

HEAT PUMP OUTDOOR UNITS

**EL18KSLV**

ELITE® SERIES

Cold Climate | Variable Capacity | Side Discharge | R-454B | 60Hz



RESIDENTIAL  
PRODUCT SPECIFICATIONS (EHB)

SEER2 up to 19.0

HSPF2 up to 10.0

2 to 5 Tons

Cooling Capacity - 22,200 to 55,500 Btuh

Heating Capacity - 23,600 to 56,000 Btuh

**ELITE®**  
SERIES



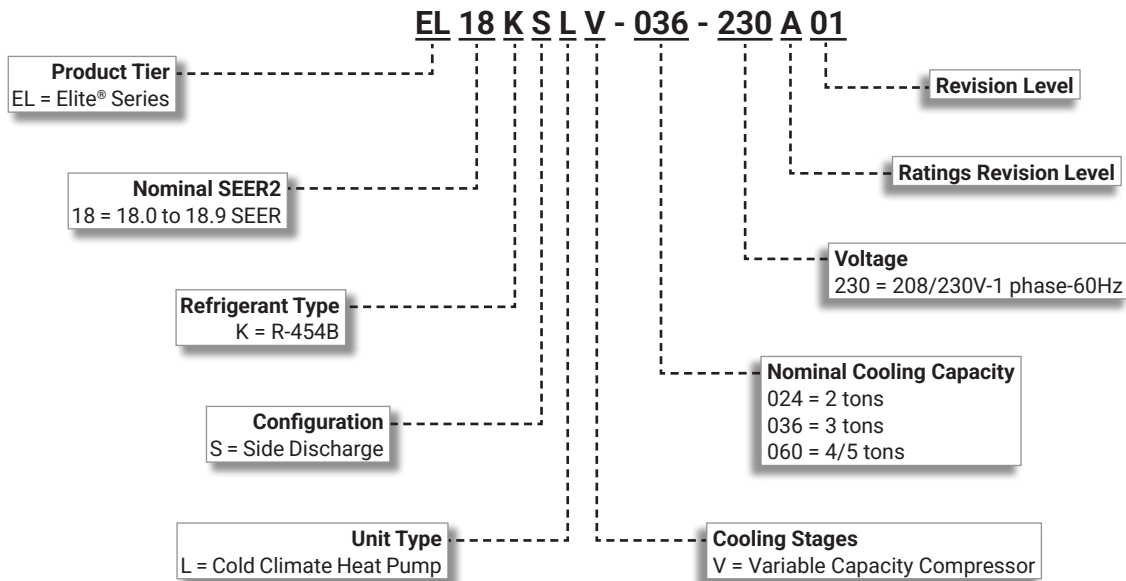
EL18KSLV-036  
(EL18KSLV-024 not shown)



EL18KSLV-060



MODEL NUMBER IDENTIFICATION



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## APPROVALS AND WARRANTY

### APPROVALS

- AHRI Certified to AHRI Standard 210/240-2023
- For AHRI Certified system match-ups and expanded ratings, visit [www.LennoxPros.com](http://www.LennoxPros.com)
- ENERGY STAR® Cold Climate certified
- Sound rated to AHRI Standard 270-2008 test conditions
- Rated according to U.S. Department of Energy (DOE) test procedures
- Units and components UL, NEC, and CEC bonded for grounding to meet safety standards for servicing
- ETL certified (U.S. and Canada)
- ISO 9001 Registered Manufacturing Quality System

### WARRANTY

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

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

## FEATURES

### APPLICATIONS

- 2 through 5 ton
- Sound levels as low as 54 dBA
- Single phase power supply (208/230V)
- Side discharge air
- Units shipped completely factory assembled, internally piped, and wired

**NOTE** - The EL18KSLV-060 model can be configured to operate as a 4 or 5 ton unit.

**NOTE** - When heat pumps are used with gas furnaces, a dual-fuel compatible thermostat or a zone control system with dual-fuel capabilities must be used (order separately)

**NOTE** - Installer must set outdoor unit, connect refrigerant lines and make electrical connections to complete job.

### REFRIGERATION SYSTEM

#### **R-454B Refrigerant**

- Low GWP (Global Warming Potential)
- Zero ODP (Ozone Depletion Potential)
- Low Toxicity/Lower Flammability - A2L

#### **Outdoor Coil**

- Aluminum fins fitted to copper tubes

#### **Outdoor Fan**

- Direct drive fan moves large air volumes uniformly through entire outdoor coil for high refrigeration capacity
- Fan guard provided

#### **Refrigerant Line Connections, Service Valve**

- Flare connection lines are located on side of unit cabinet
- Fully serviceable brass service valve prevents corrosion and provides access to refrigerant system
- Suction and liquid extension pipes furnished

