



# GAS FURNACES

## EL280UH

### ELITE® SERIES

#### Upflow / Horizontal - Two-Stage Heat

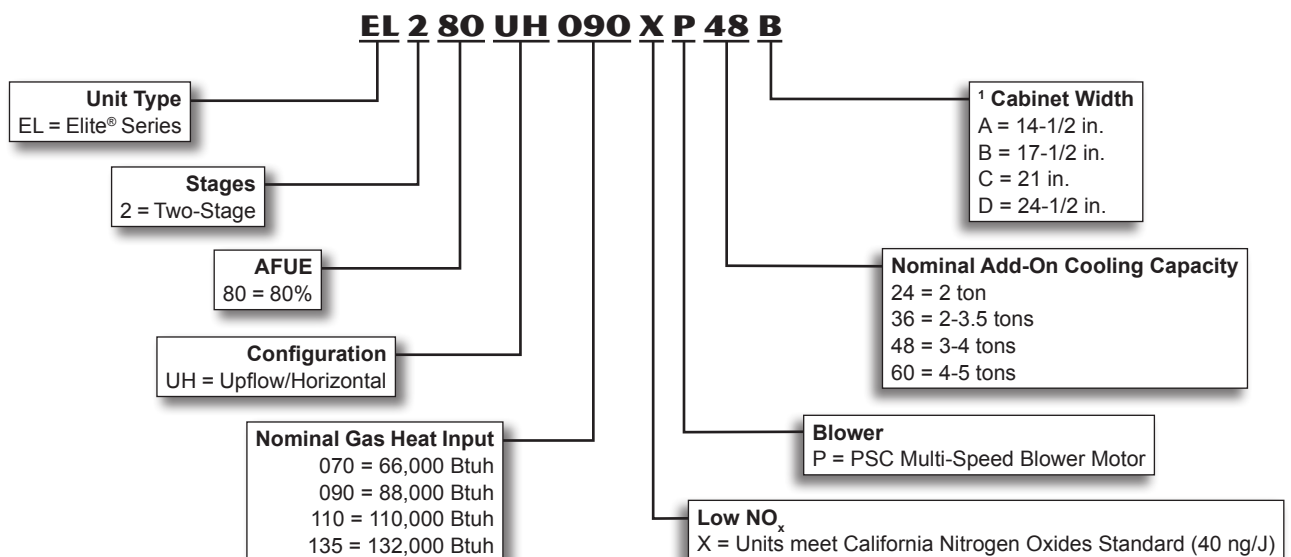
## PRODUCT SPECIFICATIONS

Bulletin No. 210631  
April 2019  
Supersedes October 2018



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

## MODEL NUMBER IDENTIFICATION



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

## FEATURES

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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 (NO<sub>x</sub>) limits of 40 ng/J.

ISO 9001 Registered Manufacturing Quality System.

Blower data from unit tests conducted in Lennox Laboratory air test chamber.

#### California Only

If installed in South Coast Air Quality Management District (SCAQMD) only:

This furnace does not meet the SCAQMD Rule 1111 NO<sub>x</sub> emission limit (14 ng/J), and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the Clean Air Furnace Rebate Program:

[www.CleanAirFurnaceRebate.com](http://www.CleanAirFurnaceRebate.com).

If installed in San Joaquin Valley Air Pollution Control District (SJVAPCD) only:

This furnace does not meet the SJVAPCD Rule 4905 NO<sub>x</sub> emission limit (14 ng/J), and thus is subject to a mitigation fee of up to \$450.



### 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.

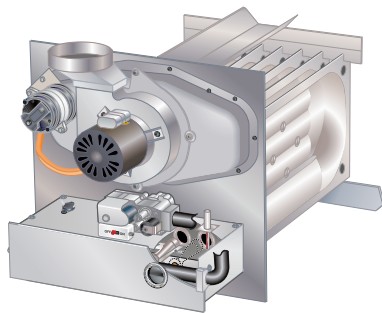
Each unit factory test operated to ensure proper operation.

**NOTE - FURNACES CANNOT BE TWINNED!**

## FEATURES

### 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.

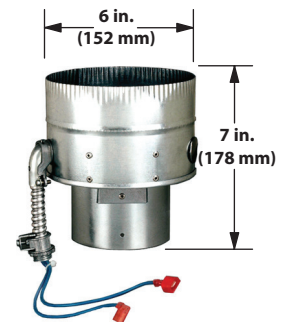
Sensor wiring may be routed from either side of adaptor.

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 7 for application information. Also refer to the installation instructions for detailed information.



### BLOWER

#### 7 Multi-speed direct drive 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.

## FEATURES

### 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

#### iComfort® E30 Smart Wi-Fi Thermostat

Wi-Fi enabled, electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat.

3 Heat/2 Cool.

Auto-changeover.

Controls dehumidification during cooling mode and humidification during heating mode.

Offers enhanced capabilities including humidification / dehumidification / dewpoint measurement and control, *Humiditrol*® control, and equipment maintenance reminders.

Easy to read 7 in. color touchscreen (measured diagonally).

