



## COMMERCIAL PRODUCT SPECIFICATIONS

AIR HANDLERS

**ELXA**

Elite® Commercial Split Systems  
Upflow/Horizontal - R-410A - 60 Hz

Bulletin No. 211012

May 2023

Supercedes March 2022

**ELITE®**  
SERIES



072-090-120-150 Models



180-240 Models



**MSAV™**  
MULTI-STAGE AIR VOLUME

**Nominal Capacity - 6 to 20 Tons**  
**Optional Electric Heat - 10 to 50 kW**

### MODEL NUMBER IDENTIFICATION

**EL 120 X A S D - 1 Y**

**Brand/Family**  
EL = Elite® Series Product Line

**Voltage**  
Y = 208/230V-3 phase-60Hz  
G = 460V-3 phase-60Hz  
J = 575V-3 phase-60Hz

**Nominal Cooling Capacity - Tons**  
072 = 6 Tons  
090 = 7.5 Tons  
120 = 10 Tons  
150 = 12.5 Tons  
180 = 15 Tons  
240 = 20 Tons

**Minor Design Sequence**  
1 = 1st Revision

**Refrigerant Type**  
X = R-410A

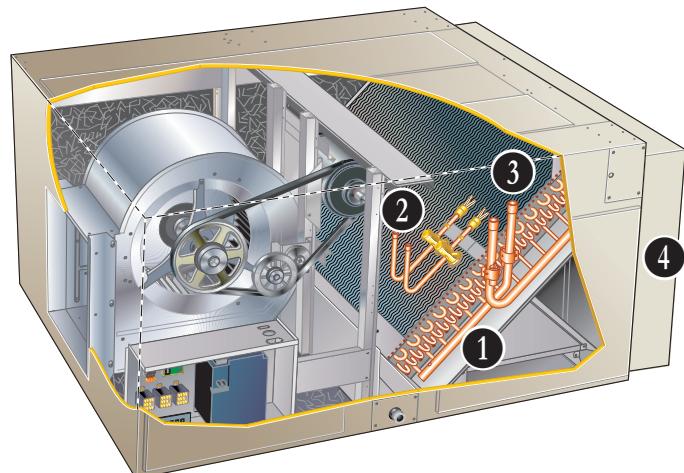
**Refrigerant Circuits**  
S = Single Circuit  
D = Dual Circuits

**Unit Type**  
A = Split System Air Handler

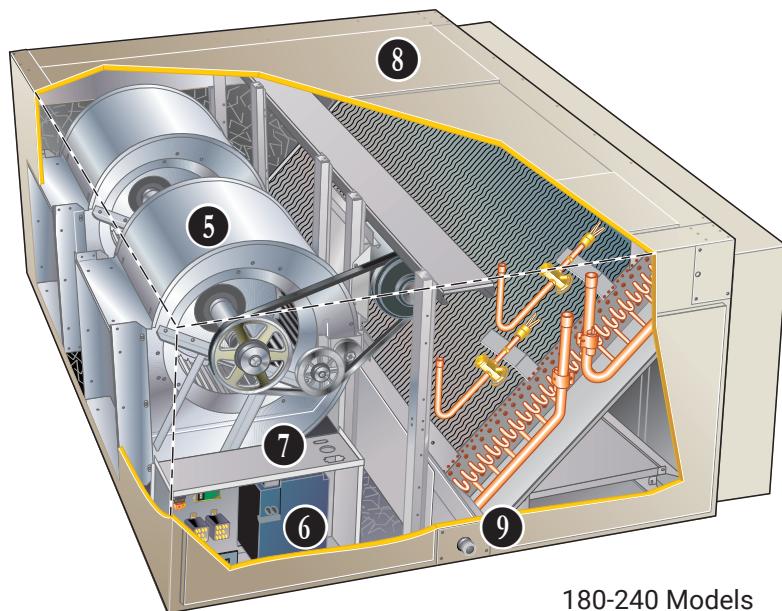
**Cooling Efficiency**  
S = Standard Efficiency

## FEATURE HIGHLIGHTS

1. Multi-Circuit, Copper Tube Coil
2. Expansion Valve
3. Refrigerant Piping and Drain Connections
4. External Filter Rack
5. Belt Drive Blowers
6. MSAV® Multi-Stage Air Volume
7. Control Box
8. Heavy Gauge Steel Cabinet
9. Corrosion Resistant Drain Pan



072-090-120-150 Models



180-240 Models

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## APPROVALS AND WARRANTY

### APPROVALS

- Tested with matching air conditioners and heat pump units in the Lennox Research Laboratory environmental test room in accordance with AHRI Standard 340/360
- ETL Listed to US and Canadian safety standards and components within are bonded for grounding to meet safety standards for servicing required by NEC and CEC
- Meet ASHRAE 90.1, IECC 2015 and California Code of Regulations, Title 24 requirements for staged airflow
- Blower performance data according to unit tests conducted in the Lennox Laboratory air test chamber
- ISO 9001 Registered Manufacturing Quality System

### WARRANTY

- All covered components - Limited one year
- Variable-Frequency Drive (VFD) - Limited five years
- High Performance Economizers (optional) - Limited five years

## FEATURES AND BENEFITS

### APPLICATIONS

- The Elite® Series 6-20 ton large split system air handlers combine MSAV® Multi-Stage Air Volume and up to three stages of cooling to provide temperature control and enhanced humidity control
- Provides installation versatility in a variety of applications
- Superior efficiency in air conditioning and heat pump applications with enhanced air handling and filtering
- Easy to field service
- Equipped with single circuit (072) or dual-circuit (090-240) indoor coils
- Suitable for application with Lennox 6 to 20 ton ELXC air conditioners or 6 to 10 ton ELXP heat pump outdoor units
- Convertible upflow or horizontal design
- Each refrigerant circuit has a dedicated expansion valve
- Shipped factory assembled ready to install
- Standard static blower drive is furnished factory installed
- Low or high static drive options are available as factory installed options
- See Blower Drive Specifications Table for selections

### REFRIGERATION SYSTEM

#### 1 Multi-Circuit, Copper Tube Coil

- Extra large surface area of Lennox designed coil provides maximum cooling efficiency, excellent heat transfer and low air resistance
- Coils on 090-240 models are face split with separate circuits, each circuit has its own expansion valve
- Precise circuiting gives uniform refrigerant distribution
- Lennox fabricated coil is constructed of precisely spaced ripple edged aluminum fins fitted to durable seamless, rifled copper tubes

- Rifled tubing provides enhanced heat transfer which results in maximum coil performance when combined with the Lennox fin design
- Fins are strengthened to resist bending and are equipped with collars that grip tubing for maximum contact area
- Flared tubing connections and silver soldering provide tight, leakproof joints
- Long life copper tubing is corrosion-resistant and easy to field service
- Coil is thoroughly factory tested under high pressure to ensure leakproof construction

#### 2 Expansion Valve

- For use with R-410A systems
- Factory installed and piped
- Multi-circuit coils are equipped with one thermal expansion valve per circuit
- Valves are sized for best performance
- 072, 090 and 120 models have internal check valves for use with heat pump systems

#### Indoor Coil Freeze Protection

- Protects the evaporator coil from damaging ice build-up due to conditions such as low/no air flow or low refrigerant charge

#### 3 Refrigerant Piping and Drain Connections

- Refrigerant line inlets (knockouts) are provided on both sides of the cabinet
- Refrigerant lines require sweat connections and are made internal to the cabinet
- Condensate drain outlet extends outside the cabinet for ease of connection
- Condensate drain can be relocated to other side of cabinet and can be repositioned for horizontal air flow applications

## FEATURES AND BENEFITS

### REFRIGERATION SYSTEM (continued)

#### Options/Accessories

#### Field Installed

##### Float Switch Kit

- Float switch interrupts cooling operation if excessive condensate collects in the drain pan

##### Heat Pump Check Valve Kit (240 Models Only)

- Contains two valve assemblies that field convert the coil to allow it to be matched with two EL090XP heat pump outdoor units

### INDOOR AIR QUALITY

#### 4 External Filter Rack

- Filter rack design permits quick and easy removal of filters for servicing
- Heavy-gauge galvanized steel cabinet is completely insulated with thick, foil-faced fiberglass insulation and painted to match the unit
- Furnished and shipped inside the unit for field installation
- Must be field assembled
- 2-inch thick, MERV 8 pleated media filters are furnished as standard

#### Options/Accessories

#### Field Installed

##### Healthy Climate® Air Filters

- Disposable MERV 8 or high efficiency MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 4-inch pleated filters
- 4-inch pleated filters offer longer filter life and better filtration efficiency compared to standard 2 inch filters

##### 4-Inch External Filter Mounting Kits

- Required for use with Healthy Climate MERV 8 or MERV 13 filters
- Kit includes filter rack for 4-inch filters
- Must be field assembled

#### **BELT DRIVE BLOWERS**

- 072-090-120-150 models are equipped with a single blower wheel
- 180 and 240 models have dual blower wheels
- Centrifugal belt driven blowers deliver large air volumes quietly and with low power consumption
- Blower wheels are heavy-duty, with forward curved blades and double inlet
- Wheels are statically and dynamically balanced to eliminate vibration and designed to give maximum air delivery
- Bearings are heavy-duty, permanently sealed and lubricated
- Belt tension is automatically controlled by auto tensioning device
- Adjustable motor pulley allows speed adjustments
- Standard static drive is furnished factory installed

- See Blower Drive Specifications table for optional factory installed low and high static drives available

#### 6 MSAV® Multi-Stage Air Volume

- Variable-Frequency drive (VFD) and control stages the supply air blower airflow
- Designed for use on multi-stage split systems the VFD alters the frequency and voltage of the power supply to control blower motor speed and airflow
- Supply air blower has three speeds:
  1. Low speed for part-load (Y1) cooling operation
  2. Medium speed for part-load (Y2) cooling operation
  3. High speed for full load (Y3) cooling and all heat modes
- Full speed blower operation is set by adjusting the motor pulley to deliver the desired air volume
- The ventilation speed is selectable between high and low speed

**NOTE** - Part load airflow in cooling mode on **MSAV® Multi-Stage Air Volume** units should not be set below 220 cfm/nominal full load ton to reduce the risk of evaporator coil freeze-up.

- Lower operating costs are obtained when the blower is operated on lower speeds

**NOTE** -Drive (VFD) are designed to operate on balanced, three-phase power. Operating units on unbalanced three-phase power will reduce the reliability of all electrical components in the unit. Unbalanced power is a result of the power delivery system supplied by the local utility company. Factory-installed inverters are sized to drive blower motors with an equivalent current rating using balanced three-phase power. If unbalanced three-phase power is supplied; the installer must replace the existing factory-installed inverter with an inverter that has a higher current rating to allow for the imbalance. Refer to the installation instructions for additional information and replacement information.

#### **MSAV® Multi-Stage Air Volume Sequence of Operation**

- Ventilation speed is determined by the VENT SPEED switch setting on VFD control board (LO or HI)
- Blower operates up to three speeds for mechanical cooling
- Blower operates in high speed for any other mode (free cooling and heating)
- Economizer damper minimum position is fully closed in unoccupied mode
- In occupied mode, the economizer damper minimum position is determined by the setting of the two potentiometers on VFD control board
  - LO SPD MIN POS potentiometer sets the minimum position when blower is operating at low speed
  - HI SPD MIN POS potentiometer sets the minimum position when blower is operating at high speed

## FEATURES AND BENEFITS

### **BELT DRIVE BLOWERS (continued)**

#### Options/Accessories

#### **Factory Installed**

##### Low or High Static Drives

- A choice of optional low or high static drives are available for factory installation
- See Blower Drive Specifications table

#### **CONTROLS**

##### **7 Control Box**

- Located in separate compartment in unit cabinet
- Low voltage terminal strip factory installed
- Blower contactor furnished and factory installed in control box
- All controls are pre-wired at the factory

**NOTE** - Freezestat wiring needs to be field wired depending on upflow or horizontal configuration.

#### Options/Accessories

#### **Field Installed**

##### Thermostat

- Thermostat is not furnished with unit and must be ordered extra

##### Aftermarket Unit Controller Options

- See Options/Accessories table for selection

#### **CABINET**

##### **8**

- Heavy-gauge, pre-painted steel for superior rust and corrosion protection
- Completely lined with thick fiberglass insulation resulting in quiet and efficient operation
- Closed-cell foam on top mullion between the blower and coil section reduces heat transfer through cabinet and prevents moisture build-up on outside of cabinet
- Supply and return air duct flanges are furnished for field installation
- Service access provided on three sides of unit
- Large removable panels provide complete service access on one side of unit
- Electrical inlets are conveniently located in the cabinet

##### **9 Drain Pan**

- Deep, corrosion resistant plastic drain pan
- Reversible drain pan allows for drain outlets on either end of cabinet and can be repositioned for horizontal air flow applications
- Drain pan is removable from either side in both horizontal and vertical applications
- Blow-off baffle and extended drip shield collects condensate from the coil and directs it to the drain pan

#### Options/Accessories

#### **Factory Installed**

##### Corrosion Protection

- Polymeric epoxy coating
- Deposited by electrical transport (electrophoresis), using a process known as electrocoat (e-coat)
- Available for enhanced coil corrosion protection
- Blower housing is painted when this option is ordered

#### **Field Installed**

##### Float Switch

- Prevents condensate overflow by turning the unit off when the condensate level is abnormally high

