Variable Capacity - Precise Comfort® Technology - R-410A - 60 Hz

SEER up to 23.50
HSPF up to 10.40
2 to 5 Tons

Cooling Capacity - 18,000 to 60,000 Btuh
Heating Capacity - 16,700 to 61,000 Btuh

Product Tier
EL = Elite® Series

Nominal SEER
18 = 18 SEER

Refrigerant Type
X = R-410A

Unit Type
P = Heat Pump Outdoor Unit

Cooling/Heating Stages
V = Variable Capacity Compressor

Revision Level

Ratings Revision Level

Voltage
230 = 208/230V-1 phase-60Hz

Nominal Cooling Capacity
024 = 2 tons
036 = 3 tons
048 = 4 tons
060 = 5 tons

* iComfort® Communicating Thermostat required. Not furnished - Order separately.

Easy to install • Easy to service • Easy to sell

* iComfort® S30
Ultra-Smart Wi-Fi
Communicating Thermostat

Easy to install • Easy to service • Easy to sell
FEATURE HIGHLIGHTS

1. Outdoor Coil Fan
2. Quantum™ Coil
3. High Capacity Liquid Line Drier
4. High Pressure Switch
5. Four-Way Reversing Valve
6. Variable Speed Rotary Compressor
7. DC Inverter Control
8. iComfort® Communicating Control
9. Heavy Gauge Steel Cabinet
10. SmartHinge™ Louvered Coil Protection
11. Refrigerant Line Connections and Access

CONTENTS

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Optional Accessories - Order Separately ..................................... 9
Sound Data .................................................................................... 10
Specifications ................................................................................. 9
TXV/Orifice Usage ........................................................................ 12
APPLICATIONS
• 2 through 5 ton
• Sound levels as low as 61 dBA
• Single-phase power supply
• Applicable to indoor air handlers or gas furnaces with indoor add-on coils
• Shipped completely factory assembled, piped and wired

NOTE - When heat pumps are used with gas furnaces, a dual-fuel compatible thermostat or 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-410A Refrigerant
• Non-chlorine, ozone friendly
• Unit is factory pre-charged

NOTE - Total system refrigerant charge is dependent on outdoor unit size, indoor unit size and refrigerant line length.

NOTE - Refer to the unit-mounted charging sticker to determine correct amount of charge required.

FEATURES

APPROVALS
• AHRI Standard 210/240 certified
• AHRI Certified system match-ups and expanded ratings, visit www.LennoxPros.com
• ENERGY STAR® Certified (certain units)
• Sound rated to AHRI Standard 270-2008 test conditions
• Tested in Lennox’ Research Laboratory environmental test room
• Rated According to U.S. Department of Energy (DOE) test procedures
• Region specific models meet the minimum efficiency requirements for U.S. DOE Federal Regional Standards in that area
• Unit and components ETL, 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 Equipment Limited Warranty certificate included with unit for specific details.

1 Outdoor Coil Fan
• Direct drive fan
• PSC motor
• Vertical air discharge
• Totally enclosed fan motor
• Ball bearings
• Inherently protected
• PVC (polyvinyl chloride) coated steel fan guard

2 Quantum™ Coil
• Lennox designed and fabricated coil
• Enhanced aluminum alloy tube/enhanced fin coil
• Superior corrosion resistance
• Ripple-edged aluminum fins
• Aluminum tube construction
• Lanced fins for maximum fin surface exposure
• Fin collars grip tubing for maximum contact area
• Flared shoulder tubing connections
• Factory tested under high pressure
• Entire coil is accessible for cleaning

Expansion Valve - Outdoor Unit
• Designed and sized specifically for use in heat pump system
• Sensing bulb is located on the line between reversing valve and the coil
• Senses suction temperature during the heating cycle
• Factory installed and piped
Discharge Temperature Switch
- Shuts off unit if operating conditions cause the compressor discharge line temperature to rise above setpoint
- Protects compressor from excessive pressure / temperature
- Automatic reset when temperature drops below setpoint

High Pressure Transducer
- Protects the system from high pressure conditions
- Automatic reset

Low Pressure Transducer
- Shuts off unit if suction pressure falls below setting
- Provides loss of charge and freeze-up protection
- Auto-reset

High Capacity Liquid Line Drier
- Factory installed in the liquid line
- Drier traps moisture or dirt
- 100% molecular-sieve, bead type, bi-flow drier