LCD display with backlight shows the current and set temperature, time, inside relative humidity, system status (operating mode and schedules) and outside temperature (optional outdoor sensor required).

Smooth Setback Recovery starts system early to achieve setpoint at start of program period.

Compressor short-cycle protection (5 minutes).

Up to four separate schedules are available plus Schedule IQ™.

One-Touch Away Mode - A quick and easy way to set the cooling and heating setpoints while away.

Smart Away™ - Uses geo-fencing technology to determine when the homeowner is within a predetermined distance from the home to operate the system when leaving, away and arriving.

Apple HomeKit™ enabled, making it easy to control the E30 thermostat from an iPhone, iPad or iPod device. Use Siri® voice commands to control the E30 thermostat.

Amazon® Alexa-enabled, smart-home compatible. It works with Amazon Echo, Echo Dot and Tap devices.

Wi-Fi remote monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets.

High Definition Color Display, Mag-Mount, Smart Hub Controller, wallplate (for retrofit installations) furnished for easy installation.

Additional indoor air quality comfort products (PureAir™ Air Purification System, *Healthy Climate*® Humidifiers, *Humiditrol*® Enhanced Dehumidification Accessory, *Healthy Climate*® Energy/Heat Recovery Ventilators, *Healthy Climate*® Germicidal Lights) can be added to the system for a complete total-comfort system.

See the iComfort® E30 Smart Wi-Fi Thermostat Product Specifications bulletin in the Controls section for more information.



## FEATURES

### **CONTROLS (continued)**

#### **Optional Accessories (continued)**

##### **Remote Outdoor Temperature Sensor**

Used with the iComfort® E30 Smart Thermostat.

When installed outdoors, sensor allows thermostat to display outdoor temperature. Sensor is auto-detected when connected to thermostat.



*NOTE - Sensor is required for the Enhanced Dehumidification Accessory (EDA).*

##### **Thermostat**

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

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

### **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.

- 9 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.

- 10 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.

- 11 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 air volumes over 1800 cfm must have one of the following:**

1. Single side return air and Optional Return Air Base with transition that must accommodate required 20 x 25 x 1 inch air filter to maintain proper velocity.
2. Bottom return air.
3. Return air from both sides.
4. Bottom and one side return air.

See Blower Performance Tables for additional information.

##### **Coil Match-Up**

All furnaces exactly match Lennox cased upflow indoor coils and horizontal indoor coils with same letter designation (A, B, C, D) in model number. No adaptor required. Engaging holes furnished on cabinet for alignment.

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

## FEATURES

### **CABINET**

#### **Optional Accessories (continued)**

##### **High Performance Economizer (Commercial Applications Only)**

Designed for applications requiring outdoor air to be utilized in a commercial HVAC system. Allows the entry of fresh outdoor air for free cooling, reducing the requirement for mechanical cooling.

Heavy gauge galvanized steel cabinet lined with thick fiberglass insulation.

Mixed air sensor, outdoor air sensor and 24VAC transformer furnished.

Approved for California Title 24 building standards.

ASHRAE 90.1-2010 compliant.

See separate Product Specifications bulletin for additional information and available control and sensor options.

### **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 United 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

### UPFLOW POSITION

Vent Type	Type B1	Type C
Sides	0 (0)	<sup>1</sup> 0 (0)
Rear	0 (0)	0 (0)
Top	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	<sup>1</sup> 2	<sup>1</sup> 2
Rear	0 (0)	0 (0)
Top	<sup>1</sup> 0 (0)	<sup>1</sup> 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.

## SPECIFICATIONS

Gas Heating Performance		Model No.	EL280UH070P24A	EL280UH070P36A	EL280UH090P36B
		Model No. - Low Nox	---	EL280UH070XP36A	---
AHRI Ref. No.	Non "X" Models		5202440	5202445	5202441
	"X" Models		---	5202447	---
	<sup>1</sup> AFUE		80%	80%	80%
<b>High Fire</b>	Input - Btuh		66,000	66,000	88,000
	Output - Btuh		52,000	53,000	70,000
	Temperature rise range - °F		40 - 70	30 - 60	35 - 65
Gas Manifold Pressure (in. w.g.)			3.5 / 10.0	3.5 / 10.0	3.5 / 10.0
Nat. Gas / LPG/Propane					
<b>Low Fire</b>	Input - Btuh		43,000	43,000	57,000
	Output - Btuh		35,000	35,000	46,000
	Temperature rise range - °F		25 - 55	20 - 50	25 - 55
Gas Manifold Pressure (in. w.g.)			1.7 / 4.9	1.7 / 4.9	1.7 / 4.9
Nat. Gas / LPG/Propane					
<b>High static - in. w.g.</b>	Heating		0.5	0.5	0.5
	Cooling		0.5	0.5	0.5
<b>Connections in.</b>	Flue connection - in. round		4	4	4
	Gas pipe size IPS		1/2	1/2	1/2
<b>Indoor Blower</b>	Wheel nominal diameter x width - in.		10 x 7	10 x 8	10 x 9
	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		120 volts - 60 hertz - 1 phase		
	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>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.

