34-49C-6F	C35/CX35-49C-6F	C33-49C	29-1/2	749	62-1/2	1588	28-1/2	724	61-1/2	1562
CX34-50/60C-6F	C35/CX35-50/60C-6F	C33-50/60C	27-1/2	699	60-1/2	1537	24-3/4	629	57-3/4	1467
CX34-60D-6F		C33-60D	25-1/2	648	58-1/2	1486	24-3/4	629	57-3/4	1467
CX34-62C-6F	CX35-60C-6F	C33-62C	31-1/2	800	64-1/2	1638	30-5/8	778	63-5/8	1616
CX34-62D-6F	CX35-60D-6F	C33-62D	29-1/2	749	62-1/2	1588	28-3/4	730	61-3/4	1568





# **HORIZONTAL POSITION**

Model	<i>A</i>	4	В			
Number	in.	mm	in.	mm		
С	H33					
CH33-18A-2F	21-1/2	546	54-1/2	1384		
CH33-24/30A-2F, CH33-42B-2F, CH33-36A-2F, CH33-48C-2F, CH33-36B-2F, CH33-60D-2F CH33-36C-2F,	26-1/2	673	59-1/2	1511		
CH33-44/48B-2F, CH33-62D-2F CH33-50/60C-2F,	31-1/2	800	64-1/2	1638		
С	H35					
CH35-18A-2F, CH35-36A-2F, CH35-24A-2F, CH35-36B-2F, CH35-36C-2F, CH35-30B-2F, CH35-42C-2F, CH35-48C-2F	26-1/2	673	59-1/2	1511		
CH35-30A-2F, CH35-51C-2F, CH35-42B-2F, CH35-48B-2F,	31-1/2	880	64-1/2	1638		

#### EL280UH070P24A PERFORMANCE (Less Filter)

					•							
External	Air \	Air Volume / Watts at Various Blower Speeds										
Static Pressure	Hi	gh		ium- gh		ium- ow	Low					
in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts				
0.10	1073	430	863	332	727	267	657	232				
0.20	1076	415	848	324	716	261	641	227				
0.30	1060	399	850	315	703	255	634	223				
0.40	1039	380	825	301	693	247	624	216				
0.50	1004	357	809	289	680	236	608	208				
0.60	951	345	778	270	656	227	589	199				
0.70	906	320	749	258	630	213	546	188				
0.80	836	298	685	239	584	198	492	171				

NOTES - All air data is measured external to unit without filter (not furnished - field provided)

## EL280UH090P36B PERFORMANCE (Less Filter)

External	Air \	Air Volume / Watts at Various Blower Speeds									
Static Pressure	High			ium- gh		ium- ow	Low				
in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts			
0.10	1760	730	1435	576	1185	452	970	378			
0.20	1725	683	1420	547	1170	440	975	368			
0.30	1685	656	1410	525	1170	420	980	356			
0.40	1630	625	1370	501	1150	400	955	340			
0.50	1535	569	1315	469	1125	391	925	326			
0.60	1470	533	1275	440	1085	367	910	309			
0.70	1365	490	1185	407	1020	344	840	290			
0.80	1255	466	1105	380	935	314	785	266			

NOTES - All air data is measured external to unit without filter (not furnished - field provided)

#### EL280UH070P36A PERFORMANCE (Less Filter)

External	Air \	Air Volume / Watts at Various Blower Speeds									
Static Pressure	High			ium- gh		ium- ow	Low				
in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts			
0.10	1620	658	1365	568	1115	468	945	374			
0.20	1580	621	1355	535	1135	442	960	362			
0.30	1520	595	1335	513	1130	423	955	350			
0.40	1480	562	1300	478	1100	403	945	335			
0.50	1400	520	1270	450	1080	382	925	320			
0.60	1340	490	1205	420	1035	358	880	301			
0.70	1245	458	1125	393	975	333	835	282			
0.80	1160	434	1045	364	915	310	775	262			

NOTES - All air data is measured external to unit without filter (not furnished - field provided)

#### EL280UH090P48B PERFORMANCE (Less Filter)

External	Air \	Air Volume / Watts at Various Blower Speeds										
Static Pressure	High			ium- gh	_	ium- ow	Low					
in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts				
0.10	2030	804	1780	719	1525	613	1280	518				
0.20	1910	740	1740	666	1535	580	1305	493				
0.30	1840	698	1705	643	1500	551	1305	474				
0.40	1770	664	1635	594	1460	517	1280	445				
0.50	1665	625	1560	567	1410	483	1225	420				
0.60	1585	595	1470	523	1330	451	1190	391				
0.70	1470	561	1365	483	1260	421	1115	368				
0.80	1355	514	1230	433	1155	392	1020	338				