## FEATURES

### **INDOOR REFRIGERANT DETECTION SYSTEM (RDS)**

- Complies with UL 60335-2-40 approved standard
- Required for all systems using R-454B refrigerant
- Factory or field installed on all indoor units
- Consists of a RDS refrigerant detection sensor and a mitigation control in the indoor unit
- Ensures safe operation for systems equipped with R-454B refrigerant
- Indoor sensor will detect any R-454B refrigerant
- If R-454B refrigerant is detected, the refrigerant detection system will stop compressor operation and operate the blower to reduce concentrations in the conditioned space
- Once safe levels are reached the HVAC system will resume normal operation
- Refer to indoor unit Product Specifications documents for additional details

### **COMPRESSOR**

#### **Variable Capacity Rotary Compressor**

- Compressor features high efficiency operation
- Balanced for reduced vibration and quiet operation
- Brushless DC motor uses powerful Neodymium magnets, which are approximately 15-20 times stronger than ferrite magnets used in conventional AC compressors

#### **Compressor Crankcase Heater**

- Protects against liquid refrigerant migration that can occur during low ambient operation

### **CONTROLS**

#### **DC Inverter Control**

- Provides continuous operation, while adjusting capacity according to room temperature
- The accurate sensing of cooling loads prevents frequent changes in capacity and ensures efficient, economical operation

#### **Inverter Module Protection**

- Protects against differences in current, voltage and temperature
- Displays code on the indoor unit indicating a need for servicing

#### **Outdoor Unit Microprocessor**

- Electronic expansion valve control
- Automatic compressor timed-off protection (3 minutes)
- Temperature sensor
- LEDs on control display error codes and assist in troubleshooting
- 4-Way reversing valve control

#### **Electronic Expansion Valve**

- Furnished on all models for heating control

#### **Compressor Overcurrent Protection**

- Overcurrent protection can result due to any of the following:
  - Ambient temperature is too high
  - Locked rotor on the compressor
  - Outdoor air is blocked or restricted

#### **Condenser High Temperature Protection**

- Condenser high temperature can occur due to any of the following conditions:
  - High outdoor ambient
  - Outdoor fan blocked
  - Outdoor coil blocked
- The outdoor coil thermistor continuously monitors the temperature and communicates with the microprocessor
- Depending on the temperature measured, the compressor will be allowed to increase the frequency if needed to meet the load or is forced to run at the current or reduced frequency
- If the temperature becomes excessively high the compressor will be de-energized

#### **Compressor Discharge Temperature Protection**

- The compressor discharge line thermistor continuously monitors the temperature and communicates with the microprocessor
- Depending on the temperature measured, the compressor will be allowed to increase the frequency to meet the load or is forced to run at the current or reduced frequency
- If the temperature becomes excessively high, the compressor will be de-energized

#### **Voltage Protection**

- Protects unit from low or high voltage fluctuations

#### **Terminal Strip**

- Furnished for easy wiring connections

#### **Defrost Control**

- Defrost cycle is automatically enabled if there is a build-up of frost on the outdoor coil
- Outdoor fan operation is terminated during the defrost cycle
- Defrost LED is lit on the indoor unit panel on the front cover during a defrost cycle

#### **Reversing Valve**

- 4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa
- Valve operates on pressure differential between outdoor unit and indoor unit of the system

### **Optional Accessories**

#### **Thermostat**

- Thermostat is not furnished with unit
- See page 5

## FEATURES

### CABINET

- Constructed of heavy gauge steel
- Tabs on unit base allow secure mounting to slab
- Condensate drain outlets furnished on unit base

**NOTE** - Drain must be field furnished.

- Pan heater prevents ice build-up in the bottom of the unit during heating operation
- Access cover for power and control wiring connections
- Access cover for service valves
- Rubber dampening pads (4)

### Optional Accessories

#### Condenser Pad

- Provides permanent foundation for outdoor units
- One-piece lightweight structural foam and molded from high-density polyethylene (HDPE)
- Lightweight, easy to carry and install
- Textured finish provides a non-skid surface so outdoor unit sits securely in one place
- UV stable

#### Wind Baffle

- Front wind baffle increases unit reliability and performance in extremely cold temperature
- Protects the coil from high winds to prevent damage
- Required for low ambient cooling performance for mechanical or server room applications
- Recommended when unit is installed facing prevailing winds
- Heavy gauge galvanized steel
- Easy to install

#### Snow Hoods

- Side and back hoods
- Increases unit reliability and performance in extremely cold temperature
- Helps keep snow and ice from blocking the outdoor coil to prevent damage
- Protects coil from high winds
- Reduces defrost cycles and helps maintain a comfortable indoor temperature
- Heavy gauge galvanized steel
- Easy to install
- Recommended for cold climate heating and cooling applications