## SPECIFICATIONS

Gas Heating Performance		Model No.	EL280UH090P48B	EL280UH110P48C
		Model No. - Low Nox	EL280UH090XP48B	---
AHRI Ref. No.	Non "X" Models		5202442	5202443
	"X" Models		5202448	---
	<sup>1</sup> AFUE		80%	80%
<b>High Fire</b>	Input - Btuh		88,000	110,000
	Output - Btuh		69,000	86,000
	Temperature rise range - °F		30 - 60	35 - 65
Gas Manifold Pressure (in. w.g.)			3.5 / 10.0	3.5 / 10.0
Nat. Gas / LPG/Propane				
<b>Low Fire</b>	Input - Btuh		57,000	72,000
	Output - Btuh		46,000	58,000
	Temperature rise range - °F		20 - 50	25 - 55
Gas Manifold Pressure (in. w.g.)			1.7 / 4.9	1.7 / 4.9
Nat. Gas / LPG/Propane				
<b>High static - in. w.g.</b>	Heating		0.5	0.5
	Cooling		0.5	0.5
<b>Connections in.</b>	Flue connection - in. round		4	4
	Gas pipe size IPS		1/2	1/2
<b>Indoor Blower</b>	Wheel nominal diameter x width - in.		10 x 10	10 x 10
	Motor output - hp		1/2	1/2
	Tons of add-on cooling		3 - 4	3 - 4
	Air Volume Range - cfm		1020 - 2030	1050 - 2125
<b>Electrical Data</b>	Voltage		120 volts - 60 hertz - 1 phase	
	Blower motor full load amps		8.2	8.2
	Maximum overcurrent protection		15	15
<b>Shipping Data</b>	lbs. - 1 package		144	161

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

<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.



## SPECIFICATIONS

		Model No.	EL280UH110P60C	EL280UH135P60D	
<b>Gas Heating Performance</b>		<b>Model No. - Low Nox</b>	<b>EL280UH110XP60C</b>	<b>- - -</b>	
	AHRI Ref. No.	Non "X" Models	5202446	5202444	
		"X" Models	5202449	- - -	
		<sup>1</sup> AFUE	80%	80%	
	<b>High Fire</b>		Input - Btuh	110,000	132,000
			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
	<b>Low Fire</b>		Input - Btuh	72,000	86,000
			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	
<b>High static - in. w.g.</b>		Heating	0.5	0.5	
		Cooling	0.5	0.5	
<b>Connections in.</b>		Flue connection - in. round	4	<sup>2</sup> 4	
		Gas pipe size IPS	1/2	1/2	
<b>Indoor Blower</b>		Wheel nominal diameter x width - in.	11-1/2 x 10	11 x 11	
		Motor output - hp	1	1	
		Tons of add-on cooling	4 - 5	4 - 5	
		Air Volume Range - cfm	1470 - 2520	1435 - 2750	
<b>Electrical Data</b>		Voltage	120 volts - 60 hertz - 1 phase		
		Blower motor full load amps	10	11.5	
		Maximum overcurrent protection	15	15	
<b>Shipping Data</b>		lbs. - 1 package	169	188	

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

<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>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

		"A" Width Models	"B" Width Models	"C" Width Models	"D" Width Models	
<b>CABINET ACCESSORIES</b>						
Horizontal Suspension Kit - Horizontal only		51W10	51W10	51W10	51W10	
Return Air Base - Upflow only		65W75	50W98	50W99	51W00	
High Performance Economizer (Commerical only)		10U53	10U53	10U53	10U53	
<b>CONTROLS</b>						
iComfort® E30 Smart Wi-Fi Thermostat		15S63	15S63	15S63	15S63	
Remote Outdoor Temperature Sensor		X2658	X2658	X2658	X2658	
<b>FILTERS</b>						
¹ Air Filter and Rack Kit	Horizontal (end)	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	16 x 25 x 1	16 x 25 x 1	16 x 25 x 1	
<b>VENTING</b>						
Vent Adaptor – 6 in. conn. size upflow applications only		18M79	18M79	18M79	18M79	

¹ Cleanable polyurethane, frame-type filter.

## GAS HEAT ACCESSORIES - ORDER SEPARATELY

Input	High Altitude Pressure Switch Kit			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.	4501 - 7500 ft.	7501 - 10,000 ft.	0 - 7500 ft.	0 - 7500 ft.	7501 - 10,000 ft.	7501 - 10,000 ft.
070	No Change	91W53	73W35	11K51	77W09	73W37	11K46
090	No Change	91W53	73W35	11K51	77W09	73W37	11K46
110	No Change	91W53	73W35	11K51	77W09	73W37	11K46
135	No Change	73W33	73W34	11K51	77W09	73W37	11K46

## 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.

Input	Gas Manifold Pressure (Outlet) in. w.g.											
	0 - 4500 Feet				4501 -7500 Feet				7501 - 10,000 ft.			
	Natural Gas		LPG/Propane		Natural Gas		LPG/Propane		¹ 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

¹ Natural Gas High Altitude Orifice Kit required.