Four-Way Reversing Valve
- Rapid changeover of refrigerant flow direction from cooling to heating and vice versa
- Operates on pressure differential between outdoor unit and indoor coil
- Factory installed

Expansion Valve Kits
- Field installed on certain indoor units
- See TXV/Orifice Usage table
- Chatleff-style fitting

Freezestat
- Senses suction line temperature
- Cycles compressor off when suction line temperature falls below it’s setpoint
- Opens at 29°F and closes at 58°F
- Installs on or near the discharge line of the evaporator or on the suction line

Refrigerant Line Kits
- Refrigerant lines are shipped refrigeration clean
- Lines are cleaned, dried, pressurized and sealed at factory
- Suction line fully insulated
- Lines are stubbed at both ends

NOTE - Not available for -060 models. Must be field fabricated.

NOTE - The EL18XPV is a variable capacity heat pump utilizing variable speed compressor technology. With the variable speed compressor and variable pumping capacity, additional consideration must be given to refrigerant piping sizing and application. Please refer to the Installation Instructions or Service Literature for Line Set Requirements and Refrigerant Piping Guidelines.
PRECISE COMFORT® TECHNOLOGY

The Variable Capacity Rotary Compressor and DC Inverter Control is an integrated system that operates together to reduce overall energy usage when compared to conventional heat pumps.

Variable Capacity Compressor
- Rotary compressor - 030 and 036 models
- Scroll compressor - 048 and 060 models
- High volumetric efficiency
- Uniform suction flow
- Constant discharge flow
- Quiet operation
- Low gas pulses during compression reduces operational sound levels
- Compressor motor is internally protected from excessive current and temperature
- Compressor is installed in the unit on resilient rubber mounts for vibration free operation

Rotary Compressor Operation (030 and 036 Models)
- Rotary compressor has a cylindrical chamber
- A roller is mounted to the motor shaft and is offset to rotate in the center of the chamber
- Two spring-loaded vanes sweep the sides of the chamber as the roller rotates
- Roller touches the chamber at a point between the intake and the discharge ports as the roller rotates
- While rotating, the roller draws vapor into the chamber through the intake port
- Vapor is trapped in the space between the chamber wall, the vane, and the point of contact between the roller and the chamber
- As the next vane passes the contact point vapor is compressed
- The space becomes smaller compressing the vapor as the roller rotates
- Vapor is discharged through the discharge port

Scroll Compressor Operation (048 and 060 Models)
- Two involute spiral scrolls matched together generate a series of crescent shaped gas pockets between them
- During compression, one scroll remains stationary while the other scroll orbits around it
- Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates
- As the spiral movement continues, gas pockets are pushed to the center of the scrolls
- Volume between the pockets is simultaneously reduced
- When the pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls
- During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle
- Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency

Compressor is tolerant to the effects of slugging and contaminants

Compressor Crankcase Heater
- Protects against refrigerant migration that can occur during low ambient operation
- Factory Installed

Compressor Sound Dampening System
- Polyethylene compressor
- 2 inch thick batt fiberglass insulation
- All open edges sealed with one-inch wide hook and loop fastening tape

CONTROLS

DC Inverter Control
- Converts AC line voltage into filtered variable DC voltage
- Provides continuous compressor operation, while adjusting the capacity according to indoor temperature
- Adjusts compressor output in increments as small as 1%
- The accurate sensing of the cooling or heating load prevents frequent changes in capacity and ensures efficient, economical operation
- Power Factor Correction (PFC) circuit monitors the DC bus for high, low and abnormal voltage conditions to protect the compressor
- Two LEDs (red and green) indicate inverter operating status and aid in troubleshooting
- Noise filter reduces unwanted electromagnetic interference (EMI)
- Integrated on the iComfort Communicating Control for 024 and 036 models,
- Separate external inverter control for 048 and 060 models
- The inverter reactor (mounted separately) adds inductance to the line between the inverter and the compressor to limit current rise and protect the compressor