## **OPTIONS / ACCESSORIES**

### **ELECTRIC HEAT SECTION**

#### **Field Installed**

- Furnished in a separate add-on matching cabinet
- Mounting hardware is furnished to secure cabinets together
- Pre-punched mounting holes are furnished for aligning electric heat section to air handler supply air flange
- Removable panel permits service access
- Electrical inlet provides wiring entry
- Field installed electric heaters are available in several kW sizes
- See Electric Heat Data table
- Helix wound, nichrome heating elements are exposed directly in the air stream resulting in instant heat transfer, lower coil temperatures and long service life
- Elements are accurately located and insulated from the heavy-gauge steel support frame by high quality insulators
- Elements are equipped with individual limit controls providing positive protection in case of overheating
- Sub-fusing, contactors, control relays, 24V transformer are furnished
- Certain electric heat sizes may be two-stage controlled (with field provided control) with each stage being energized only when required
- See Electric Heat Tables

### **HOT WATER COIL**

#### **Field Installed**

- Furnished in a separate add-on matching cabinet
- Mounting hardware is furnished to secure cabinets together
- Pre-punched mounting holes are furnished for aligning hot water cabinet to air handler
- Cabinet is constructed of heavy-gauge galvanized steel
- Completely insulated with thick, foil-faced fiberglass insulation
- Removable panel permits service access
- Cabinet is reversible to allow piping on either side of unit
- Lennox designed and built coil has large face area, excellent heat transfer and low air resistance
- Constructed of precisely spaced ripple-edged aluminum fins fitted to durable copper tubes
- Fins are equipped with collars that grip tubing for maximum contact area
- Flared shoulder tubing connections and silver soldering provide tight, leakproof joints
- Long life copper tubing is easy to field service
- Coil is thoroughly factory tested under high pressure to ensure leakproof construction

**NOTE** - Valves and pumps must be furnished by installer.

## OPTIONS / ACCESSORIES

### ECONOMIZER

#### Field Installed

- Factory assembled and wired economizer dampers and controls are available for field installation
- Heavy-gauge galvanized steel cabinet is completely insulated with thick, matte-faced fiberglass insulation
- Large removable panels on both sides of cabinet provide complete service access
- Mounting flanges provide ease of connection to air handler unit
- Flanges on outdoor air opening and return air opening permit easy duct connection
- Damper linkage and shafts are plated

#### Standard Economizer Features (Not for Title 24)

- Gear-driven action, return air and outdoor air dampers, plug-in connections to unit, neoprene seals, 24-volt, fully-modulating spring return motor, adjustable minimum damper position

#### Standard Economizer Control Module

- The Standard Economizer Control Module can be adjusted to operate based on outdoor air temperatures.



#### Economizer Controls:

- **Damper Minimum Position** - Can be set lower than traditional minimum air requirements resulting in cost savings
- **IAQ Sensor** - Signals dampers to modulate and maintain 55°F when CO<sub>2</sub> is higher than the CO<sub>2</sub> setpoint
- **Demand Control Ventilation (DCV) LED** - A steady green Demand Control Ventilation LED indicates the IAQ reading is higher than setpoint and requires more fresh air
- **Free Cool LED** - A steady green LED indicates outdoor air is suitable for free cooling

**NOTE** - Free Cooling runs when outdoor air temperature is lower than the set temperature on the economizer control.

**NOTE:** The Free Cooling default setting for outdoor air temperature sensor is 55°F.

#### High Performance Economizer Features

- Approved for California Title 24 building standards
- ASHRAE 90.1-2010 compliant
- Gear-driven action
- High torque 24-volt fully-modulating spring return damper motor
- Return air and outdoor air dampers
- Plug-in connections to unit
- Nylon bearings
- Enhanced thermoplastic vulcanizate (TPV) seals
- Flexible stainless steel jamb seals to minimize air leakage

**NOTE** - High Performance Economizers are not approved for use with enthalpy controls in Title 24 applications.

#### High Performance Economizer Control Module

- Module provides inputs and outputs to control economizer based on parameter settings
- Module automatically detects sensors by polling to determine which sensors are installed in system
- Module displays any alarm messages (fault detection and diagnostics) as an aid in troubleshooting
- Non-volatile memory retains parameter settings in case of power failure
- Keypad with four navigation buttons and LCD screen is furnished for setting economizer parameters
  - Menu Up/Exit button returns to the main menu
  - Arrow Up button moves to the previous or next parameter within the selected menu
  - Arrow Down button moves to the next parameter within the selected menu
  - Select (enter) button confirms parameter selection



#### Main Menu Structure:

- STATUS (economizer and system operation status)
- SETPOINTS (settings for various setpoint parameters)
- SYSTEM SETUP (settings/information about the system)
- ADVANCED SETUP (freeze protection, CO<sub>2</sub> settings, stage 3 delay and additional calibration settings)
- CHECKOUT (damper positions)
- ALARMS (output signal that can be configured for remote alarm monitoring)

**NOTE** - The free cooling setpoint for Title 24 applications must be set based on the Climate Zone where the system is installed. See Section 140.4 "Prescriptive Requirements for Space Conditioning Systems" of the California Energy Commission's 2013 Building Energy Efficiency Standards. Refer to Installation Instructions for complete setup information and menu parameters available.

#### Differential Enthalpy Control (Not for Title 24)

- Allows the outdoor air enthalpy control to select between outdoor air or return air, whichever has lower enthalpy
- Field installed in economizer damper section

#### Single Enthalpy Temperature Control (Not for Title 24)

- Outdoor air enthalpy sensor enables Economizer if the outdoor enthalpy is less than the setpoint of the control

## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

**CS7500 Commercial 7-Day Programmable Thermostat**



**CS3000 Commercial 5-2 Day Programmable Thermostat**



- Four-Stage Heating / Three-Stage Cooling
- Universal Multi-Stage
- Intuitive Touchscreen Interface
- Automatic Changeover between Heating and Cooling
- Full Seven-Day Programming
- Four Time Periods Per Day
- Temperature and Humidity Control
- One-Touch Away Mode
- Holiday Scheduling
- Smooth Setback Recovery (SSR)
- Performance Reports
- Notifications/Reminders
- Dehumidification Control for Split Systems
- Economizer Relay Control
- Backlit Display
- Wallplate Furnished
- FDD, ASHRAE and IECC Compliant

- Two-Stage Heating / Two-Stage Cooling
- Conventional Systems
- Intuitive Interface
- 5-2 Day Programming
- Program Hold
- Remote Indoor Temperature Sensing
- Smooth Setback Recovery (SSR)
- Economizer Relay Control
- Maintenance/Filter/Service Reminders
- Backlit Display
- Wallplate Furnished
- Simple Up and Down Temperature Control

### Optional Accessory

#### Cooling Stage-Up Timer Relay

- Allows the unit to attain an additional stage of cooling without the need for extra thermostat connections
- Adjustable - 1 to 1023 seconds
- Mounts internal to unit

## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

### BACnet Compatible Thermostat With Reheat



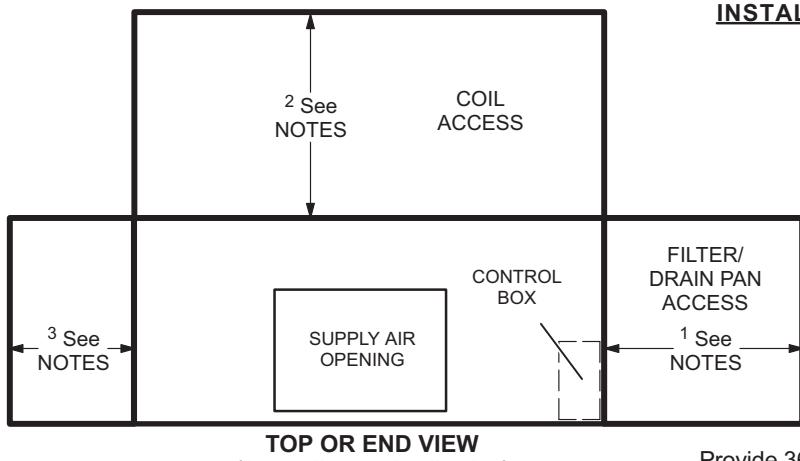
- 7-Day Programmable
- For units with or without dehumidification
- BTL listed MS/TP ensures compatibility with any BACnet system
- Built-in control programs for conventional and heat pump applications
- Conventional systems up to 3-stage heat and 3-stage cool
- Heat pumps with 1 or 2 compressors and up to 2-stage auxiliary heat
- On-board temperature and humidity sensor
- Multiple configurable inputs and outputs enable advanced control strategies
- Set-up Wizard enables rapid system configuration
- No special tools required for installation or commissioning
- Seven-day (2, 4 or 6 event) occupancy scheduling per day
- Backlit 5-inch LCD touchscreen

Description	Catalog No.
<b>CS7500 Commercial 7-Day Programmable Thermostat</b>	
CS7500 7-Day Thermostat	24K41
Sensors/Accessories	1 Remote non-adjustable wall-mount 20k 1 Remote non-adjustable wall-mount 10k Remote non-adjustable discharge air (duct mount) Outdoor temperature sensor
	47W36 47W37 19L22 X2658
<b>CS3000 5-2 Day Programmable Thermostat</b>	
CS3000 5-2 Day Thermostat	11Y05
Sensor/Accessories	Remote non-adjustable wall mount 10k averaging Thermostat wall mounting plate
	47W37 X2659
<b>Optional Accessory</b>	
	Cooling Stage-Up Timer Relay
<b>BACnet 7-Day Programmable Thermostat</b>	
BACnet 7-Day Thermostat	24C57
<b>Universal Thermostat Guard with Lock (clear)</b>	
Inside Dimensions (H x W x D) 5-7/8 x 8-3/8 x 3 in.	39P21

<sup>1</sup> Remote wall-mount sensors can be applied in any of the following combinations:

One Sensor - (1) 47W36, Two Sensors - (2) 47W37, Three Sensors - (2) 47W36 and (1) 47W37  
 Four Sensors - (4) 47W36, Five Sensors - (3) 47W36 and (2) 47W37

## UNIT CLEARANCES



### INSTALLATION CLEARANCES (WITH ELECTRIC HEAT)

Cabinet – 0 in. (0 mm)  
To Plenum – 0 in. (0 mm)  
To Outlet Duct within 3 feet (914 mm) – 0 in. (0 mm)

### RECOMMENDED SERVICE CLEARANCES

**1 Filter Removal and Routine Maintenance:**  
36 in. (914 mm)

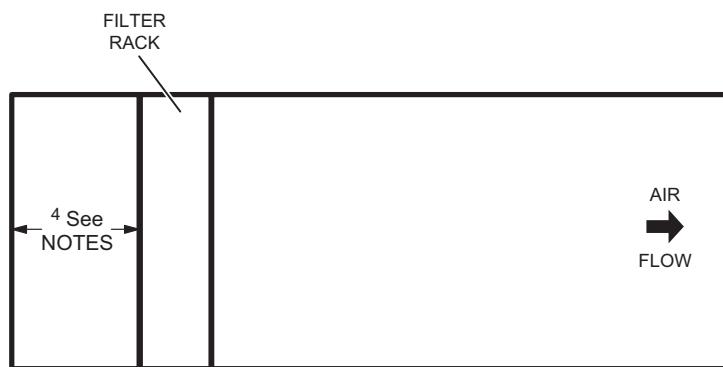
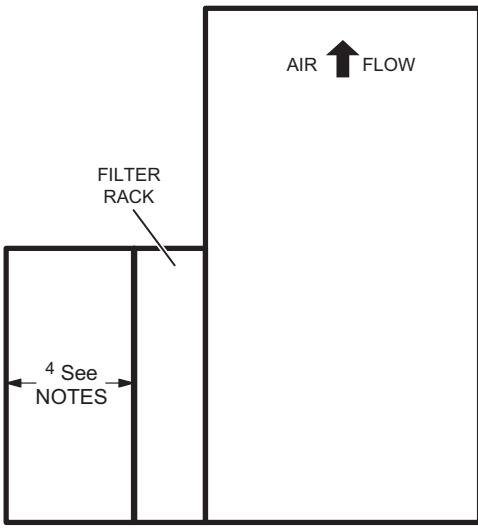
**1 Service Clearance for Drain Pan Removal:**  
EL072XA, EL090XA – 57 in. (1448 mm)  
EL120XA, EL150XA – 73 in. (1854 mm)  
EL180XA, EL240XA – 102 in. (2590 mm)

**2 Coil Cleaning (Upflow):**  
All models – 36 in. (914 mm)

**3 Alternate Coil Cleaning:**  
Provide 36 in. (914 mm) on this side if top/rear access is obstructed

Allow additional clearance if refrigerant or drain lines are routed from this side of cabinet.

**4 Freestanding Operation With Filter Rack But Without Return Air Duct:**  
All models - 24 in. (610 mm)



## SPECIFICATIONS

General Data	Model No. Nominal Tonnage Blower Type	EL072XASS	EL090XASD
		6	7.5
		MSAV® Multi-Stage Air Volume	MSAV® Multi-Stage Air Volume
Connections	No. of Circuits	1	2
	Liquid line o.d. - in. (sweat)	(1) 5/8	(2) 5/8
	Suction/Vapor line o.d. - in. (sweat)	(1) 7/8	(2) 7/8
	Condensate drain - in. (fpt)	1 (NPT)	1 (NPT)
Refrigerant	Not Furnished	R-410A	R-410A
Evaporator Coil	Net face area - sq. ft.	9.2	9.2
	Coil (Face) Split - 1st stage / 2nd stage (%)	---	50/50
	Tube diameter - in.	3/8	3/8
	Number of rows	3	4
	Fins per inch	17	17
Blower and Drive	See Blower Drive Specifications Table on page 19.		
	Wheel nominal diameter & width - in.	(1) 15 x 15	(1) 15 x 15
¹ Filter	Number and size - in.	(3) 16 x 25 x 2	(3) 16 x 25 x 2

<sup>1</sup> External Filter Rack is shipped with unit for field assembly and installation.