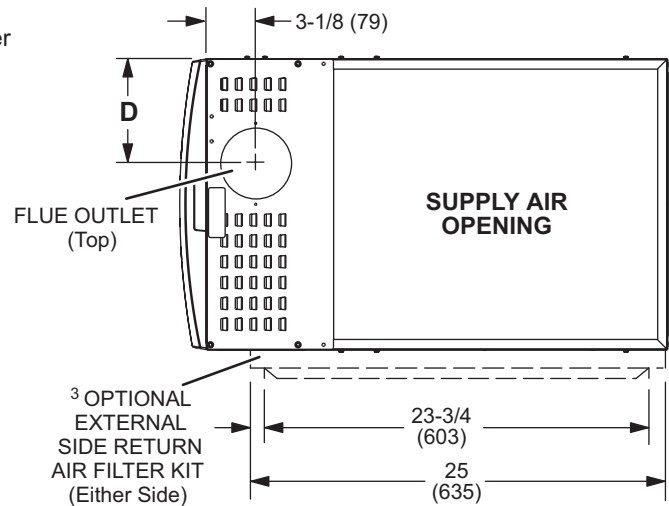
## DIMENSIONS - UPFLOW POSITION

<sup>1</sup> NOTE - 60C and 60D size units that require air volumes over 1800 cfm must have one of the following:

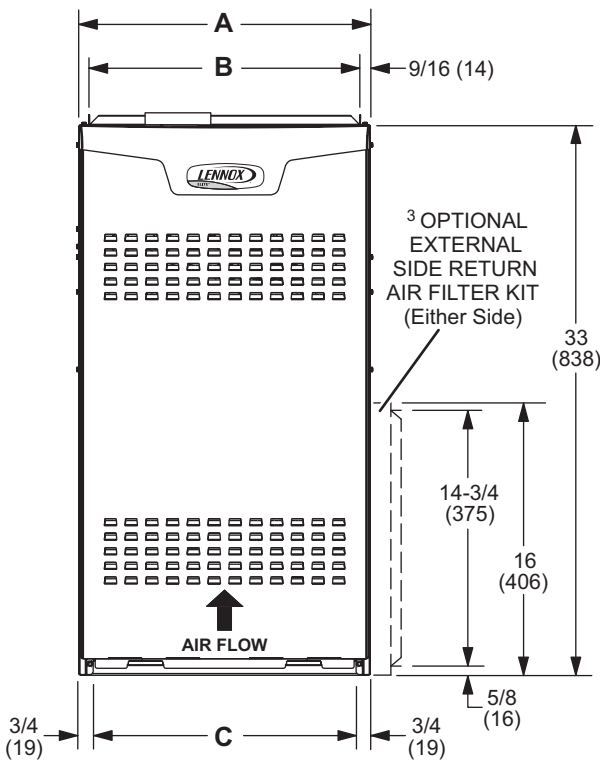
1. Single side return air and Optional Return Air Base with transition that must accommodate required 20 x 25 x 1 inch (508 x 635 x 25 mm) air filter to maintain proper velocity.
  2. Bottom return air.
  3. Return air from both sides.
  4. Bottom and one side return air.
- See Blower Performance Tables for additional information.

<sup>2</sup> Flue outlet may be horizontal but furnace must be vented vertically

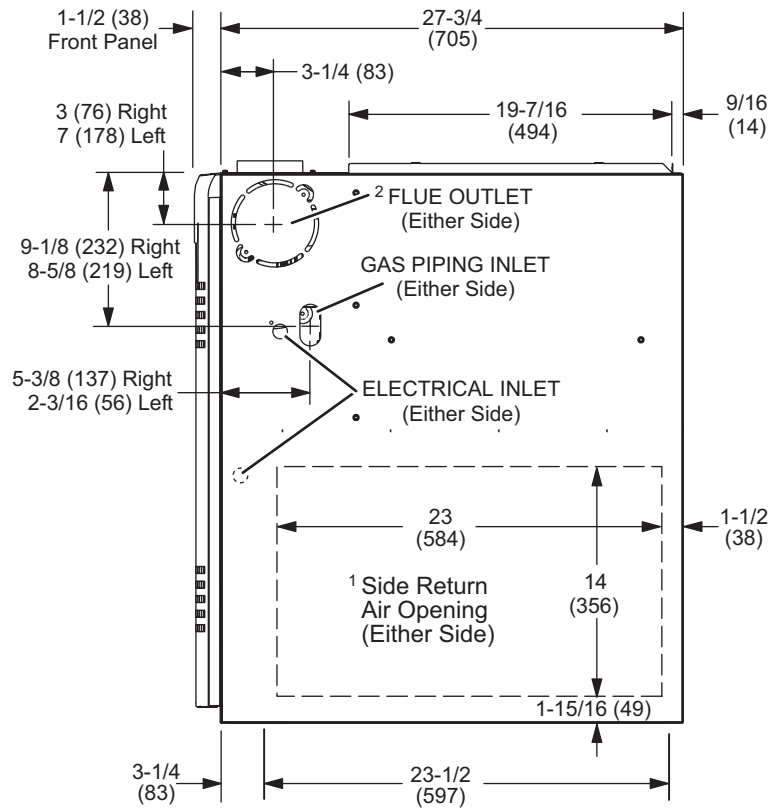
<sup>3</sup> Optional External Side Return Air Filter Kit is not for use with the optional Return Air Base.