Optional Accessories

Compressor Low Ambient Cut-Off Switch
- Non-adjustable switch (low ambient cut-out) prevents compressor operation when outdoor temperature is below 35°F
CONTROLS (continued)

iComfort® Communicating Control
• Advanced control communicates information about various operating parameters in the heat pump to the iComfort® Communicating Thermostats to constantly maintain the highest level of comfort, performance and efficiency available
• Connections for connecting a conventional heating/cooling thermostat are also provided on the control
• Auto Configuration - On start-up the control automatically sends a description of the unit to the iComfort® Communicating Thermostat to automatically configure the features available
• Control also features:
  • Seven-Segment Display - Shows information about outdoor unit type and capacity and also displays alerts for common fault conditions (electrical and mechanical)
  • Low Voltage Protection - Prevents compressor operation when voltage is not within the specified range
  • High and low pressure switch monitoring with provisions for lockout
  • Five-Strike lockout protection protects compressor
  • Liquid line temperature and sensor monitoring
  • EEPROM storage of all local configurations
  • Non-volatile memory storage of 100 alarm codes with display of last 10 codes for troubleshooting
  • Built-in low-ambient control

NOTE - Two RAST connectors for a conventional heating/cooling thermostat are also provided for connecting to the control. A two-stage or single-stage thermostat can be used.

Low Ambient Operation
• Cooling Mode - The heat pump can operate down to 0°F outdoor air temperature in the cooling mode

NOTE - A freezestat is recommended for extra protection during low ambient cooling operation.

Heating Mode (Low Temperature Protection)
• Outdoor unit will not operate in the heating mode when the outdoor temperature is at or below –4°F
• If the unit is operating and the outdoor temperature drops below –4°F, the unit will continue to operate until the room thermostat is satisfied or the outdoor temperature drops to –15°F

iComfort Thermostat Operation:
Climate IQ™ Technology
• Optimizes dehumidification settings for specific climates to improve home comfort during cooling or heating operation

iComfort Communicating Thermostat Settings:
Cooling Mode
• Three climate settings are available:
  • Dry - The system supplies higher indoor airflow at all compressor capacities, increasing efficiency by operating at a higher sensible to total ratio
  • Moderate - The system supplies indoor airflow that balances efficiency and comfort
  • Humid - The system supplies lower indoor airflow at all compressor capacities, improving humidity removal by operating at a lower sensible to total ratio

Heating Mode
• Two climate settings are available:
  • Comfort - The system reduces indoor airflow, increasing supply air temperature
  • Normal - Standard system operation

iComfort® S30 Thermostat Setting:
• Climate IQ (Auto) - Dry, Normal, Basic and Humid modes are automatically set based on the difference between the measured relative humidity and the relative humidity setting
• All modes are selected on the iComfort® Communicating Thermostat

Outdoor Air Temperature Sensor
• Used with iComfort® Communicating Thermostats
• Sensor allows thermostat to display outdoor temperature
• Sensor is auto-detected when connected to thermostat
FEATURES

OPTIONAL ACCESSORIES

iComfort® S30 Ultra-Smart Wi-Fi Thermostat (part of the iComfort® Residential Communicating Control System)
  - Recognizes and connects to all iComfort® Communicating products to automatically configure and control the heating/cooling system (based on user-specified settings) for the highest level of comfort, performance and efficiency
  - Recognizes model and serial number information for iComfort® Communicating products to simplify system setup
  - Wi-Fi remote temperature monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets
  - Service alerts and reminders sent via text message or e-mail
  - Smart home automation compatible with Apple HomeKit™, Amazon Alexa®, Google Assistant and IFTTT
  - Service Dashboard features online real-time monitoring of installed iComfort® Communicating systems
  - Simple easy-to-use touchscreen allows complete system configuration
  - Scheduled maintenance alerts, system warnings and troubleshooting are also displayed on thermostat screen
  - Easy to read 7 inch high definition color display (measured diagonally)
  - Conventional outdoor units (not iComfort® Communicating) can easily be added and controlled by the iComfort® S30 Thermostat
  - Installer setup screens allow quick and simple system configuration without a manual. Installer can also run tests on complete system or individual components for easy maintenance and troubleshooting
  - Serial communications bus (RSBus), with less wiring than a conventional heating/cooling system, allows system communication
  - Uses 4-wire, standard thermostat wiring
  - High Definition Color Display with Subbase, Smart Hub Controller, wallplate (for retrofit installations) furnished for easy installation
  - See the iComfort® S30 Thermostat Product Specifications bulletin for more information