## OPTIONAL ACCESSORIES - ORDER SEPARATELY

| Description                 | Order Number | Size |     |     |
|-----------------------------|--------------|------|-----|-----|
|                             |              | 024  | 036 | 060 |
| Condenser Pad (24 x 48 x 3) | 28V63        | •    | •   | •   |
| Wind Baffle                 | 31J04        | •    |     |     |
|                             | 31J05        |      | •   |     |
|                             | 31J06        |      |     | •   |
| Snow Hoods                  | 31J07        | •    |     |     |
|                             | 31J08        |      | •   |     |
|                             | 31J09        |      |     | •   |

## EXPANDED SOUND DATA

| 1 Size          | 1 Estimated Sound Pressure Level at Distance From Unit (dBA at distance in ft.) |    |    |    |    |
|-----------------|---|----|----|----|----|
|                 | 3   | 5  | 10 | 15 | 50 |
| <b>024 Min.</b> | 47  | 42 | 36 | 33 | 22 |
| <b>024 Max.</b> | 62  | 57 | 51 | 48 | 37 |
| <b>036 Min.</b> | 50  | 45 | 39 | 36 | 25 |
| <b>036 Max.</b> | 68  | 63 | 57 | 54 | 43 |
| <b>060 Min.</b> | 55  | 50 | 44 | 41 | 30 |
| <b>060 Max.</b> | 71  | 66 | 60 | 57 | 46 |

<sup>1</sup> Estimated sound pressure level at distance based on AHRI Standard 275-2010 method for equipment located on the ground, roof, or on side of building wall with no adjacent reflective surface within 9.8 feet. Sound pressure levels will increase based on changes to assumptions. For other applications, refer to AHRI Standard 275.

## CONTROL OPTIONS

### E40 Smart Wi-Fi Thermostat

- 3 Htg.-2 Clg.
- 7-day, universal, programmable, touchscreen thermostat
- Controls dehumidification during cooling mode and humidification during heating mode
- Smooth Setback Recovery and compressor short-cycle protection
- One-Touch Away Mode, Smart Away™ (geo-fencing), equipment maintenance reminders and scheduling
- Smart home automation compatible with Amazon Alexa®, Google Assistant, Control4®, Building36®, Matter and IFTTT
- Lennox® Home App controls temperature, fan operation, set programs/schedules and set Away mode on a smartphone
- Lennox Smart Tech App allows the installer to commission the system and remotely turn the system on and off during setup or service call on a smartphone



### M40 Smart Wi-Fi Thermostat

- 3 Htg.-2 Clg.
- 7-day, universal, programmable, touchscreen thermostat
- Smooth Setback Recovery and compressor short-cycle protection
- One-Touch Away Mode, Smart Away™ (geo-fencing), equipment maintenance reminders and scheduling
- Smart home automation compatible with Amazon Alexa®, Google Assistant, Control4®, Building36®, Matter and IFTTT
- Lennox® Home App controls temperature, fan operation, set programs/schedules and set Away mode on a smartphone
- Lennox Smart Tech App allows the installer to commission the system and remotely turn the system on and off during setup or service call on a smartphone



**NOTE** - Please refer to the individual Product Specifications for these products for full information.

## CONTROLS - ORDERING

|                                   |                       |              |
|-----------------------------------|-----------------------|--------------|
| E40 Smart Wi-Fi Thermostat        | 3-3/8 x 5-3/8 x 1     | <b>30L26</b> |
| Lennox® Smart Room Sensor         | 4 x 5-1/2 x 3         | <b>22V25</b> |
| Lennox® Smart Air Quality Monitor | 3-5/8 x 4-3/8 x 1-3/8 | <b>21P02</b> |
| Lennox® Wireless Extender         | 4 x 5-1/2 x 2-1/2     | <b>22V26</b> |
| M40 Smart Wi-Fi Thermostat        | 3-5/16 x 4-5/16 x 7/8 | <b>30L27</b> |

### Thermostat Accessories

|  |              |
|--|--------------|
| <sup>1</sup> Discharge Air Temperature Sensor (For E40)                            | <b>88K38</b> |
| <sup>2</sup> Remote Outdoor Air Temperature Sensor (For dual-fuel and Humiditrol®) | <b>X2658</b> |

<sup>1</sup> Optional for service diagnostics (E40).

<sup>2</sup> Remote Outdoor Air Temperature Sensor is used with conventional (non-Lennox® Communicating) outdoor units (sensor is furnished with Lennox® Communicating outdoor units). Allows the thermostat to display outdoor temperature. Required in dual-fuel and Humiditrol® applications.