**TOP VIEW**



<sup>1</sup> Bottom Return Air Opening  
**FRONT VIEW**



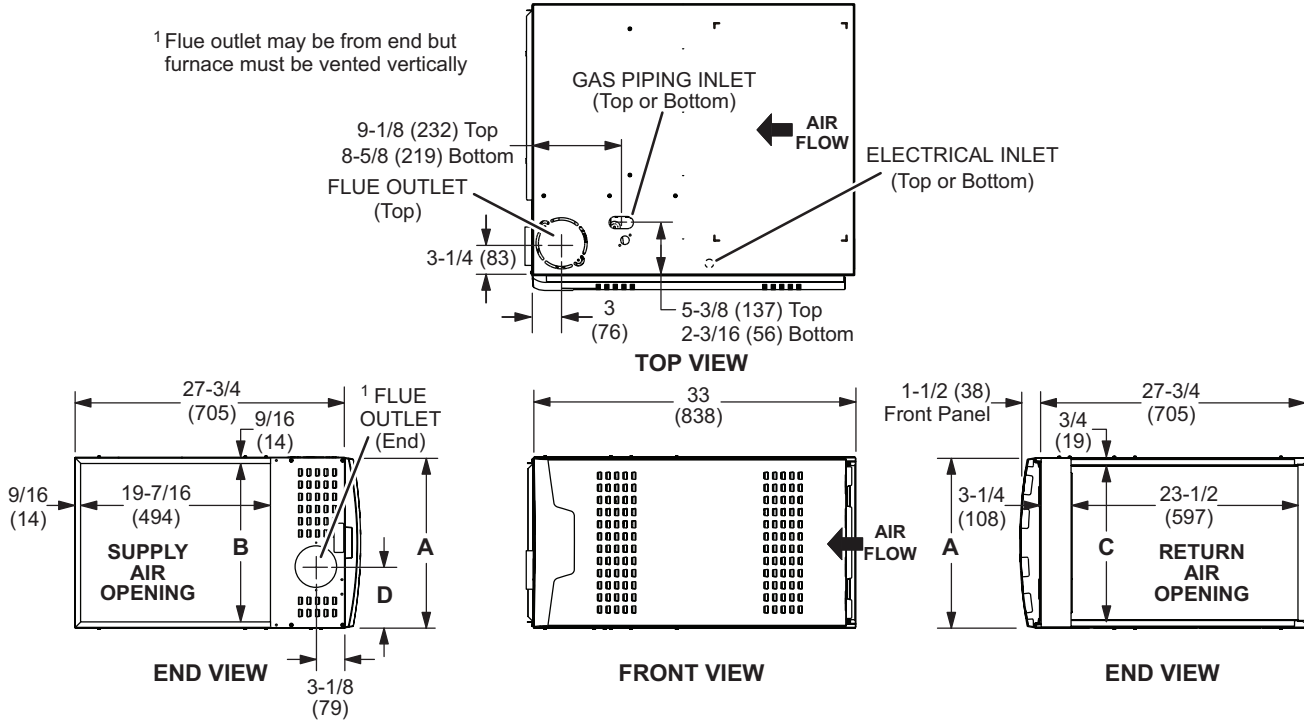
<sup>1</sup> Bottom Return Air Opening  
**SIDE VIEW**

Model No.	A		B		C		D	
	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 - HORIZONTAL POSITION