## SPECIFICATIONS

General Data	Model No. Nominal Tonnage Blower Type	EL120XASD	EL150XASD	EL180XASD	EL240XASD
		10	12.5	15	20
		MSAV® Multi-Stage Air Volume			
Connections	No. of Circuits	2	2	2	2
	Liquid line o.d. - in. (sweat)	(2) 5/8	(2) 5/8	(2) 5/8	(2) 5/8
	Suction/Vapor line o.d. - in. (sweat)	(2) 7/8	(2) 7/8	(2) 1-1/8	(2) 1-1/8
	Condensate drain - in. (fpt)	1 (NPT)	1 (NPT)	1 (NPT)	1 (NPT)
Refrigerant	Not Furnished	R-410A	R-410A	R-410A	R-410A
Evaporator Coil	Net face area - sq. ft.	12.5	12.5	18.5	18.5
	Coil (Face) Split - 1st stage / 2nd stage (%)	50/50	50/50	50/50	50/50
	Tube diameter - in.	3/8	3/8	3/8	3/8
	Number of rows	4	4	3	4
	Fins per inch	17	17	17	17
Blower and Drive	See Blower Drive Specifications Table on page 19.				
	Wheel nominal diameter & width - in.	(1) 15 x 15	(1) 15 x 15	(2) 15 x 15	(2) 15 x 15
¹ Filter	Number and size - in.	(4) 16 x 25 x 2	(4) 16 x 25 x 2	(6) 16 x 25 x 2	(6) 16 x 25 x 2

<sup>1</sup> External Filter Rack is shipped with unit for field assembly and installation.

## OPTIONS / ACCESSORIES

Item	Catalog No.	072	090	120	150	180	240
<b>BLOWER</b>							
Blower Motor and Drive Kits	Factory						
<b>CABINET</b>							
Corrosion Protection	Factory	O	O	O	O	O	O
Float Switch	16B29	X	X	X	X	X	X
<b>CONTROL SYSTEMS</b>							
BACnet® Module and Enclosure Kit	17A08	X	X	¹ X			
BACnet® Sensor with Display	97W23	X	X	X			
BACnet® Sensor without Display	97W24	X	X	X			

<sup>1</sup> Only for use with a single compressor outdoor unit.

O - Factory Installed with extended lead time.

X - Field Installed.

## OPTIONS / ACCESSORIES

Item	Catalog No.	072	090	120	150	180	240
<b>ELECTRIC HEAT</b>							
10 kW	208/240V-3ph 460V-3ph 575V-3ph	46W50 46W55 46W60	X X X X X X	X X X X X X	X X X X X X		
15 kW	208/240V-3ph 460V-3ph 575V-3ph	46W51 46W56 46W61	X x X X X X	X X X X X X	X X X X X X		
25 kW	208/240V-3ph 460V-3ph 575V-3ph	46W52 46W57 46W62	X X X X X X	X X X X X X	X X X X X X		
35 kW	208/240V-3ph 460V-3ph 575V-3ph	46W53 46W58 46W63		X X X X X X			
20 kW	208/240V-3ph 460V-3ph 575V-3ph	46W65 46W69 46W73				X X X X X X	
30 kW	208/240V-3ph 460V-3ph 575V-3ph	46W66 46W70 46W74				X X X X X X	
40 kW	208/240V-3ph 460V-3ph 575V-3ph	49W39 49W40 49W41				X X X X X X	
50 kW	208/240V-3ph 460V-3ph 575V-3ph	46W67 46W71 46W75				X X X X X X	
<b>ECONOMIZER</b>							
Standard Economizers (Not for Title 24)							
	17A10 17A11 17A12		X X X X X X				
High Performance Economizers							
	20V20 20V21 20V22		X X X X X X				
Economizer Controls (Not for Title 24)							
Single Enthalpy Control (Standard Economizer)	21Z09	X X	X X	X X	X X	X X	
Single Enthalpy Control (High Performance Economizer)	11G21	X X	X X	X X	X X	X X	
NOTE - FOR DIFFERENTIAL ENTHALPY CONTROL ORDER TWO OF THE SAME CONTROLS ABOVE.							
<b>HOT WATER COIL</b>							
	44W20 44W21		X X X X	X X X X	X X X X	X X X X	
<b>INDOOR AIR QUALITY</b>							
Air Filters							
<sup>1</sup> Healthy Climate® Air Filters (16 x 25 x 4)	MERV 8 MERV 13	16C78 16C79	X X X X	X X X X	X X X X	X X X X	X X
4-Inch Filter Mounting Kits		17A05 17A06 17A07	X X X X X X		X X X X X X		X X
Indoor Air Quality (CO <sub>2</sub> ) Sensors							
Sensor - Wall-mount, off-white plastic cover with LCD display	77N39	X X	X X	X X	X X	X X	X X
Sensor - Wall-mount, off-white plastic cover, no display	23V86	X X	X X	X X	X X	X X	X X
Sensor - Black plastic case with LCD display, rated for plenum mounting	87N52	X X	X X	X X	X X	X X	X X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting	87N54	X X	X X	X X	X X	X X	X X
CO <sub>2</sub> Sensor Duct Mounting Kit	23Y47	X X	X X	X X	X X	X X	X X
Aspiration Box - for duct mounting non-plenum rated CO <sub>2</sub> sensor (77N39)	90N43	X X	X X	X X	X X	X X	X X
<b>REFRIGERANT SYSTEM</b>							
<sup>2</sup> Heat Pump Check Valve Kit	16G33						X
X - Field Installed.							
<sup>1</sup> Order 4 in. Filter Mounting Kit and required number of MERV 8 or MERV 13 filters: - (3) 072-090, (4) 120-150, (6) 180-240.							
<sup>2</sup> Heat Pump Check Valve Kit is required when EL240XA is twinned with two EL090XP outdoor heat pump units.							













## BLOWER DATA

### BLOWER DRIVE SPECIFICATIONS

Static	RPM Range	Motor HP		072	090	120	150	180	240
		Nominal	Maximum						
Low	563 - 798	1.5	1.5	O	---	---	---	---	---
Standard	798 - 1033	1.5	1.5	S	---	---	---	---	---
High	878 - 1097	2	2	O	---	---	---	---	---
Low	562 - 796	2	2	---	O	---	---	---	---
Standard	796 - 1030	2	2	---	S	---	---	---	---
High	865 - 1071	3	3	---	O	---	---	---	---
Low	560 - 793	2	2	---	---	O	---	---	---
Standard	793 - 1027	3	3	---	---	S	---	---	---
High	865 - 1071	3	3	---	---	O	---	---	---
Low	653 - 887	3	3	---	---	---	O	---	---
Standard	846 - 1081	5	5	---	---	---	S	---	---
High	896 - 1146	5	5	---	---	---	O	---	---
Low	598 - 820	3	3	---	---	---	---	O	---
Standard	820 - 1041	5	5	---	---	---	---	S	---
High	875 - 1111	5	5	---	---	---	---	O	---
Low	689 - 875	5	5	---	---	---	---	---	O
Standard	810 - 1036	7.5	7.5	---	---	---	---	---	S
High	963 - 1232	7.5	7.5	---	---	---	---	---	O

NOTE - Using total air volume and system static pressure requirements, determine from blower performance tables rpm and motor horsepower required.

Maximum usable horsepower of motors furnished by Lennox are shown. In Canada, nominal motor horsepower is also maximum usable motor horsepower. If motors of comparable horsepower are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

S - Factory installed standard

O - Factory Installed with extended lead time.

### BLOWER MOTOR ELECTRICAL DATA

		Model No.	072	090	120	150	180	240
1.5 HP Blower Motor	Maximum Overcurrent Protection / Minimum Circuit Ampacity	208/230/-60hz-3ph	15 / 8	---	---	---	---	---
		460V-60hz-3ph	15 / 4	---	---	---	---	---
		575V-60hz-3ph	15 / 3	---	---	---	---	---
	Blower Motor Full Load Amps	208/230/-60hz-3ph	5.7	---	---	---	---	---
		460V-60hz-3ph	3	---	---	---	---	---
		575V-60hz-3ph	2.4	---	---	---	---	---
2 HP Blower Motor	Maximum Overcurrent Protection / Minimum Circuit Ampacity	208/230/-60hz-3ph	15 / 10	15 / 10	15 / 10	---	---	---
		460V-60hz-3ph	15 / 5	15 / 5	15 / 5	---	---	---
		575V-60hz-3ph	15 / 4	15 / 4	15 / 4	---	---	---
	Blower Motor Full Load Amps	208/230/-60hz-3ph	7.5	7.5	7.5	---	---	---
		460V-60hz-3ph	3.4	3.4	3.4	---	---	---
		575V-60hz-3ph	2.7	2.7	2.7	---	---	---
3 HP Blower Motor	Maximum Overcurrent Protection / Minimum Circuit Ampacity	208/230/-60hz-3ph	---	20 / 14	20 / 14	20 / 14	20 / 14	---
		460V-60hz-3ph	---	15 / 6	15 / 6	15 / 6	15 / 6	---
		575V-60hz-3ph	---	15 / 5	15 / 5	15 / 5	15 / 5	---
	Blower Motor Full Load Amps	208/230/-60hz-3ph	---	10.6	10.6	10.6	10.6	---
		460V-60hz-3ph	---	4.8	4.8	4.8	4.8	---
		575V-60hz-3ph	---	3.9	3.9	3.9	3.9	---
5 HP Blower Motor	Maximum Overcurrent Protection / Minimum Circuit Ampacity	208/230/-60hz-3ph	---	---	---	35 / 21	35 / 21	35 / 21
		460V-60hz-3ph	---	---	---	15 / 10	15 / 10	15 / 10
		575V-60hz-3ph	---	---	---	15 / 8	15 / 8	15 / 8
	Blower Motor Full Load Amps	208/230/-60hz-3ph	---	---	---	16.7	16.7	16.7
		460V-60hz-3ph	---	---	---	7.6	7.6	7.6
		575V-60hz-3ph	---	---	---	6.1	6.1	6.1
7.5 HP Blower Motor	Maximum Overcurrent Protection / Minimum Circuit Ampacity	208/230/-60hz-3ph	---	---	---	---	---	50 / 31
		460V-60hz-3ph	---	---	---	---	---	20 / 14
		575V-60hz-3ph	---	---	---	---	---	20 / 12
	Blower Motor Full Load Amps	208/230/-60hz-3ph	---	---	---	---	---	24.2
		460V-60hz-3ph	---	---	---	---	---	11
		575V-60hz-3ph	---	---	---	---	---	9

## BLOWER DATA

### EL072-090 ACCESSORY AIR RESISTANCE

Air Volume (cfm)	Total Resistance - in. w.g.						
	Wet Coil		4-Inch Filters		Economizer	Electric Heat	Hot Water Coil
	072	090	MERV 8	MERV 13			
1600	0.05	0.07	0.00	0.03	0.02	0.00	0.08
1700	0.06	0.08	0.00	0.03	0.03	0.00	0.09
1800	0.06	0.09	0.00	0.03	0.03	0.00	0.10
1900	0.07	0.09	0.00	0.03	0.04	0.02	0.12
2000	0.07	0.10	0.00	0.03	0.04	0.02	0.13
2100	0.08	0.11	0.00	0.04	0.04	0.02	0.14
2200	0.08	0.11	0.00	0.04	0.05	0.02	0.15
2300	0.09	0.12	0.00	0.04	0.05	0.03	0.16
2400	0.10	0.13	0.00	0.05	0.05	0.03	0.17
2500	0.10	0.14	0.00	0.05	0.06	0.03	0.18
2600	0.11	0.15	0.00	0.06	0.06	0.03	0.19
2700	0.12	0.16	0.00	0.06	0.07	0.04	0.20
2800	0.12	0.17	0.00	0.07	0.07	0.04	0.21
2900	0.13	0.18	0.00	0.07	0.08	0.04	0.23
3000	0.14	0.19	0.00	0.08	0.08	0.05	0.24
3100	0.14	0.20	0.00	0.08	0.09	0.05	0.25
3200	0.15	0.21	0.00	0.09	0.09	0.05	0.27
3300	0.16	0.22	0.00	0.10	0.10	0.06	0.28
3400	0.17	0.23	0.00	0.10	0.10	0.06	0.29
3500	0.18	0.24	0.00	0.11	0.11	0.06	0.31
3600	0.18	0.25	0.00	0.12	0.12	0.06	0.32