## SPECIFICATIONS

| Size  |  | 024                                | 036                 | 060                 |
|---|--|------------------------------------|---------------------|---------------------|
| <b>Nominal Size - Tons</b>                                      |  | 2                                  | 3                   | 4/5                 |
| <b>Ambient Temperature Range - °F</b>                           | Cooling  | 5°F - 115°F                        | 5°F - 115°F         | 5°F - 115°F         |
|   | Heating  | -22°F - 86°F                       | -22°F - 86°F        | -22°F - 86°F        |
| <b>Sound Data (low)</b>   | dBA  | 54                                 | 57                  | 62                  |
| <b>Refrigerant (15 ft. Line Set)</b>                            | <sup>1</sup> Charge furnished (R-454B)             | 3 lbs. 9 oz.                       | 5 lbs. 9 oz.        | 7 lbs. 8 oz.        |
|   | Maximum line length with furnished charge - ft.    | 15                                 | 15                  | 15                  |
|   | Additional charge required per ft. - oz.           | 0.55                               | 0.55                | 0.55                |
| <b>Compressor</b>   | Number and Type                                    | (1) Variable Rotary                | (1) Variable Rotary | (1) Variable Rotary |
|   | Refrigerant oil type                               | HAF68D1C                           | RM68EH              | RM68EH              |
|   | Refrigerant oil charge - oz.                       | 30.4                               | 29.4                | 47.3                |
| <b>Connections</b>  | Liquid OD (flare) - in.                            | 3/8                                | 3/8                 | 3/8                 |
|   | <sup>2</sup> Suction OD (flare) - in.              | 5/8                                | 3/4                 | 3/4                 |
|   | Refrigerant line size - Liquid - in.               | 3/8 - same size as unit connection |                     |                     |
|   | <sup>2</sup> Refrigerant line size - Suction - in. | 3/4                                | 7/8                 | 7/8                 |
|   | Maximum line length - ft.                          | 150                                | 150                 | 100                 |
| Maximum height difference between indoor and outdoor unit - ft. |  | 50                                 | 50                  | 50                  |
| <b>Outdoor Coil</b>   | Net face area - ft. <sup>2</sup>                   | 7.19                               | 9.61                | 16.7                |
|   | Tube diameter - mm                                 | 7                                  | 7                   | 7                   |
|   | Rows   | 3                                  | 3                   | 2                   |
|   | Fins - in.   | 18                                 | 18                  | 18                  |
|   | Fin type   | Hydrophillic aluminum              |                     |                     |
|   | Tube type  | Inner Grooved Copper Tube          |                     |                     |
| <b>Outdoor Fan(s)</b>   | HP   | 1/4                                | 1/4                 | (2) 1/4             |
|   | (Number) Diameter - in.                            | (1) 22                             | (1) 25              | (2) 24              |
|   | Blades   | 3                                  | 3                   | 3                   |
|   | Total air volume - cfm                             | 3000                               | 3330                | 5970                |
|   | Rpm  | 680                                | 700                 | 750                 |
|   | Watts  | 160                                | 200                 | (2) 160             |
| <b>Shipping/Net Data - lbs.</b>                                 |  | 137 / 161                          | 157 / 190           | 245 / 280           |

## ELECTRICAL DATA

|   |                 |              |              |      |
|---|-----------------|--------------|--------------|------|
| Line voltage data (Volts-Phase-Hz)                      | 208/230-1-60    | 208/230-1-60 | 208/230-1-60 |      |
| <sup>3</sup> Maximum Overcurrent Protection (MOCP) amps | 30              | 35           | 60           |      |
| <sup>4</sup> Minimum circuit ampacity (MCA)             | 21              | 24           | 37           |      |
| <b>Compressor</b>                                       | Rated Load Amps | 14.5         | 16.5         | 26.4 |
| <b>Fan Motor</b>  | Rated load amps | 1.2          | 1.5          | 2.4  |

NOTE - Extremes of operating range are plus and minus 10% of line voltage.

<sup>1</sup> Refrigerant charge sufficient for the line set length listed in parenthesis. For longer line set requirements see the Installation Instructions or unit Charging Label for information about line set length and additional refrigerant charge required.

<sup>2</sup> Line set sizes for Suction Line (unit to line set):

024 - 5/8 to 3/4 in.

036 - 3/4 to 7/8 in.