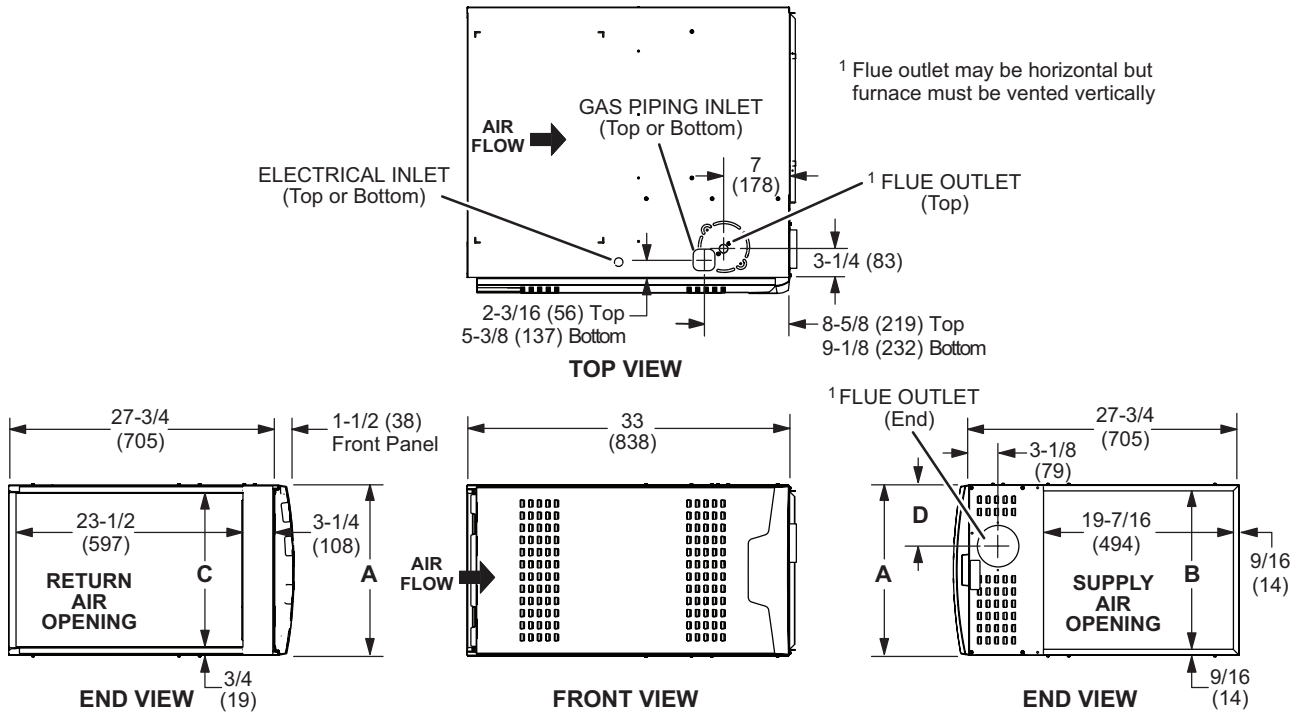
## LEFT-HAND AIR DISCHARGE

<sup>1</sup> Flue outlet may be from end but furnace must be vented vertically



## RIGHT-HAND AIR DISCHARGE

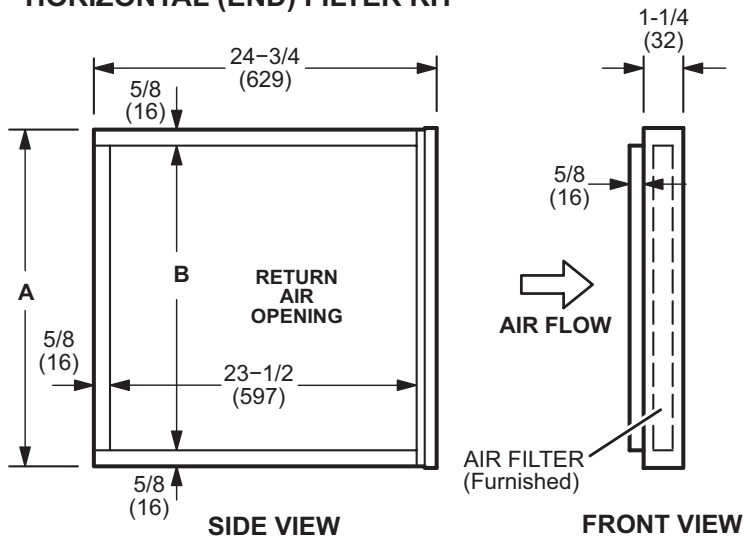
<sup>1</sup> Flue outlet may be horizontal but furnace must be vented vertically



Model No.	A		B		C		D	
	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

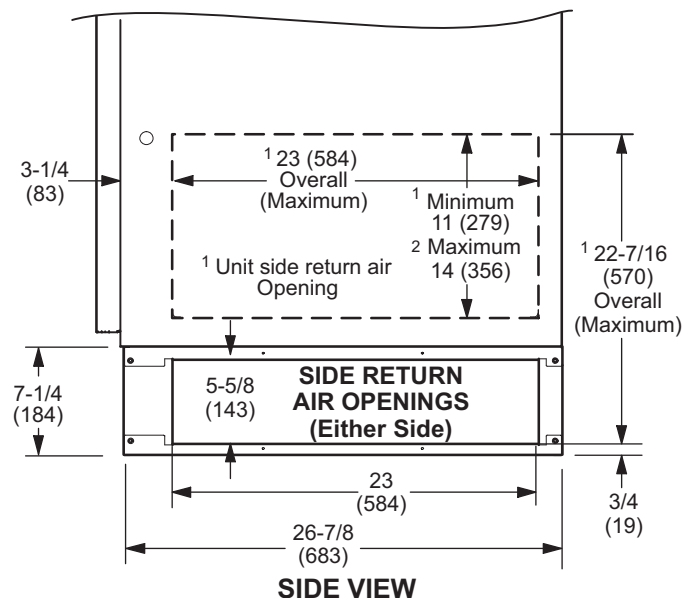
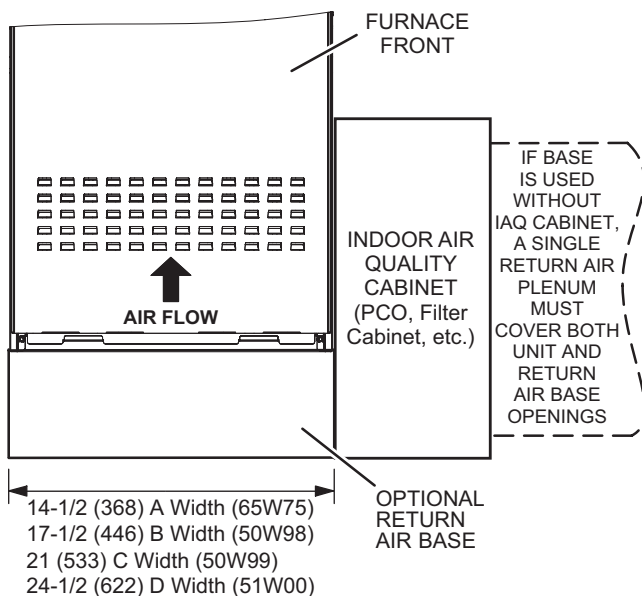
## OPTIONAL ACCESSORY DIMENSIONS