### EL120-150 ACCESSORY AIR RESISTANCE

Air Volume (cfm)	Total Resistance - in. w.g.						
	Wet Coil		4-Inch Filters		Economizer	Electric Heat	Hot Water Coil
	120	150	MERV 8	MERV 13			
2200	0.07	0.07	0.00	0.01	0.03	0.03	0.15
2400	0.08	0.08	0.00	0.02	0.03	0.03	0.17
2600	0.09	0.09	0.00	0.02	0.03	0.04	0.20
2800	0.10	0.10	0.00	0.02	0.04	0.04	0.22
3000	0.11	0.11	0.00	0.03	0.04	0.05	0.24
3200	0.12	0.12	0.00	0.03	0.04	0.05	0.27
3400	0.14	0.14	0.00	0.03	0.05	0.06	0.29
3600	0.15	0.15	0.00	0.03	0.05	0.06	0.32
3800	0.16	0.16	0.00	0.04	0.05	0.06	0.35
4000	0.18	0.18	0.00	0.04	0.06	0.08	0.38
4200	0.19	0.19	0.00	0.05	0.06	0.08	0.41
4400	0.20	0.20	0.00	0.06	0.07	0.09	0.44
4600	0.22	0.22	0.00	0.07	0.07	0.09	0.47
4800	0.23	0.23	0.00	0.08	0.08	0.10	0.51
5000	0.25	0.25	0.00	0.10	0.08	0.10	0.54
5200	0.27	0.27	0.00	0.12	0.09	0.11	0.58
5400	0.28	0.28	0.00	0.14	0.09	0.11	0.61
5600	0.30	0.30	0.00	0.17	0.10	0.13	0.65
5800	0.32	0.32	0.00	0.20	0.10	0.13	0.69
6000	0.33	0.33	0.00	0.24	0.11	0.14	0.72

## BLOWER DATA

### EL180-240 ACCESSORY AIR RESISTANCE

Air Volume (cfm)	Total Resistance - in. w.g.						
	Wet Coil		4-Inch Filters		Economizer	Electric Heat	Hot Water Coil
	180	240	MERV 8	MERV 13			
3250	0.07	0.06	0.00	0.01	0.02	0.04	0.16
3500	0.07	0.07	0.00	0.01	0.02	0.05	0.18
3750	0.08	0.08	0.00	0.02	0.03	0.06	0.20
4000	0.08	0.09	0.00	0.02	0.03	0.06	0.22
4250	0.09	0.09	0.00	0.02	0.03	0.07	0.23
4500	0.08	0.11	0.00	0.03	0.05	0.06	0.24
4750	0.09	0.12	0.00	0.03	0.06	0.08	0.26
5000	0.10	0.13	0.00	0.03	0.07	0.09	0.28
5250	0.11	0.14	0.00	0.04	0.07	0.09	0.31
5500	0.11	0.15	0.00	0.04	0.08	0.11	0.33
5750	0.12	0.16	0.00	0.04	0.08	0.11	0.35
6000	0.13	0.18	0.00	0.05	0.10	0.12	0.38
6250	0.14	0.19	0.00	0.05	0.11	0.14	0.40
6500	0.15	0.20	0.00	0.06	0.11	0.14	0.43
6750	0.16	0.21	0.00	0.06	0.12	0.15	0.46
7000	0.17	0.22	0.00	0.07	0.12	0.15	0.48
7250	0.18	0.24	0.00	0.07	0.13	0.17	0.51
7500	0.19	0.25	0.00	0.08	0.13	0.17	0.54
7750	0.19	0.26	0.00	0.09	0.14	0.18	0.57
8000	0.21	0.28	0.00	0.09	0.16	0.20	0.60
8250	0.22	0.29	0.00	0.10	0.16	0.20	0.63
8500	0.23	0.31	0.00	0.11	0.17	0.21	0.66
8750	0.24	0.32	0.00	0.12	0.17	0.21	0.69
9000	0.25	0.33	0.00	0.14	0.18	0.23	0.72
9250	0.26	0.35	0.00	0.15	0.19	0.24	0.76
9500	0.27	0.36	0.00	0.16	0.20	0.26	0.79
9750	0.28	0.38	0.00	0.18	0.22	0.27	0.82
10,000	0.29	0.40	0.00	0.19	0.23	0.29	0.86

**OPTIONAL ELECTRIC HEAT DATA**
**EL072XA**

Electric Heat Size	No. of Steps	Volts Input	kW Input	¹ Btuh Output	² Total Unit + Electric Heat Minimum Circuit Ampacity		Total Unit + Electric Heat Maximum Overcurrent Protection	
					1.5 hp	2 hp	1.5 hp	2 hp
<b>10 kW</b>	1	208	7.5	25,600	34	36	35	40
	1	220	8.4	28,700	38	40	40	40
		230	9.2	31,400				
		240	10	34,100				
	1	440	8.4	28,700	19	20	20	20
		460	9.2	31,400				
		480	10	34,100				
	1	550	8.4	28,700	15	16	15	20
		575	9.2	31,400				
		600	10	34,100				
<b>15 kW</b>	1	208	11.3	38,400	47	49	50	50
	1	220	12.6	43,000	53	55	60	60
		230	13.5	47,000				
		240	15	51,200				
	1	440	12.6	43,000	27	27	30	30
		460	13.5	47,000				
		480	15	51,200				
	1	550	12.6	43,000	21	22	25	25
		575	13.5	47,000				
		600	15	51,200				
<b>25 kW</b>	³ 2	208	18.8	64,100	73	75	80	80
	³ 2	220	21	71,700	83	85	90	90
		230	23	78,300				
		240	25	85,300				
	1	440	21	71,700	42	42	45	45
		460	23	78,300				
		480	25	85,300				
	1	550	21	71,700	34	34	35	35
		575	23	78,300				
		600	25	85,300				

<sup>1</sup> Electric heater capacity only - does not include additional blower motor heat capacity.

<sup>2</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

<sup>3</sup> May be used with two stage control (field provided).

**OPTIONAL ELECTRIC HEAT DATA**
**EL090XA**

Electric Heat Size	No. of Steps	Volts Input	kW Input	¹ Btuh Output	² Total Unit + Electric Heat Minimum Circuit Ampacity		Total Unit + Electric Heat Maximum Overcurrent Protection	
					2 hp	3 hp	2 hp	3 hp
<b>10 kW</b>	1	208	7.5	25,600	36	40	40	40
		220	8.4	28,700	40	44	40	45
		230	9.2	31,400				
		240	10	34,100				
	1	440	8.4	28,700	20	21	20	25
		460	9.2	31,400				
		480	10	34,100				
	1	550	8.4	28,700	16	17	20	20
		575	9.2	31,400				
		600	10	34,100				
<b>15 kW</b>	1	208	11.3	38,400	49	53	50	60
		220	12.6	43,000	55	59	60	60
		230	13.5	47,000				
		240	15	51,200				
	1	440	12.6	43,000	27	29	30	30
		460	13.5	47,000				
		480	15	51,200				
	1	550	12.6	43,000	22	23	25	25
		575	13.5	47,000				
		600	15	51,200				
<b>25 kW</b>	³ 2	208	18.8	64,100	75	79	80	80
		220	21	71,700	85	89	90	90
		230	23	78,300				
		240	25	85,300				
	1	440	21	71,700	42	44	45	45
		460	23	78,300				
		480	25	85,300				
	1	550	21	71,700	34	35	35	35
		575	23	78,300				
		600	25	85,300				
<b>35 kW</b>	³ 2	208	25	85,300	97	100	100	100
		220	28	95,500	110	114	110	125
		230	30.6	104,400				
		240	33.3	113,700				
	1	440	28	95,500	55	57	60	60
		460	30.6	104,400				
		480	33.3	113,700				
	1	550	28	95,500	44	45	45	45
		575	30.6	104,400				
		600	33.3	113,700				

<sup>1</sup> Electric heater capacity only - does not include additional blower motor heat capacity.

<sup>2</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

<sup>3</sup> May be used with two stage control (field provided).

**OPTIONAL ELECTRIC HEAT DATA**
**EL120XA**

Electric Heat Size	No. of Steps	Volts Input	kW Input	¹ Btuh Output	² Total Unit + Electric Heat Minimum Circuit Ampacity		Total Unit + Electric Heat Maximum Overcurrent Protection	
					2 hp	3 hp	2 hp	3 hp
<b>10 kW</b>	1	208	7.5	25,600	36	40	40	40
	1	220	8.4	28,700	40	44	40	45
		230	9.2	31,400				
		240	10	34,100				
	1	440	8.4	28,700	20	21	20	25
		460	9.2	31,400				
		480	10	34,100				
	1	550	8.4	28,700	16	17	20	20
		575	9.2	31,400				
		600	10	34,100				
<b>15 kW</b>	1	208	11.3	38,400	49	53	50	60
	1	220	12.6	43,000	55	59	60	60
		230	13.5	47,000				
		240	15	51,200				
	1	440	12.6	43,000	27	29	30	30
		460	13.5	47,000				
		480	15	51,200				
	1	550	12.6	43,000	22	23	25	25
		575	13.5	47,000				
		600	15	51,200				
<b>25 kW</b>	³ 2	208	18.8	64,100	75	79	80	80
	³ 2	220	21	71,700	85	89	90	90
		230	23	78,300				
		240	25	85,300				
	1	440	21	71,700	42	44	45	45
		460	23	78,300				
		480	25	85,300				
	1	550	21	71,700	34	35	35	35
		575	23	78,300				
		600	25	85,300				
<b>35 kW</b>	³ 2	208	25	85,300	97	100	100	100
	³ 2	220	28	95,500	110	114	110	125
		230	30.6	104,400				
		240	33.3	113,700				
	1	440	28	95,500	55	57	60	60
		460	30.6	104,400				
		480	33.3	113,700				
	1	550	28	95,500	44	45	45	45
		575	30.6	104,400				
		600	33.3	113,700				

<sup>1</sup> Electric heater capacity only - does not include additional blower motor heat capacity.

<sup>2</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

<sup>3</sup> May be used with two stage control (field provided).

**OPTIONAL ELECTRIC HEAT DATA**
**EL150XA**

Electric Heat Size	No. of Steps	Volts Input	kW Input	¹ Btuh Output	² Total Unit + Electric Heat Minimum Circuit Ampacity		Total Unit + Electric Heat Maximum Overcurrent Protection	
					3 hp	5 hp	3 hp	5 hp
<b>10 kW</b>	1	208	7.5	25,600	40	47	40	50
	1	220	8.4	28,700	44	51	45	60
		230	9.2	31,400				
		240	10	34,100				
	1	440	8.4	28,700	21	25	25	25
		460	9.2	31,400				
		480	10	34,100				
	1	550	8.4	28,700	17	20	20	20
		575	9.2	31,400				
		600	10	34,100				
<b>15 kW</b>	1	208	11.3	38,400	53	60	60	60
	1	220	12.6	43,000	59	66	60	70
		230	13.5	47,000				
		240	15	51,200				
	1	440	12.6	43,000	29	32	30	35
		460	13.5	47,000				
		480	15	51,200				
	1	550	12.6	43,000	23	26	25	30
		575	13.5	47,000				
		600	15	51,200				
<b>25 kW</b>	³ 2	208	18.8	64,100	79	86	80	90
	³ 2	220	21	71,700	89	96	90	100
		230	23	78,300				
		240	25	85,300				
	1	440	21	71,700	44	48	45	50
		460	23	78,300				
		480	25	85,300				
	1	550	21	71,700	35	38	35	40
		575	23	78,300				
		600	25	85,300				
<b>35 kW</b>	³ 2	208	25	85,300	100	108	100	110
	³ 2	220	28	95,500	114	121	125	125
		230	30.6	104,400				
		240	33.3	113,700				
	1	440	28	95,500	57	60	60	60
		460	30.6	104,400				
		480	33.3	113,700				
	1	550	28	95,500	45	48	45	50
		575	30.6	104,400				
		600	33.3	113,700				

<sup>1</sup> Electric heater capacity only - does not include additional blower motor heat capacity.

<sup>2</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

<sup>3</sup> May be used with two stage control (field provided).

**OPTIONAL ELECTRIC HEAT DATA**
**EL180XA**

Electric Heat Size	No. of Steps	Volts Input	kW Input	¹ Btuh Output	² Total Unit + Electric Heat Minimum Circuit Ampacity		Total Unit + Electric Heat Maximum Overcurrent Protection	
					3 hp	5 hp	3 hp	5 hp
					65	73	70	80
<b>20 kW</b>	1	208	14.8	50,600	73	81	80	90
		220	16.5	56,500				
		230	18.1	61,800				
		240	19.7	67,300				
	1	440	16.8	57,500	37	40	40	40
		460	18.4	62,900				
		480	20	68,300				
		550	16.8	57,300				
	1	575	18.4	62,600	29	32	30	35
		600	20	68,300				
<b>30 kW</b>	2	208	22.5	76,900	92	99	100	100
		220	25.2	86,100				
		230	27.5	94,100		104	112	110
		240	30	102,500				
	1	440	25.2	86,100	52	55	60	60
		460	27.5	94,100				
		480	30	102,500				
		550	25.2	86,200		41	44	45
	1	575	27.5	94,200				
		600	30	102,500				
<b>40 kW</b>	2	208	29.3	100,000	115	123	125	125
		220	32.8	112,000				
		230	35.8	122,300		131	139	150
		240	39	133,200				
	1	440	32.8	112,000	65	69	70	70
		460	35.9	122,400				
		480	39	133,200				
		550	33.6	114,800		53	56	60
	1	575	36.7	125,500				
		600	40	136,600				
<b>50 kW</b>	2	208	36.1	123,200	139	146	150	150
		220	40.3	137,700				
		230	44.1	150,600		158	166	175
		240	48	163,900				
	2	440	42	143,400	82	85	90	90
		460	45.9	156,700				
		480	50	170,800				
		550	42	143,500		65	69	70
	2	575	45.9	156,800				
		600	50	170,800				

<sup>1</sup> Electric heater capacity only - does not include additional blower motor heat capacity.