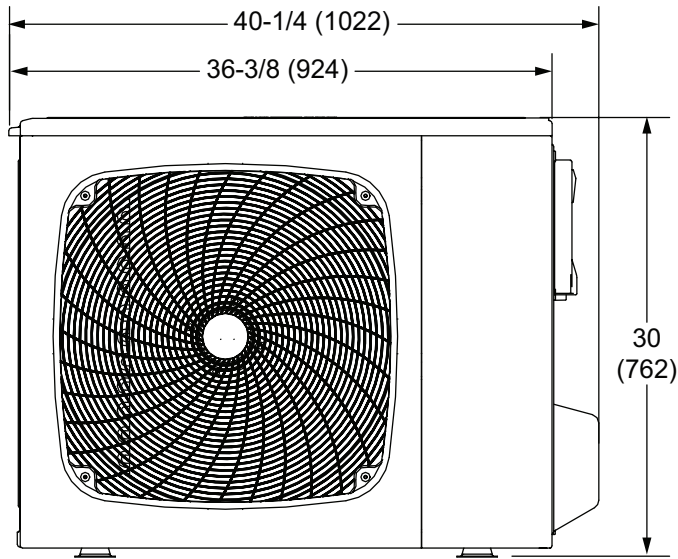
060 - 3/4 to 7/8 in.

<sup>3</sup> HACR type circuit breaker or fuse.

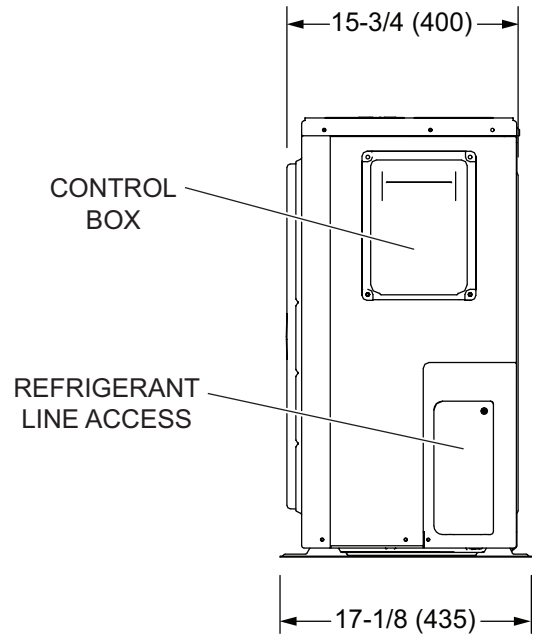
<sup>4</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