### HORIZONTAL (END) FILTER KIT



Furnace Cabinet Width	Catalog Number	A		B	
		in.	mm	in.	mm
A	87L95	14	356	12-3/4	324
B	87L96	18	457	16-3/4	425
C	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)



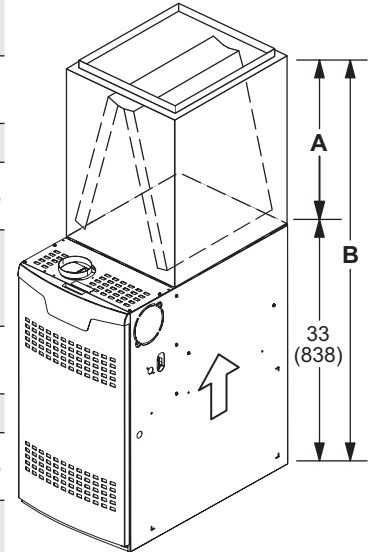
**NOTE- Optional Side Return Air Filter Kits are not for use with Optional Return Air Base.**

- 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.
- To minimize pressure drop, the largest opening height possible, up to 14 in. (356 mm), is preferred.

## DIMENSIONS - FURNACE/COIL COMBINED DIMENSIONS

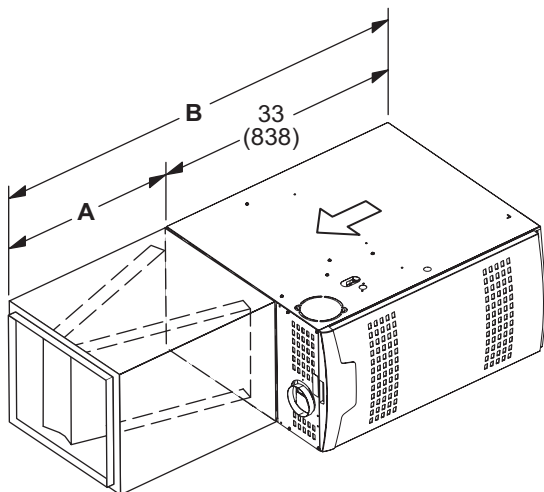
### UPFLOW POSITION

Model No			C35/C37/CX35/CX38 Cased				C35 Uncased			
			A		B		A		B	
C35/CX35	C37	CX38	in.	mm	in.	mm	in.	mm	in.	mm
C35/CX35-18/24A C35/CX35-18/24B	---	---	16-1/2	419	49-1/2	1257	14-1/8	359	47-1/8	1197
C35/CX35-24A C35/CX35-24B	C37-25A C37-25B	CX38-25A CX38-25B	18-1/2	470	51-1/2	1308	16-3/8	416	49-3/8	1254
---	---	CX38-30A	20-1/2	521	53-1/2	1359	---	---	---	---
C35/CX35-30A C35/CX35-30B	C37-31A C37-31B	CX38-31A CX38-31B	22-1/2	572	55-1/2	1410	20-3/4	527	53-3/4	1365
C35/CX35-30/36A C35/CX35-30/36B C35/CX35-30/36C	C37-36A C37-36B C37-36C	CX38-36A CX38-36B CX38-36C	24-1/2	622	57-1/2	1461	22-1/4	565	55-1/4	1403
C35/CX35-36A C35/CX35-36B	C37-38A C37-38B	CX38-38A CX38-38B	24-1/2	622	57-1/2	1461	22-3/8	568	55-3/8	1407
---	C37-42B	CX38-42B	24-1/2	622	57-1/2	1461	---	---	---	---
C35/CX35-48B C35/CX35-48C	C37-43B C37-43C	CX38-43B CX38-43C	27-1/2	699	60-1/2	1537	26-1/4	667	59-1/4	1505
---	C37-48B C37-48C	CX38-44/48B CX38-44/48C	24-1/2	622	57-1/2	1461	---	---	---	---
C35/CX35-49C	C37-49C	CX38-49C	29-1/2	749	62-1/2	1588	28-1/2	724	61-1/2	1562
C35/CX35-50/60C ---	C37-50/60C C37-60D	CX38-50/60C CX38-60D	27-1/2	699	60-1/2	1537	25-7/8	657	58-7/8	1495
CX35-60C	C37-62C	CX38-62C	31-1/2	800	64-1/2	1638	30-5/8	778	63-5/8	1616
CX35-60D	C37-62D	CX38-62D	29-1/2	749	62-1/2	1588	28	711	61	1549