NOTES - All air data is measured external to unit without filter (not furnished - field provided)

#### EL280UH110P48C PERFORMANCE (Less Filter)

External	Air \	Air Volume / Watts at Various Blower Speeds										
Static Pressure	High			ium- gh		ium- ow	Low					
in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts				
0.10	2125	919	1820	747	1555	648	1300	540				
0.20	2080	862	1790	705	1540	619	1335	516				
0.30	2015	807	1745	652	1545	587	1335	498				
0.40	1940	748	1695	629	1505	552	1320	470				
0.50	1850	716	1635	581	1470	523	1295	449				
0.60	1775	679	1575	560	1395	484	1235	417				
0.70	1680	637	1470	508	1320	450	1170	387				
0.80	1560	592	1350	469	1205	404	1050	345				

NOTES - All air data is measured external to unit without filter (not furnished - field provided)

#### EL280UH110P60C PERFORMANCE (Less Filter)

		• · =···	O			· ,										
		Air Volume / Watts at Different Blower Speeds														
External	Botton	Returi	n Air, Si	de Retu	ırn Air v	with Op	tional F	Return	Single	Side Re	eturn Ai	r – Air v	olumes	in <b>bold</b>	require	field
Static	Air Bas	Air Base, Return Air from Both Sides or Return Air from							fabricat	ed trans	sition to	accomn	nodate 2	20 x 25 x	د 1 in. a	ir filter
Pressure	Bottom	Bottom and One Side.							in order	to mair	ntain pro	per air	velocity.			
in. w.g.	Hi	High Medium-High Medium-Low Low				w	Hi	gh	Mediu	m-High	Mediu	m-Low	Lo	ow		
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	2520	1359	2250	1034	1860	841	1455	654	2605	1454	2160	1060	1740	848	1430	651
0.20	2465	1329	2230	1018	1870	823	1480	647	2505	1401	2150	1018	1785	838	1450	649
0.30	2385	1307	2180	981	1885	809	1540	646	2435	1349	2115	991	1795	818	1485	638
0.40	2295	1256	2105	942	1865	778	1570	638	2350	1308	2070	965	1805	801	1480	631
0.50	2200	1214	2055	909	1845	762	1570	619	2260	1274	2010	929	1785	775	1480	621
0.60	2130	1186	1985	882	1795	741	1550	604	2175	1228	1955	901	1755	752	1490	611
0.70	2015	1150	1890	848	1720	711	1505	580	2085	1186	1850	853	1710	722	1460	594
0.80	1905	1105	1810	815	1675	687	1470	565	1965	1147	1785	818	1640	689	1425	567

NOTES - All air data is measured external to unit without filter (not furnished - field provided)

## EL280UH135P60D PERFORMANCE (Less Filter)

		Air Volume / Watts at Different Blower Speeds														
External	Bottom	ottom Return Air, Side Return Air with Optional Return								Side Re	turn Ai	<b>r</b> – Air v	olumes	in <b>bold</b>	require	field
		ir Base, Return Air from Both Sides or Return Air from							fabricat	ed trans	sition to	accomn	nodate 2	20 x 25 x	k 1 in. a	ir filter
Pressure	Bottom	Bottom and One Side.							in order	to mair	ntain pro	per air	velocity.			
in. w.g.	Hi	gh	Mediu	m-High	Mediu	m-Low	Lo	w	Hi	gh	Mediu	m-High	Mediu	m-Low	Lo	ow
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	2750	1441	2220	1056	1725	825	1395	625	2725	1463	2180	1075	1715	827	1320	624
0.20	2720	1392	2235	1029	1785	810	1445	618	2640	1400	2180	1051	1720	819	1380	626
0.30	2605	1362	2220	1002	1820	800	1460	623	2575	1374	2165	1005	1790	803	1420	622
0.40	2495	1312	2185	968	1845	779	1485	616	2495	1343	2145	988	1775	791	1450	617
0.50	2420	1275	2135	939	1825	767	1505	605	2405	1292	2105	948	1780	777	1470	610
0.60	2335	1234	2080	909	1825	753	1495	593	2305	1257	2045	914	1775	753	1480	593
0.70	2220	1190	1995	864	1760	716	1475	576	2215	1214	1970	884	1740	727	1455	583
0.80	2120	1157	1890	835	1680	686	1435	558	2110	1170	1890	851	1675	699	1430	565

NOTES - All air data is measured external to unit without filter (not furnished - field provided)

REVISIONS	
Sections	Description of Change
Furnace/Coil Combined Dimensions	Added C35, CH35 and CX35 coils.







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