**DIMENSIONS**

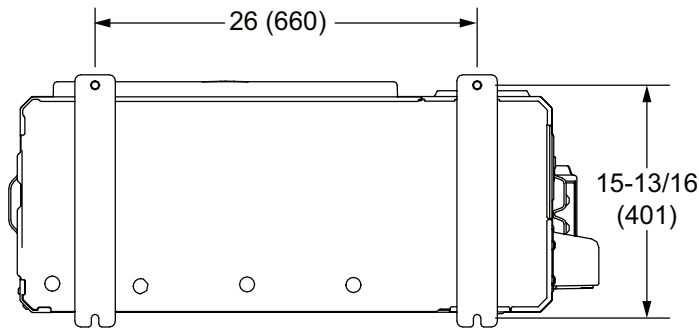
**EL18KSLV-024**



**FRONT VIEW**



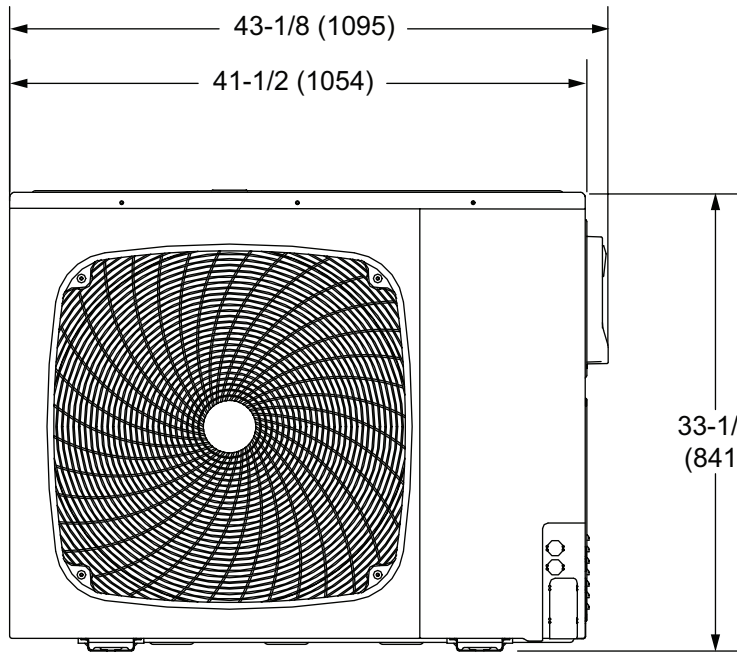
**SIDE VIEW**



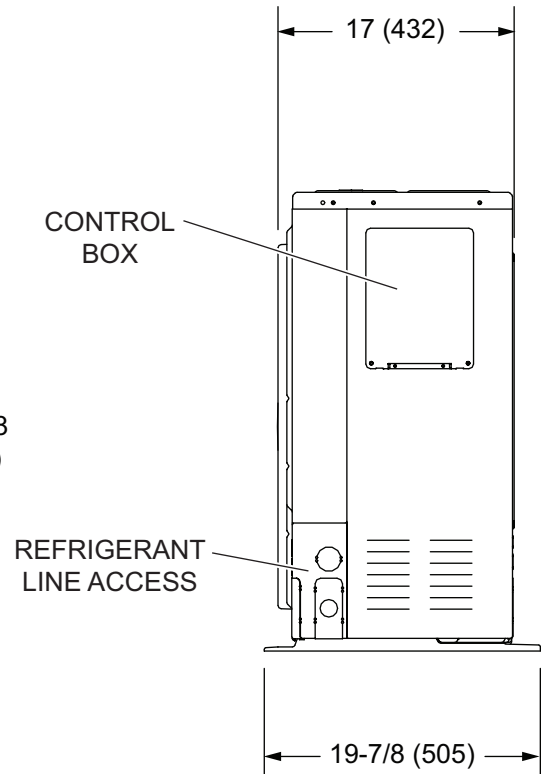
**BOTTOM VIEW**

# DIMENSIONS

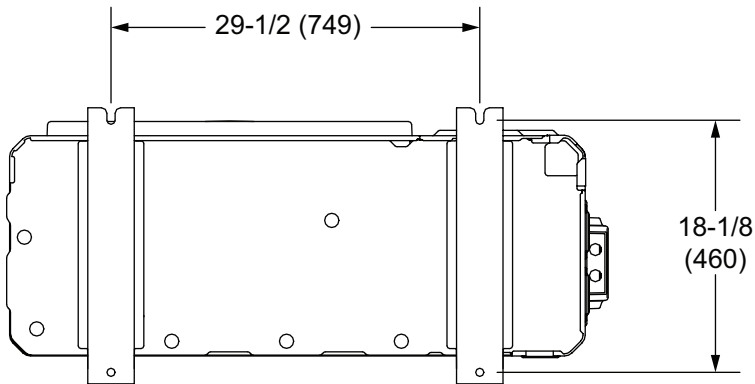
## EL18KSLV-036



**FRONT VIEW**



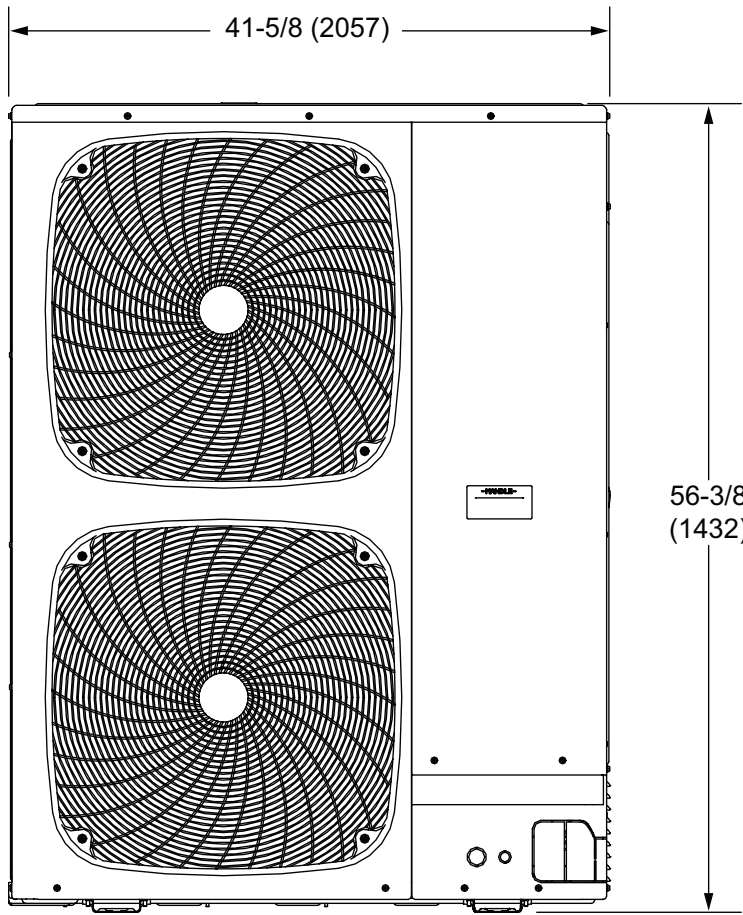
**SIDE VIEW**



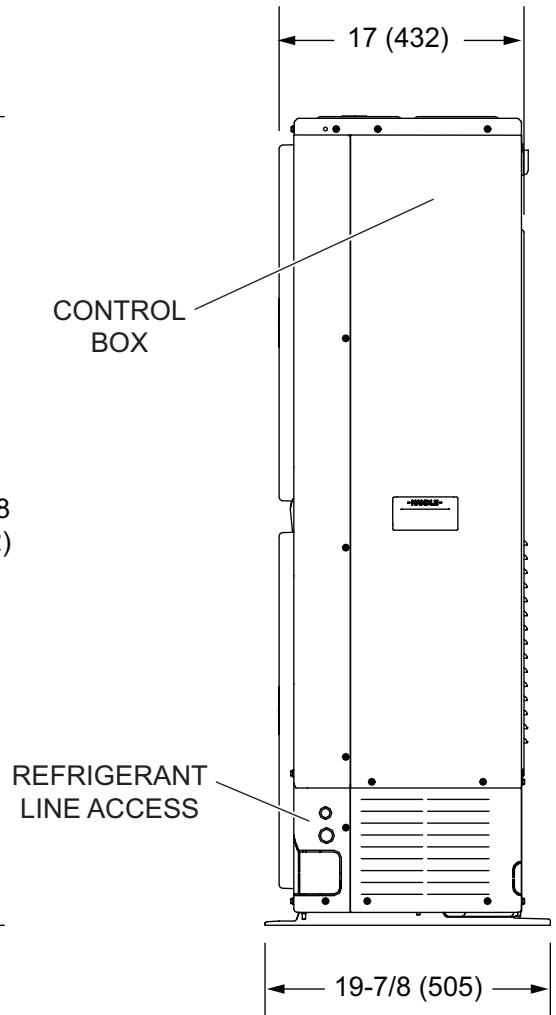
**BOTTOM VIEW**

**DIMENSIONS**

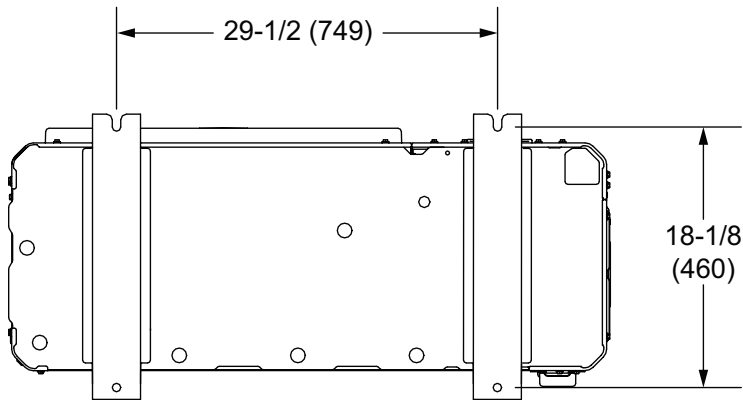