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
  - Wi-Fi remote monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets
  - Smart home automation compatible with Apple HomeKit™, Amazon Alexa®, Google Assistant and IFTTT
  - High Definition Color Display with Subbase, Smart Hub Controller, wallplate (for retrofit installations) furnished for easy installation
  - See the iComfort® E30 Smart Wi-Fi Thermostat Product Specifications bulletin for more information

Thermostat
  - Thermostat is not furnished with unit
  - See Lennox Price Book for selection

Optional Accessories

Indoor Blower Off Delay Relay
  - Delays the indoor blower-off time during the cooling cycle
FEATURES

CABINET

• Heavy-gauge steel construction
• Pre-painted cabinet finish
• Louvered heavy gauge steel panels surround unit on all four sides
• Control box is conveniently located with all controls factory wired
• Corner patch plate allows access to compressor components
• Drainage holes are provided in base section for moisture removal
• High density polyethylene unit support feet raise the unit off of the mounting surface, away from damaging moisture

PermaGuard™ Unit Base

• Durable zinc-coated base section resists rust and corrosion

SmartHinge™ Louvered Coil Protection

• Steel louvered panels provides complete coil protection
• Panels are hinged to allow easy cleaning and servicing of coils
• Panels may be completely removed
• Interlocking tabs and slots assure tight fit on cabinet

Refrigerant Line Connections, Electrical Inlets and Service Valves

• Sweat connection vapor and liquid lines
• Located on corner of unit cabinet
• Vapor valve can be fully shut off, while liquid valve may be front seated to manage refrigerant charge while servicing system
• Refrigerant line connections and field wiring inlets are located in one central area of the cabinet
• See dimension drawing

Optional Accessories

Snow Guards

• For use in locations where the possibility of heavy snow or freezing rain accumulation may occur
• Heavy gauge powder coated steel guard deflects snow and ice away from the outdoor fan and prevents build-up on the fan guard

NOTE - Snow Guards for 048-060 models are only available in Canada.
## SPECIFICATIONS

### General Data

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Tonnage</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### Connections (sweat)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid line (o.d.) - in.</td>
<td>3/8</td>
<td>3/8</td>
<td>3/8</td>
<td>3/8</td>
</tr>
<tr>
<td>Vapor line (o.d.) - in.</td>
<td>3/4</td>
<td>7/8</td>
<td>7/8</td>
<td>1-1/8</td>
</tr>
</tbody>
</table>

### Refrigerant

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-410A charge furnished</td>
<td>8 lbs. 12 oz.</td>
<td>8 lbs. 5 oz.</td>
<td>12 lbs. 5 oz.</td>
<td>12 lbs. 6 oz.</td>
</tr>
</tbody>
</table>

### Outdoor Coil

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net face area - sq. ft.</td>
<td>14.44</td>
<td>14.44</td>
<td>23.63</td>
<td>23.63</td>
</tr>
<tr>
<td>Outer coil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner coil</td>
<td>12.83</td>
<td>12.83</td>
<td>22.79</td>
<td>22.79</td>
</tr>
<tr>
<td>Tube diameter - in.</td>
<td>5/16</td>
<td>5/16</td>
<td>5/16</td>
<td>5/16</td>
</tr>
<tr>
<td>No. of rows</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fins per inch</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

### Outdoor Fan

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter - in.</td>
<td>18</td>
<td>18</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>No. of blades</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Motor hp</td>
<td>1/3</td>
<td>1/3</td>
<td>1/3</td>
<td>1/3</td>
</tr>
<tr>
<td>Cfm</td>
<td>2330</td>
<td>2400</td>
<td>3690</td>
<td>4350</td>
</tr>
<tr>
<td>Rpm</td>
<td>1100</td>
<td>1145</td>
<td>890</td>
<td>1055</td>
</tr>
<tr>
<td>Watts</td>
<td>120</td>
<td>146</td>
<td>253</td>
<td>409</td>
</tr>
</tbody>
</table>

### Shipping Data - lbs. 1 pkg.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>153</td>
<td>153</td>
<td>222</td>
<td>222</td>
</tr>
</tbody>
</table>