### HORIZONTAL POSITION

Model Number	A		B	
	in.	mm	in.	mm
<b>CH33</b>				
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
<b>CH35</b>				
CH35-18A-2F, CH35-36A-2F, CH35-24A-2F, CH35-36B-2F, CH35-24B-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, CH35-60D-2F CH35-48B-2F,	31-1/2	880	64-1/2	1638



## BLOWER DATA

**EL280UH070P24A PERFORMANCE (Less Filter)**

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds							
	High		Medium-High		Medium-Low		Low	
	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 Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds							
	High		Medium-High		Medium-Low		Low	
	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 Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds							
	High		Medium-High		Medium-Low		Low	
	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 Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds							
	High		Medium-High		Medium-Low		Low	
	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 Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds							
	High		Medium-High		Medium-Low		Low	
	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)

## BLOWER DATA

### EL280UH110P60C PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Different Blower Speeds															
	Bottom Return Air, Side Return Air from Both Sides or Return Air from Bottom and One Side.								Single Side Return Air – Air volumes in <b>bold</b> require Optional Return Air Base and field fabricated transition to accommodate 20 x 25 x 1 in. air filter in order to maintain proper air velocity.							
	High		Medium-High		Medium-Low		Low		High		Medium-High		Medium-Low		Low	
	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	<b>2605</b>	<b>1454</b>	<b>2160</b>	<b>1060</b>	1740	848	1430	651
0.20	2465	1329	2230	1018	1870	823	1480	647	<b>2505</b>	<b>1401</b>	<b>2150</b>	<b>1018</b>	1785	838	1450	649
0.30	2385	1307	2180	981	1885	809	1540	646	<b>2435</b>	<b>1349</b>	<b>2115</b>	<b>991</b>	1795	818	1485	638
0.40	2295	1256	2105	942	1865	778	1570	638	<b>2350</b>	<b>1308</b>	<b>2070</b>	<b>965</b>	<b>1805</b>	<b>801</b>	1480	631
0.50	2200	1214	2055	909	1845	762	1570	619	<b>2260</b>	<b>1274</b>	<b>2010</b>	<b>929</b>	1785	775	1480	621
0.60	2130	1186	1985	882	1795	741	1550	604	<b>2175</b>	<b>1228</b>	<b>1955</b>	<b>901</b>	1755	752	1490	611
0.70	2015	1150	1890	848	1720	711	1505	580	<b>2085</b>	<b>1186</b>	<b>1850</b>	<b>853</b>	1710	722	1460	594
0.80	1905	1105	1810	815	1675	687	1470	565	<b>1965</b>	<b>1147</b>	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)

External Static Pressure in. w.g.	Air Volume / Watts at Different Blower Speeds															
	Bottom Return Air, Side Return Air from Both Sides or Return Air from Bottom and One Side.								Single Side Return Air – Air volumes in <b>bold</b> require Optional Return Air Base and field fabricated transition to accommodate 20 x 25 x 1 in. air filter in order to maintain proper air velocity.							
	High		Medium-High		Medium-Low		Low		High		Medium-High		Medium-Low		Low	
	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	<b>2725</b>	<b>1463</b>	<b>2180</b>	<b>1075</b>	1715	827	1320	624
0.20	2720	1392	2235	1029	1785	810	1445	618	<b>2640</b>	<b>1400</b>	<b>2180</b>	<b>1051</b>	1720	819	1380	626
0.30	2605	1362	2220	1002	1820	800	1460	623	<b>2575</b>	<b>1374</b>	<b>2165</b>	<b>1005</b>	1790	803	1420	622
0.40	2495	1312	2185	968	1845	779	1485	616	<b>2495</b>	<b>1343</b>	<b>2145</b>	<b>988</b>	1775	791	1450	617
0.50	2420	1275	2135	939	1825	767	1505	605	<b>2405</b>	<b>1292</b>	<b>2105</b>	<b>948</b>	1780	777	1470	610
0.60	2335	1234	2080	909	1825	753	1495	593	<b>2305</b>	<b>1257</b>	<b>2045</b>	<b>914</b>	1775	753	1480	593
0.70	2220	1190	1995	864	1760	716	1475	576	<b>2215</b>	<b>1214</b>	<b>1970</b>	<b>884</b>	1740	727	1455	583
0.80	2120	1157	1890	835	1680	686	1435	558	<b>2110</b>	<b>1170</b>	<b>1890</b>	<b>851</b>	1675	699	1430	565

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









## REVISIONS

Sections	Description of Change
Controls	Added iComfort® E30 Smart Thermostat and Remote Outdoor Temperature Sensor.



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