<sup>2</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

**OPTIONAL ELECTRIC HEAT DATA**
**EL240XA**

Electric Heat Size	No. of Steps	Volts Input	kW Input	¹ Btuh Output	² Total Unit + Electric Heat Minimum Circuit Ampacity		Total Unit + Electric Heat Maximum Overcurrent Protection	
					5 hp	7.5 hp	5 hp	7.5 hp
<b>20 kW</b>	1	208	14.8	50,600	73	82	80	90
	1	220	16.5	56,500	81	90	90	90
		230	18.1	61,800				
		240	19.7	67,300				
	1	440	16.8	57,500	40	44	40	45
		460	18.4	62,900				
		480	20	68,300				
	1	550	16.7	57,300	32	36	35	40
		575	18.4	62,600				
		600	20	68,300				
<b>30 kW</b>	2	208	22.5	76,900	99	109	100	110
	2	220	25.2	86,100	112	121	125	125
		230	27.6	94,100				
		240	30	102,500				
	1	440	25.2	86,100	55	59	60	60
		460	27.6	94,100				
		480	30	102,500				
	1	550	25.2	86,100	44	48	45	50
		575	27.6	94,200				
		600	30	102,500				
<b>40 kW</b>	2	208	29.3	100,000	123	132	125	150
	2	220	32.8	112,000	139	148	150	150
		230	35.8	122,300				
		240	39	133,200				
	1	440	32.8	112,000	69	73	70	80
		460	35.9	122,400				
		480	39	133,200				
	1	550	33.6	114,800	56	60	60	60
		575	36.7	125,500				
		600	40	136,600				
<b>50 kW</b>	2	208	36.1	123,200	146	156	150	175
	2	220	40.3	137,700	166	175	175	175
		230	44.1	150,600				
		240	48	163,900				
	2	440	42	143,400	85	89	90	90
		460	45.9	156,700				
		480	50	170,800				
	2	550	42	143,500	68	72	70	80
		575	45.9	156,800				
		600	50	170,800				

<sup>1</sup> Electric heater capacity only - does not include additional blower motor heat capacity.

<sup>2</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

## SPECIFICATIONS - HOT WATER COIL

General Data	Hot Water Coil Catalog No.	44W20	44W21
	Air Handler Model No.	EL072XA EL090XA EL120XA EL150XA	EL180XA EL240XA
Water Line Connections	Inlet o.d. - in. (sweat)	1-3/8	1-3/8
	Outlet o.d. - in. (sweat)	1-3/8	1-3/8
Hot Water Coil	Net face area - sq. ft.	6.00	9.00
	Tube diameter - in.	3/8	3/8
	Fins per inch	14	14

## HOT WATER COIL - WATER PRESSURE DROP

Model No.	Flow Rate (gpm)																	
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Water Pressure Drop (ft. of water)																		
EL072XA	0.02	0.10	0.20	0.33	0.49	0.67	0.87	1.10	1.35	1.62	1.91	2.23	2.57	2.92	3.30	3.70	4.11	4.55
EL090XA																		
EL120XA																		
EL150XA																		
EL180XA	0.03	0.15	0.30	0.50	0.73	1.00	1.30	1.65	2.02	2.43	2.87	3.34	3.85	4.38	4.95	5.55	6.17	6.83
EL240XA																		

Model No.	Flow Rate (gpm)																
	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70
Water Pressure Drop (ft. of water)																	
EL072XA	5.01	5.48	5.98	6.49	7.02	7.57	8.14	8.73	9.33	9.96	10.60	11.26	11.93	12.63	13.34	14.07	14.82
EL090XA																	
EL120XA																	
EL150XA																	
EL180XA	7.51	8.22	8.97	9.74	10.53	11.36	12.21	13.09	14.00	14.94	15.90	16.89	17.90	18.94	20.01	21.10	22.22
EL240XA																	

## HOT WATER WITH GLYCOL SOLUTION CAPACITY CORRECTION FACTOR CHART

Multiply Rating In Hot Water Capacity Charts by Correction Factor Below

% Of Glycol	Correction Factor
0	1.00
10	.97
20	.94
30	.91
40	.87
50	.84

## HOT WATER COIL CAPACITIES

### EL072XA | EL150XA

Model No.	Air Flow (cfm)	Enter- ing Air Temp (°F)	Entering Water Temperature (°F)										
			140			160			180				
20			30			40			Water Temperature Drop (°F)				
			GPM	MBh	LAT	GPM	MBh	LAT	GPM	MBh	LAT	GPM	
072	40	12.8	126.5	100	7.8	115.8	95	5.3	104.4	90	15.9	156.9	
	60	9.8	96.7	107	5.8	85.9	101	3.7	74.0	96	12.9	126.9	
	80	6.8	67.1	113	3.7	55.7	107	2.2	42.6	101	9.9	97.3	
	120	40	14.9	147.7	96	9.0	134.6	91	6.1	120.8	86	18.6	183.4
	140	60	11.4	112.8	103	6.7	99.5	98	4.3	85.3	93	15.1	148.3
	160	80	7.9	78.0	110	4.3	64.2	105	2.5	48.7	99	11.5	113.5
090	40	16.9	166.9	93	10.2	151.6	88	6.8	135.7	83	21.1	207.5	
	60	12.9	127.3	101	7.5	111.9	96	4.8	95.4	91	17.0	167.7	
	80	8.9	87.8	108	4.8	71.9	103	2.7	54.1	98	13.0	128.2	
	120	40	14.9	147.7	96	9.0	134.6	91	6.1	120.8	86	18.6	183.4
	140	60	11.4	112.8	103	6.7	99.5	98	4.3	85.3	93	15.1	148.3
	160	80	7.9	78.0	110	4.3	64.2	105	2.5	48.7	99	11.5	113.5
120	40	17.3	171.4	92	10.5	155.7	88	7.0	139.1	83	21.7	213.2	
	60	13.2	130.7	100	7.7	114.8	95	4.9	97.8	90	17.5	172.3	
	80	9.1	90.2	108	5.0	73.7	103	2.8	55.4	97	13.4	131.6	
	120	40	19.5	193.0	89	11.7	174.6	84	7.8	155.6	80	24.4	240.2
	140	60	14.8	146.9	98	8.6	128.5	93	5.5	109.0	88	19.7	193.9
	160	80	10.2	101.1	106	5.5	82.2	101	3.1	61.3	96	15.0	148.0
150	40	18.1	178.8	91	10.9	162.3	87	7.3	144.8	82	22.6	222.5	
	60	13.8	136.3	99	8.0	119.5	95	5.1	101.7	89	18.3	179.7	
	80	9.5	93.9	107	5.2	76.6	102	2.9	57.5	97	14.0	137.3	
	120	40	20.8	206.1	87	12.5	186.3	83	8.3	165.7	78	26.1	256.9
	140	60	15.8	156.9	96	9.2	136.9	92	5.8	115.9	87	21.1	207.3
	160	80	10.9	107.8	105	5.9	87.3	100	3.3	64.9	95	16.1	158.1
4000	40	20.8	206.1	87	12.5	186.3	83	8.3	165.7	78	26.1	256.9	
	60	15.8	156.9	96	9.2	136.9	92	5.8	115.9	87	21.1	207.3	
	80	12.1	120.2	103	6.5	96.8	99	3.6	71.5	94	18.0	176.7	
	120	40	20.8	206.1	87	12.5	186.3	83	8.3	165.7	78	26.1	256.9
	140	60	15.8	156.9	96	9.2	136.9	92	5.8	115.9	87	21.1	207.3
	160	80	10.9	107.8	105	5.9	87.3	100	3.3	64.9	95	16.1	158.1
6000	40	23.9	236.2	83	14.3	212.8	79	9.5	188.7	75	30.0	294.7	
	60	18.1	179.5	93	10.5	156.0	89	6.6	131.4	84	24.2	237.7	
	80	12.4	123.0	103	6.7	99.1	98	3.7	73.0	94	18.4	181.0	
	120	40	26.6	263.2	80	15.9	236.2	76	10.5	208.8	72	33.4	328.5
	140	60	20.2	199.6	91	11.6	173.0	87	7.3	145.0	82	26.9	264.8
	160	80	13.8	136.6	101	7.4	109.4	97	4.0	80.1	92	20.5	201.4



**HOT WATER COIL CAPACITIES****EL180XA | EL240XA**

Model No.	Air Flow (cfm)	Enter-ing Air Temp (°F)	Entering Water Temperature (°F)									
			140					160				
			Water Temperature Drop (°F)									
			20	30	40	20	30	40	20	30	40	
			GPM	MBh	LAT	GPM	MBh	LAT	GPM	MBh	LAT	GPM
4800	40	27.8	275.7	93	17.1	253.8	88	11.6	230.7	84	34.6	340.8
	60	21.4	211.5	101	12.7	189.3	96	8.3	165.2	92	28.1	276.4
	80	14.9	147.5	109	8.4	124.2	104	4.9	97.8	99	21.6	212.4
180	40	32.1	318.2	89	19.6	292.0	85	13.3	264.7	80	40.0	394.0
	60	24.6	243.8	98	14.6	217.4	94	9.5	188.9	89	32.4	319.2
	80	17.1	169.7	106	9.6	142.0	102	5.6	111.0	97	24.9	244.9
7200	40	36.0	356.1	85	21.9	326.2	82	14.8	294.8	78	44.8	441.1
	60	27.5	272.6	95	16.3	242.2	91	10.6	209.9	87	36.3	357.3
	80	19.1	189.4	105	10.6	157.9	100	6.2	122.7	96	27.9	274.2
6400	40	33.4	331.2	87	20.4	303.9	84	13.9	275.1	79	41.7	410.1
	60	25.6	253.7	97	15.2	226.0	93	9.9	196.3	88	33.8	332.3
	80	17.8	176.4	106	9.9	147.6	102	5.8	115.0	97	25.9	254.9
240	40	38.3	379.4	84	23.3	347.0	80	15.8	313.2	76	47.8	470.4
	60	29.3	290.3	94	17.3	257.6	90	11.2	222.6	86	38.7	380.9
	80	20.3	201.4	103	11.3	167.6	100	6.5	129.8	95	29.7	291.8
9600	40	42.6	422.1	80	25.9	385.2	77	17.5	346.7	73	53.2	523.6
	60	32.6	322.8	91	19.2	285.3	87	12.4	246.0	84	43.1	423.9
	80	22.6	223.5	102	12.5	185.2	98	7.2	142.6	94	33.0	324.5

## HOT WATER COIL CAPACITIES

## EL180XA | EL240XA

Model No.	Air Flow (cfm)	Enter-ing Air Temp (°F)	200						210										
			GPM	MBh	LAT														
4800	40	48.6	470.3	130	31.0	450.7	126	22.4	428.6	123	52.1	502.7	136	33.3	483.3	132	24.0	460.6	128
	60	41.9	405.6	138	26.5	386.0	134	18.8	365.8	130	45.4	437.5	144	28.8	418.2	141	20.6	397.6	137
	80	35.2	341.0	146	22.1	321.4	142	15.5	301.0	138	38.7	373.1	152	24.4	353.8	149	17.2	333.7	145
	40	56.2	544.1	123	35.8	520.5	120	25.5	496.6	116	60.3	581.5	129	38.5	558.2	125	27.6	534.5	122
	60	48.4	469.0	132	30.6	445.6	129	21.7	421.3	125	52.5	506.3	138	33.3	483.1	134	23.7	459.2	131
	80	40.7	394.5	141	25.5	370.8	138	17.8	346.5	134	44.8	431.6	147	28.2	408.2	143	19.8	384.4	140
180	40	63.0	610.3	118	40.0	583.0	114	28.5	555.3	111	67.6	652.0	123	43.1	625.4	120	30.9	598.1	116
	60	54.3	525.9	128	34.3	498.7	124	24.2	471.0	120	58.9	568.0	133	37.3	541.0	129	26.5	513.7	126
	80	45.6	442.1	137	28.5	415.1	134	19.9	387.0	130	50.2	484.0	143	31.5	457.1	139	22.2	429.7	136
	40	58.5	566.9	121	37.2	542.1	118	26.6	516.9	114	62.8	605.9	127	40.1	581.3	123	28.7	556.4	120
	60	50.4	488.7	131	31.9	464.0	127	22.5	438.5	123	54.7	527.5	136	34.7	503.1	133	24.7	478.0	129
	80	42.4	410.8	140	26.5	386.1	136	18.5	360.4	133	46.6	449.7	146	29.3	425.1	142	20.7	400.1	138
240	40	67.2	651.0	115	42.7	621.4	111	30.4	591.4	108	72.2	695.9	120	46.0	666.7	116	32.9	637.1	113
	60	57.9	561.0	125	36.5	531.6	121	25.8	501.4	118	62.8	605.8	130	39.8	576.7	127	28.2	547.0	123
	80	48.7	471.4	135	30.4	442.0	132	21.2	411.7	128	53.5	516.2	140	33.6	487.2	137	23.6	457.3	133
	40	73.9	720.7	108	47.5	691.7	106	33.8	657.5	103	78.0	762.4	112	51.2	742.0	111	36.6	708.6	108
	60	64.5	625.1	120	40.6	591.5	117	28.6	557.2	114	70.0	675.2	125	44.3	641.9	122	31.4	608.2	119
	80	54.2	525.2	131	33.8	491.6	128	23.5	457.2	124	59.6	575.2	136	37.4	542.0	133	26.2	508.0	129

**WEIGHT DATA**

Model Number	Net		Shipping	
	Ibs.	kg	Ibs.	kg
072	409	186	438	199
090	431	196	460	209
120	495	225	528	240
150	509	231	542	246
180	727	330	769	349
240	799	363	841	382