**EL18KSLV-060**



**FRONT VIEW**



**SIDE VIEW**

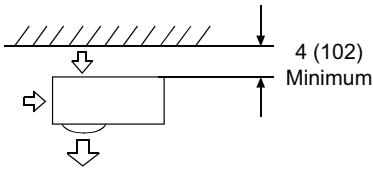


**BOTTOM VIEW**

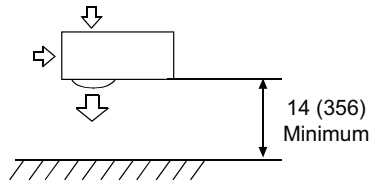
# INSTALLATION CLEARANCES

## SINGLE UNIT INSTALLATION

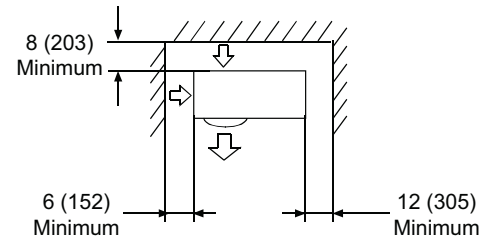
**BACK**



**FRONT**

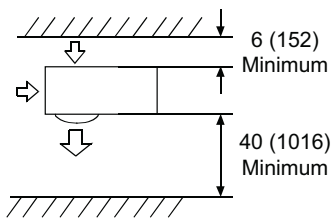


**BACK AND SIDE**

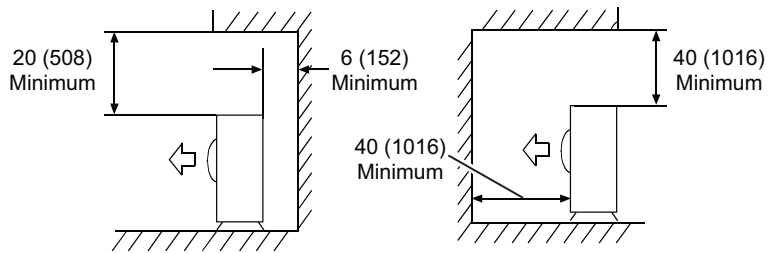


NOTE- Height of barriers is below unit height.