**OPTIONS / ACCESSORIES**

	Net		Shipping	
	Ibs.	kg	Ibs.	kg

**ELECTRIC HEAT**

072-150	10 kW	65	29	75	34
	15 kW	65	29	75	34
	25 kW	65	29	75	34
	35 kW	65	29	75	34
180-240	20 kW	100	45	120	54
	30 kW	100	45	120	54
	40 kW	100	45	120	54
	50 kW	100	45	120	54

**ECONOMIZER**

Standard Economizers	072-090	71	32	165	75
	120-150	114	52	265	120
	180-240	160	73	370	168
High Performance Economizers	072-090	108	49	202	92
	120-150	144	65	295	134
	180-240	188	85	398	181

**4-INCH FILTER MOUNTING KIT**

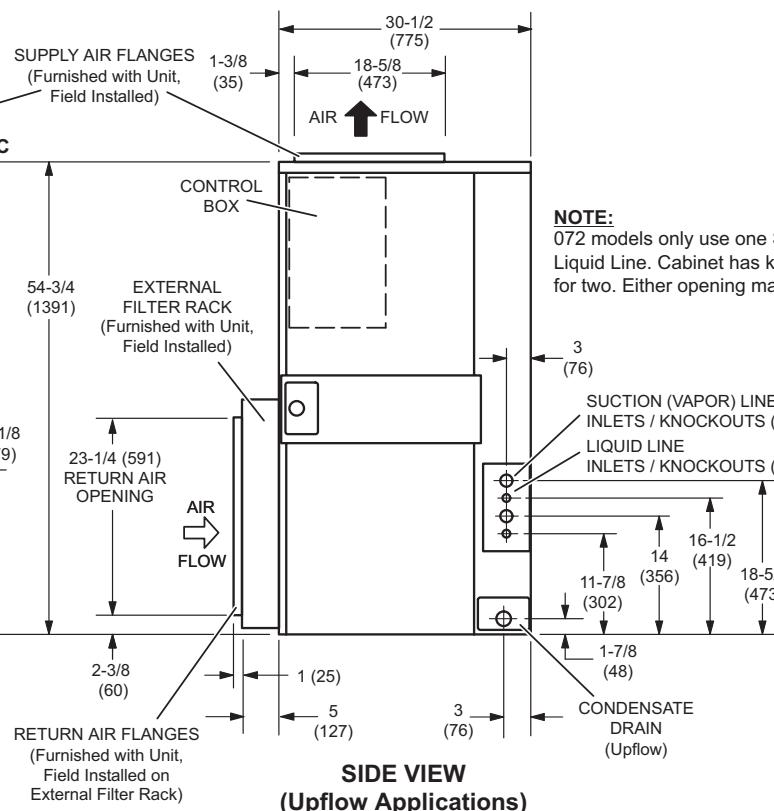
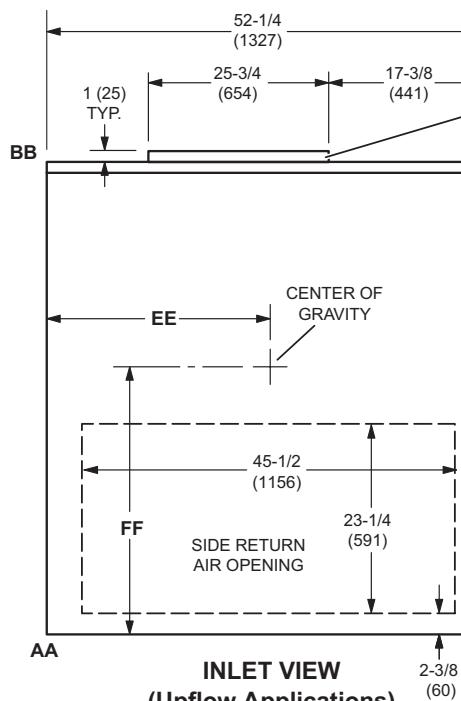
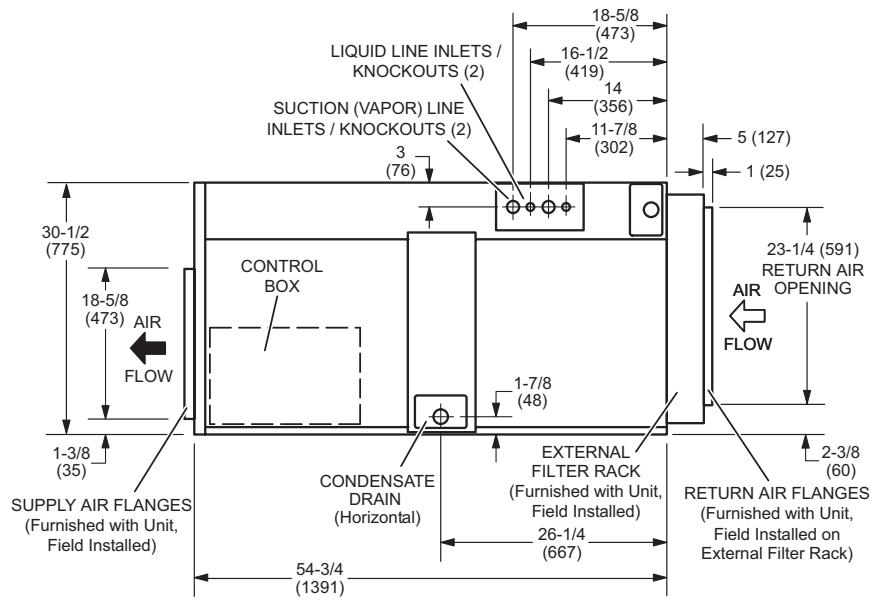
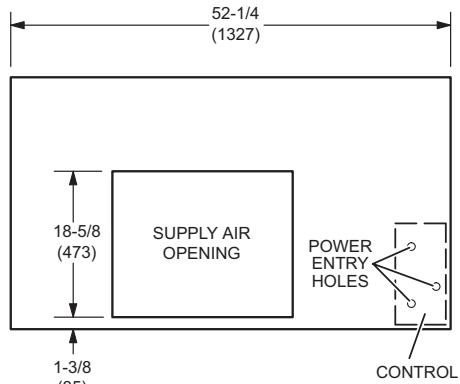
	072-090	7	3	10	5
	120-150	10	5	14	6
	180-240	15	7	20	9

**HOT WATER COIL**

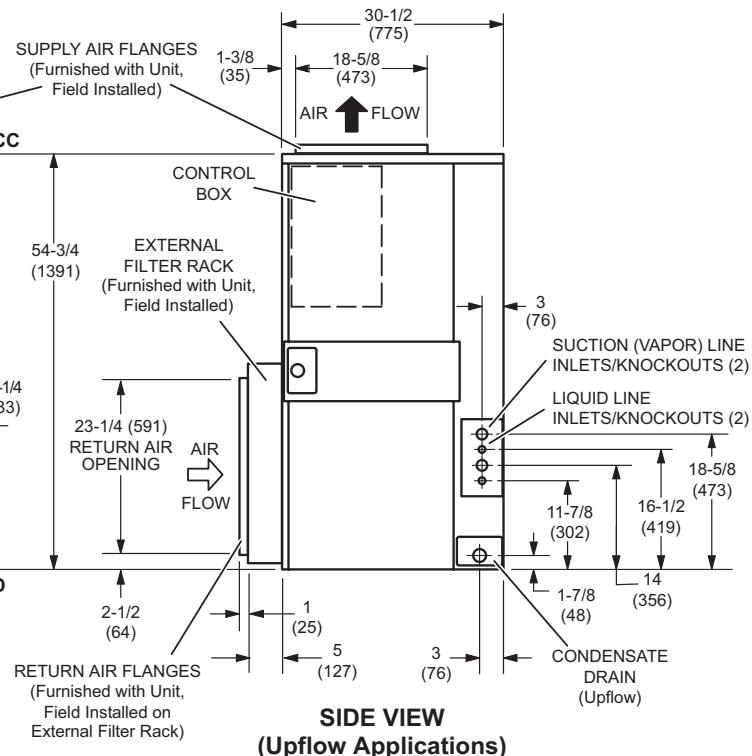
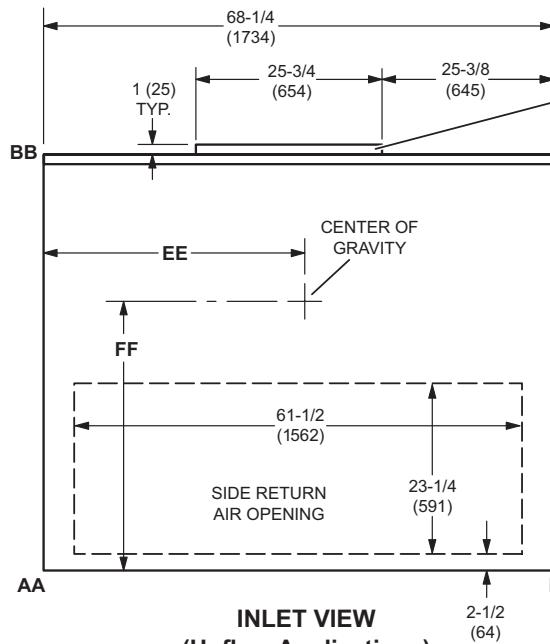
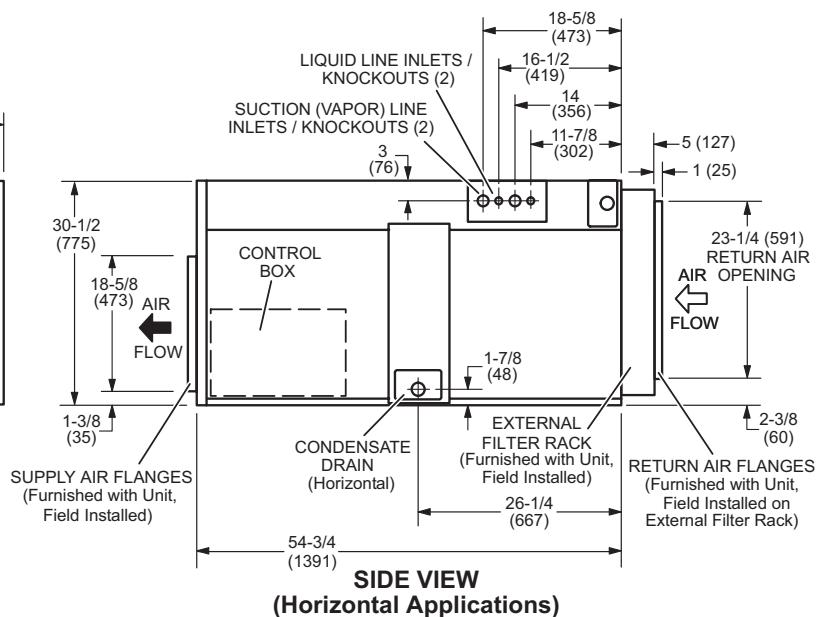
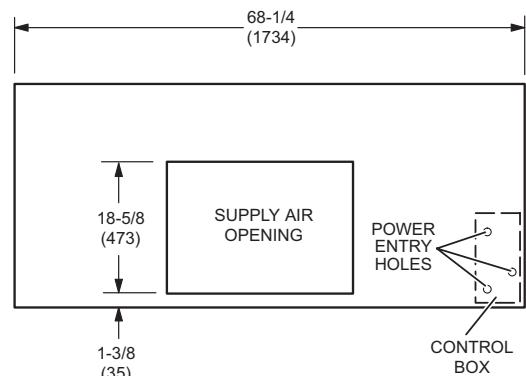
	072-150	65	29	80	36
	180-240	80	36	100	45

## DIMENSIONS - UNIT

EL072XA | EL090XA



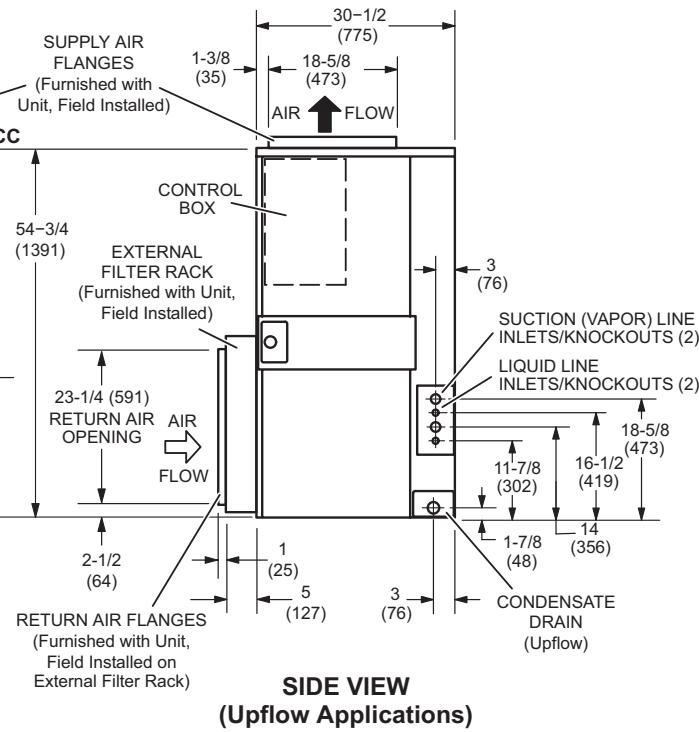
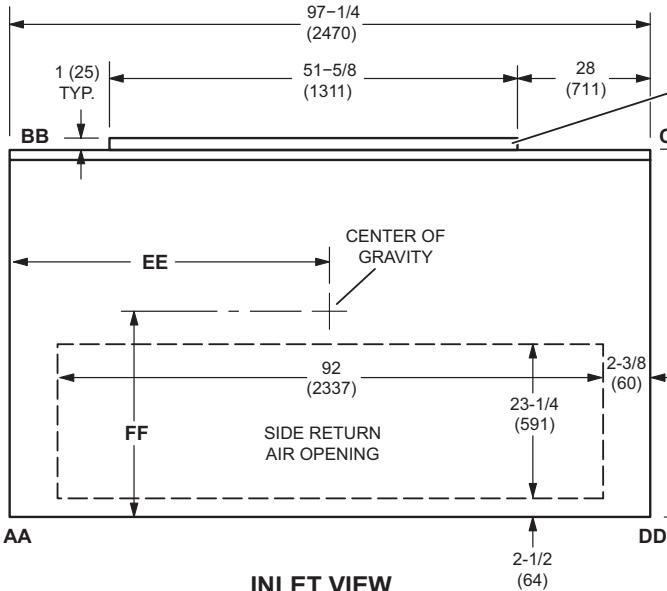
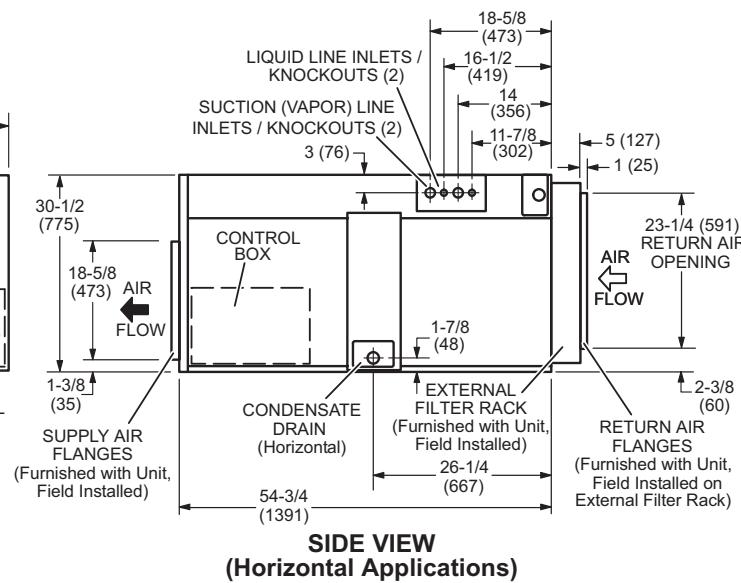
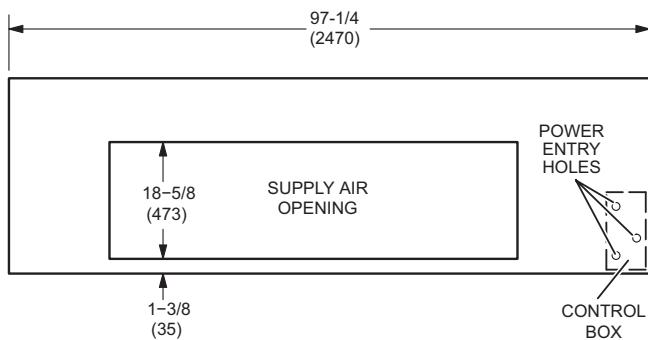
Model No.	CORNER WEIGHTS										CENTER OF GRAVITY			
	AA		BB		CC		DD		EE		FF			
	Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg	in.	mm	in.	mm		
EL072XA	102	46	102	46	102	46	102	46	26	660	27.5	699		
EL090XA	108	49	108	49	108	49	108	49	26	660	27.5	699		

**DIMENSIONS - UNIT**
**EL120XA | EL150XA**


Model No.	CORNER WEIGHTS										CENTER OF GRAVITY			
	AA		BB		CC		DD		EE		FF			
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm	in.	mm
EL120XA	126	57	121	55	121	55	126	57	34	864	26	660		
EL150XA	130	59	125	57	125	57	130	59	34	864	26	660		

## DIMENSIONS - UNIT

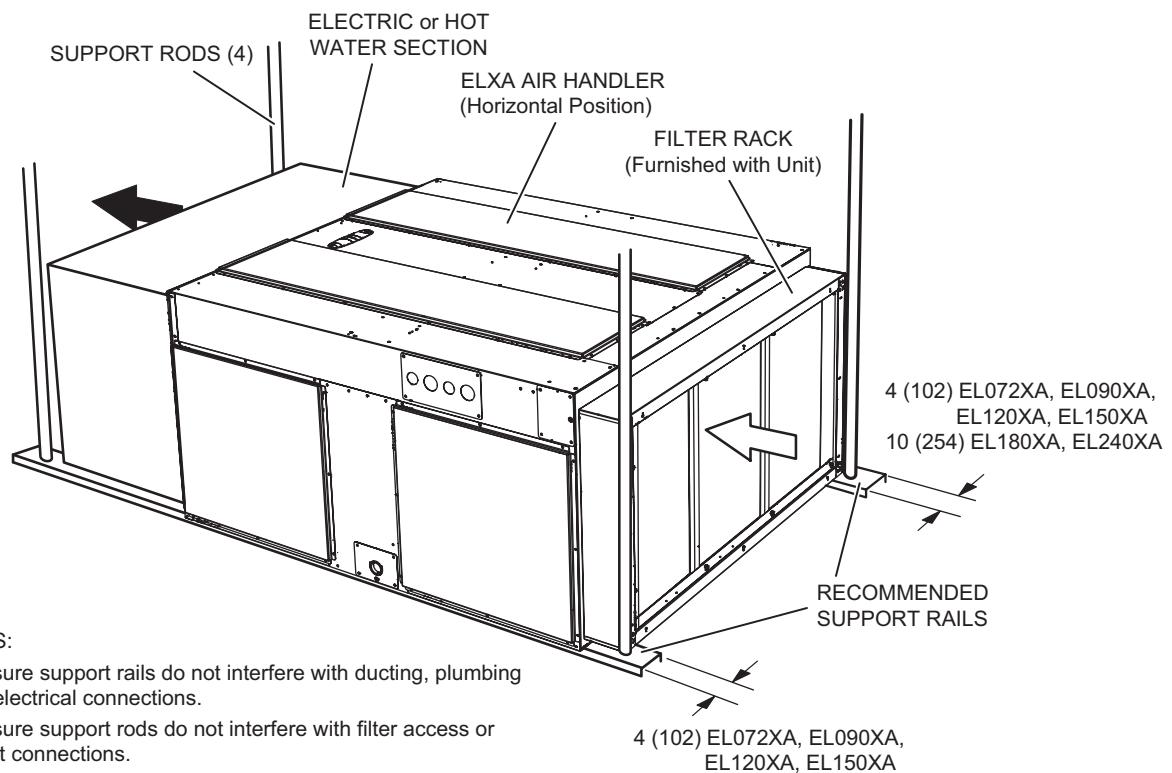
EL180XA | EL240XA



Model No.	CORNER WEIGHTS						CENTER OF GRAVITY					
	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
EL180XA	176	80	176	80	187	85	187	85	50.5	1283	27.5	699
EL240XA	189	86	189	86	211	96	211	96	52	1321	27.5	699

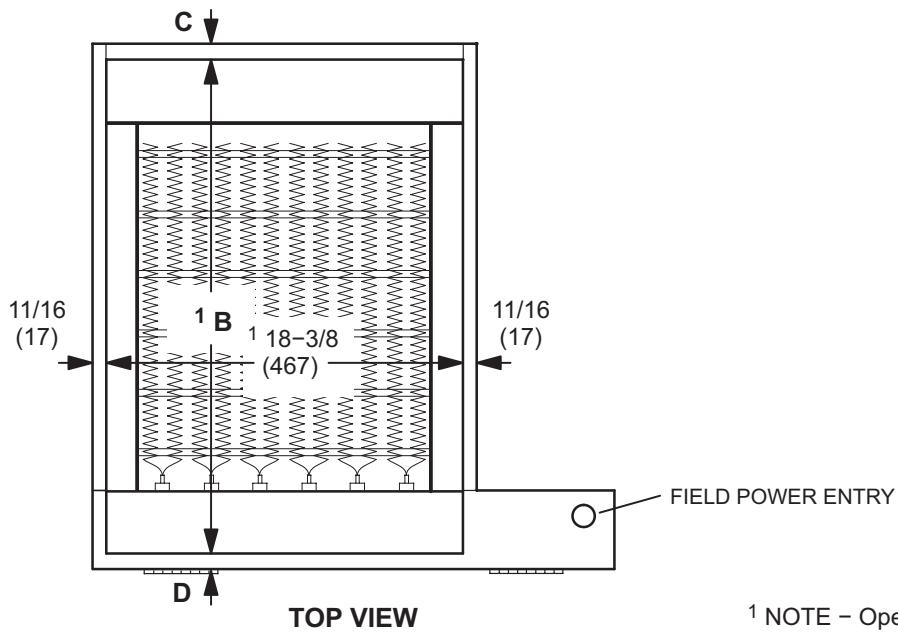
## DIMENSIONS

### TYPICAL SUPPORT METHOD FOR AIR HANDLER WITH HEAT SECTION IN HORIZONTAL POSITION

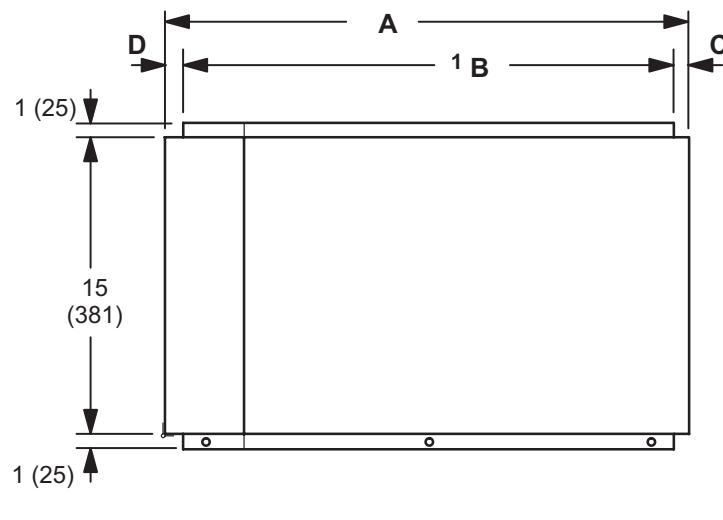
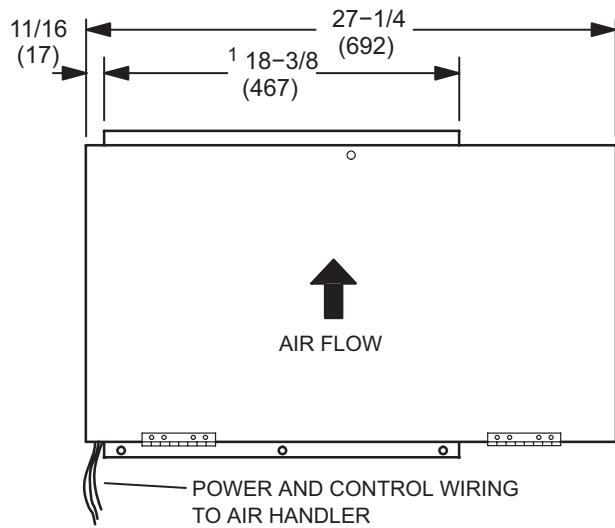


#### NOTES:

1. Ensure support rails do not interfere with ducting, plumbing or electrical connections.
2. Ensure support rods do not interfere with filter access or duct connections.
3. When hot water or electric heat section is installed, additional support underneath these accessories will be required.
4. Support rods and rails are field supplied.



<sup>1</sup> NOTE – Openings same size top and bottom.