**FRONT AND BACK**



**TOP (With Barriers)**



NOTE - Top and two sides of unit must be exposed to open space,  
Any barriers on one side of the front or back must be lower than unit height.

### MINIMUM CLEARANCES

|                       |                 |
|-----------------------|-----------------|
| Control Box (Service) | 30 in. (762 mm) |
| Discharge Air         | 14 in. (356 mm) |
| Space Between Units   | 4 in. (102 mm)  |
| Space From Wall       | 4 in. (102 mm)  |

NOTE - Maximum soffit overhang is 36 inch (914 mm).

At least one side should be unobstructed by a wall or other barrier.

## TXV USAGE

All Lennox coils and air handlers are shipped with a factory installed TXV. In most cases, no substitution is needed. If a different size TXV is required, it will be listed in the "TXV SUBSTITUTION" table by size. The correct TXV must be ordered separately and field installed.

| Size | Order Number |
|------|--------------|
| 024  | <b>26Z70</b> |
| 036  | <b>26Z70</b> |
| 048  | <b>26Z71</b> |
| 060  | <b>26Z72</b> |

## AHRI STANDARD 210/240-2023

Standard Ratings relating to cooling or heating capacities shall be net values, including the effects of circulating-fan heat, but not including supplementary electric heat. Power input used for calculating efficiency shall be the Total Power.

Standard Ratings of units which do not have indoor air-circulating fans furnished as part of the model, i.e., Coil-only System, shall be established by subtracting from the total cooling capacity 1,505 Btu/h per 1,000 SCFM, and by adding the same amount to the heating capacity for non-mobile-home, non-Space Constrained units. Total Power for both heating and cooling shall be increased by 441 W per 1,000 SCFM of indoor air circulated.

## TXV SUBSTITUTION - R-454B

A general guide for replacing the factory installed R-454B TXV if the indoor unit (coil/air handler) is larger or smaller than the outdoor unit.

| Outdoor Unit |      | Indoor Unit |       | Indoor TXV<br>Furnished | Indoor TXV<br>Replacement |
|--------------|------|-------------|-------|-------------------------|---------------------------|
| Size         | Tons | Size        | Tons  |                         |                           |
| 024          | 2    | 42          | 3.5   | <b>26Z71</b>            | <b>26Z70</b>              |
| 024          | 2    | 48          | 4     | <b>26Z71</b>            | <b>26Z70</b>              |
| 024          | 2    | 49          | 4     | <b>26Z71</b>            | <b>26Z70</b>              |
| 024          | 2    | 50/60       | 4/5   | <b>26Z71</b>            | <b>26Z70</b>              |
| 024          | 2    | 51/61       | 4/5   | <b>26Z71</b>            | <b>26Z70</b>              |
| 024          | 2    | 60          | 5     | <b>26Z72</b>            | <b>26Z70</b>              |
| 036          | 3    | 42          | 3.5   | <b>26Z71</b>            | <b>26Z70</b>              |
| 036          | 3    | 48          | 4     | <b>26Z71</b>            | <b>26Z70</b>              |
| 036          | 3    | 49          | 4     | <b>26Z71</b>            | <b>26Z70</b>              |
| 036          | 3    | 50/60       | 4/5   | <b>26Z71</b>            | <b>26Z70</b>              |
| 036          | 3    | 51/61       | 4/5   | <b>26Z71</b>            | <b>26Z70</b>              |
| 036          | 3    | 60          | 5     | <b>26Z72</b>            | <b>26Z70</b>              |
| 048          | 4    | 30/36       | 2.5/3 | <b>26Z70</b>            | <b>26Z71</b>              |
| 048          | 4    | 36          | 3     | <b>26Z70</b>            | <b>26Z71</b>              |
| 048          | 4    | 60          | 5     | <b>26Z72</b>            | <b>26Z71</b>              |
| 060          | 5    | 50/60       | 4/5   | <b>26Z71</b>            | <b>26Z72</b>              |
| 060          | 5    | 51/61       | 4/5   | <b>26Z71</b>            | <b>26Z72</b>              |

### TXV Ranges:

**26Z70** - 1.5 to 3 ton systems - Use on 3 ton (036) and lower systems.

**26Z71** - 3.5-4 ton systems - Use on 4 ton (048) and down to 3.5 ton (042) systems.

**26Z72** - 5 ton systems - Use on 5 ton (060) systems only.

## REVISIONS

| Sections        | Description of Change                       |
|-----------------|---|
| Control Options | Updated to reflect latest product offering. |



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

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

Contact us at 1-800-9-LENNOX

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

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