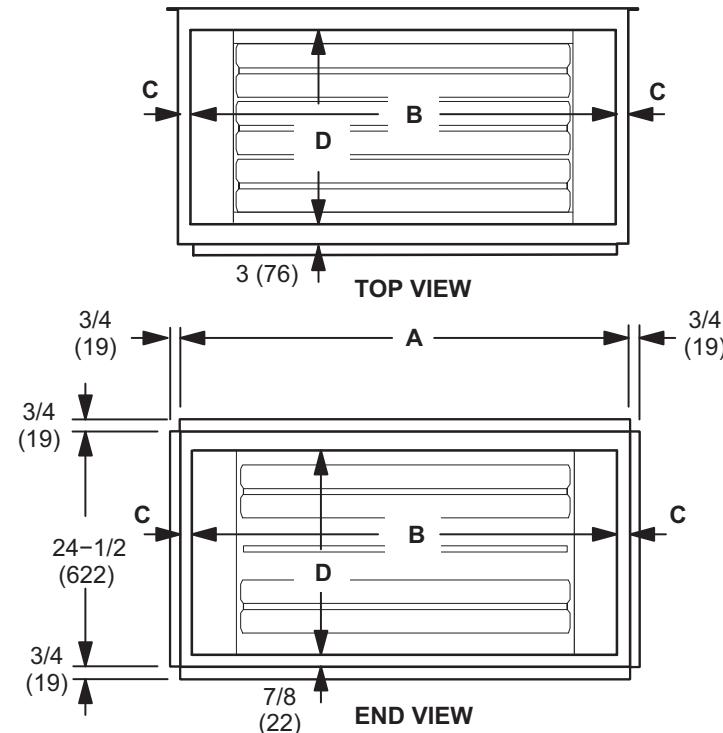
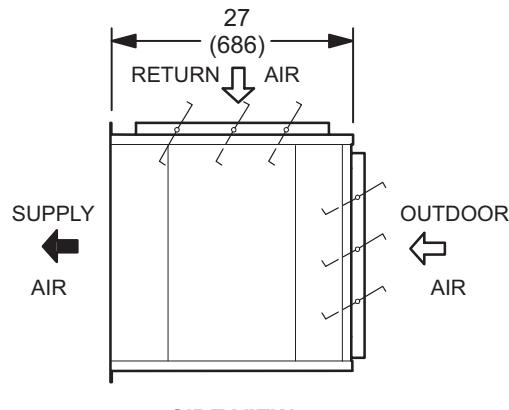


Air Handler Usage	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
EL072XA Thru EL150XA	27-1/8	689	25-1/2	648	13/16	21	13/16	21
EL180XA Thru EL240XA	56-3/4	1441	51-1/4	1302	1-1/2	38	4	102

## DIMENSIONS - ACCESSORIES

## ECONOMIZER

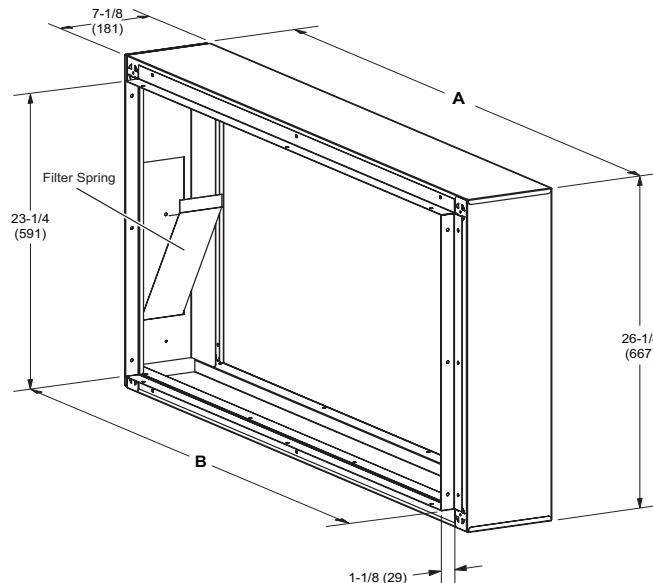
NOTE—Economizer section may be rotated 180° for bottom return air connection.



Air Handler Usage		A		B		C		D	
		in.	mm	in.	mm	in.	mm	in.	mm
Standard Economizers	072-090	32	813	30	762	1	25	20-1/2	521
	120-150	51-1/2	1308	45	1143	3-1/4	83	20-1/2	521
	180-240	72	1829	60	1524	6	152	20-1/2	521
High Performance Economizers	072-090	32	813	30	762	1	25	20-1/4	514
	120-150	51-1/2	1308	45	1143	3-1/4	83	20-1/4	514
	180-240	72	1829	60	1524	6	152	20-1/4	514

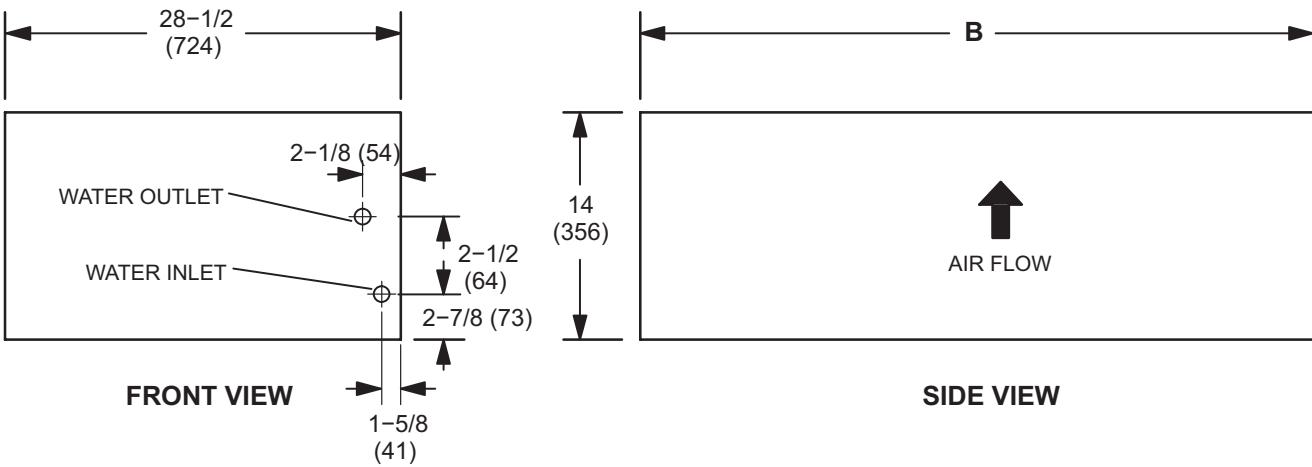
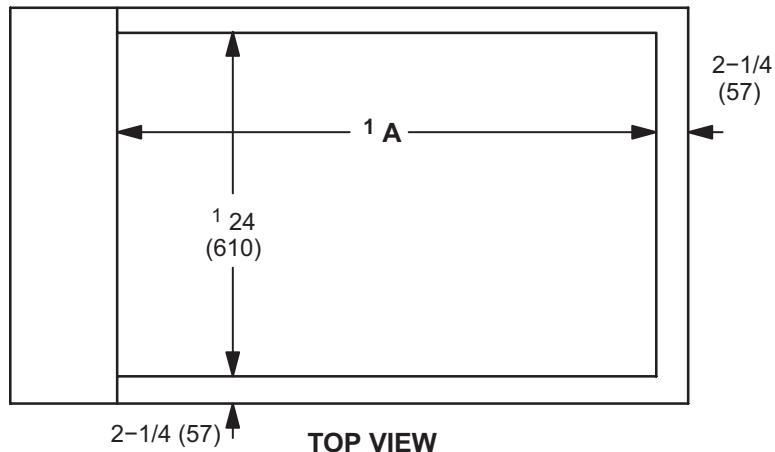
## DIMENSIONS - ACCESSORIES

## 4-INCH FILTER KIT



Model No.	A		B	
	in.	mm	in.	mm
EL072XA and EL090XA	49-5/8	1260	45-1/2	1156
EL120XA and EL150XA	65-5/8	1667	61-3/8	1559
EL180XA and EL240XA	96-1/8	2442	91-7/8	2334

<sup>1</sup> NOTE – Openings same size top and bottom.

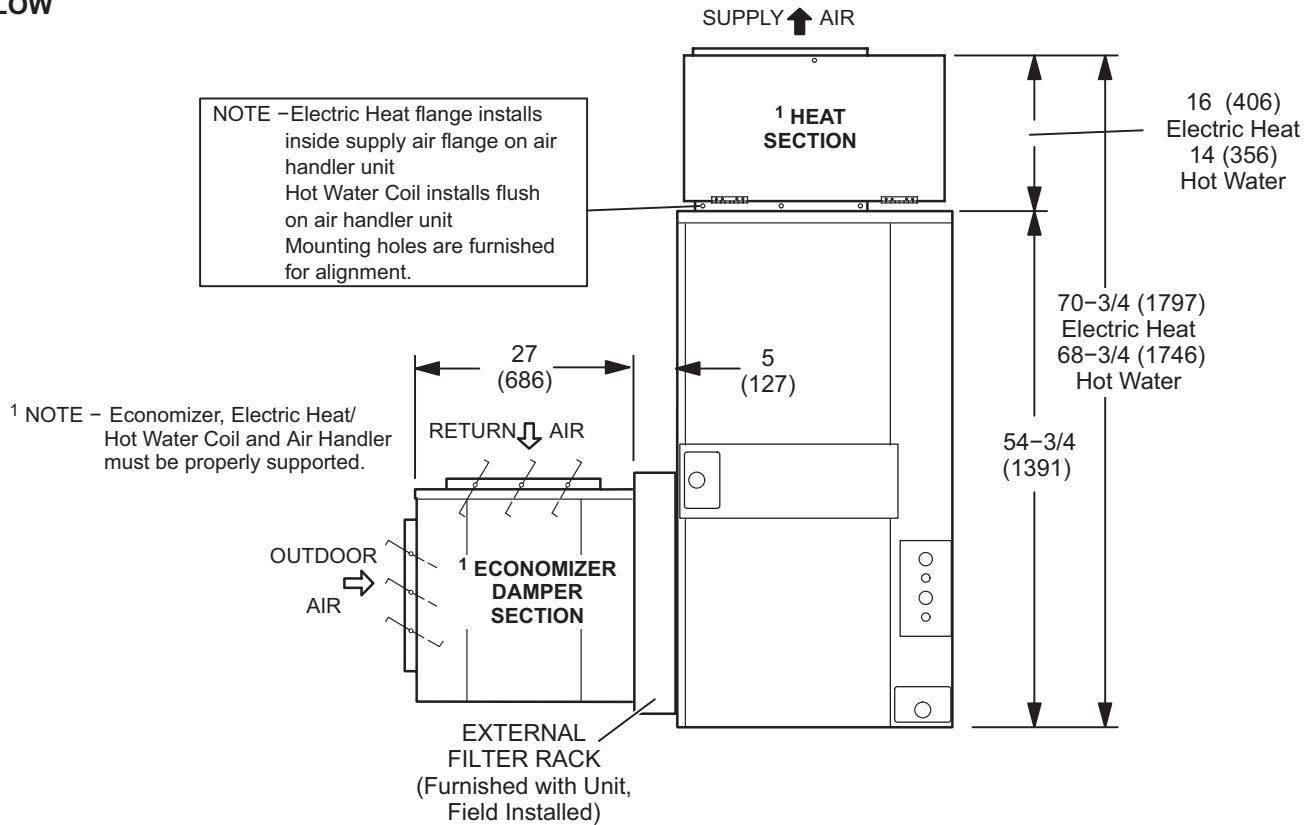


Air Handler Usage	A		B	
	in.	mm	in.	mm
EL072XA Thru EL150XA	36	914	48	1219
EL180XA Thru EL240XA	54	1372	66	1676

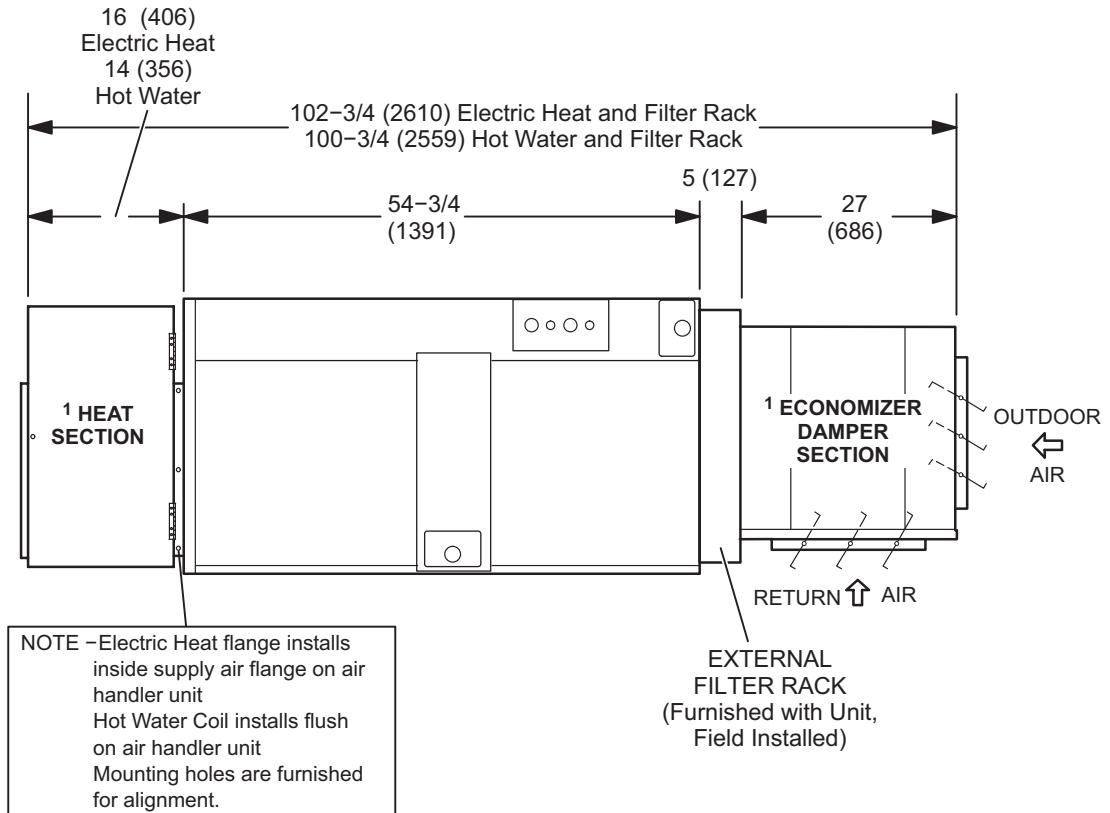
## DIMENSIONS - ACCESSORIES

### AIR HANDLER WITH OPTIONAL ELECTRIC HEAT/HOT WATER COIL AND ECONOMIZER

#### UPFLOW



#### HORIZONTAL



## REVISIONS

Sections	Description of Change
Optional Conventional Temperature Control Systems	Added BACnet Compatible Thermostat With Reheat.



**Intertek**



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