## ELECTRICAL DATA

### Line voltage data - 60 Hz

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>208/230V-1ph</td>
<td>208/230V-1ph</td>
<td>208/230V-1ph</td>
<td>208/230V-1ph</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19V30</td>
<td>20A65</td>
<td>X2658</td>
<td>X8781</td>
</tr>
<tr>
<td></td>
<td>93G35</td>
<td>50A93</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>58M81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## OPTIONAL ACCESSORIES - ORDER SEPARATELY

### Controls

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>iComfort® S30 Ultra-Smart Wi-Fi Thermostat</td>
<td>19V30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iComfort® E30 Smart Wi-Fi Thermostat</td>
<td>20A65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote Outdoor Temperature Sensor</td>
<td>X2658</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Freezestat

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8 in. tubing</td>
<td>93G35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/8 in. tubing</td>
<td>50A93</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Indoor Blower Off Delay Relay

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>58M81</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Refrigerant Line Sets

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
</table>

### Snow Guard

<table>
<thead>
<tr>
<th>Model No.</th>
<th>EL18XPV-024</th>
<th>EL18XPV-036</th>
<th>EL18XPV-048</th>
<th>EL18XPV-060</th>
</tr>
</thead>
<tbody>
<tr>
<td>28-1/2 x 27-1/2 in.</td>
<td>X8781</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-1/2 x 31 in. (Canada Only)</td>
<td>X8780</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## NOTE

- Extremes of operating range are plus 10% and minus 5% of line voltage.
- Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the Installation Instructions for information about line set length and additional refrigerant charge required.
- HACR type breaker or fuse.
- Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.
### Sound Data

<table>
<thead>
<tr>
<th>Unit Model</th>
<th>Octave Band Sound Power Levels dBA, re 10⁻¹² Watts</th>
<th>Sound Rating Number (dBA)</th>
<th>Estimated Sound Pressure Level at Distance From Unit (dBA at distance in ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>125</td>
<td>250</td>
<td>500</td>
</tr>
<tr>
<td>024 Min.</td>
<td>47.5</td>
<td>50.5</td>
<td>55</td>
</tr>
<tr>
<td>024 Max.</td>
<td>52</td>
<td>62</td>
<td>65.5</td>
</tr>
<tr>
<td>036 Min.</td>
<td>47.5</td>
<td>50.5</td>
<td>55</td>
</tr>
<tr>
<td>036 Max.</td>
<td>57</td>
<td>62</td>
<td>67.5</td>
</tr>
<tr>
<td>048 Min.</td>
<td>51.5</td>
<td>55.5</td>
<td>60</td>
</tr>
<tr>
<td>048 Max.</td>
<td>57</td>
<td>62.5</td>
<td>68.5</td>
</tr>
<tr>
<td>060 Min.</td>
<td>52</td>
<td>53</td>
<td>53.5</td>
</tr>
<tr>
<td>060 Max.</td>
<td>56.5</td>
<td>69.5</td>
<td>72</td>
</tr>
</tbody>
</table>

**NOTE:** All wiring must conform to NEC or CEC and local electrical codes.

**NOTE:** The octave sound power data does not include tonal correction.

1. Tested according to AHRI Standard 270-2008 test conditions. Sound rating Number is the overall A-Weighted Sound Power Level (LWA), dBA (100 Hz to 10,000 Hz).
2. 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.

### Field Wiring

- **A** - Two Wire Power
- **B** - Two or Three Wire Power (size to heater capacity)
- **C** - iComfort® Communicating Thermostat:
  - Four Wire, 18AWG (RSBus)
  - Eight Wire Low Voltage, 18AWG
  - Ten Wire Low Voltage, 18AWG with Optional Outdoor Thermostat
- **D** - iComfort® Communicating Thermostat:
  - Two Wire, 18AWG (RSBus) unshielded thermostat cable for low voltage Smart Hub power terminals (R, C, + and -)
  - Two Wire, 18 to 22AWG (RSBus) shielded thermostat cable recommended for Smart Hub communications terminals (I+, I-, A and B)
  - Twelve Wire Low Voltage, 18AWG
  - Fourteen Wire Low Voltage, 18AWG with Optional Outdoor Thermostat

**NOTE:** Field wiring is not furnished.

### Installation Clearances

**NOTES:**

Service clearance of 30 in. (762 mm) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 36 in. (914 mm)

Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

A clearance of 24 in. (610 mm) must be maintained between two units.

48 in. (1219 mm) clearance required on top of unit.
## TXV/ORIFICE USAGE

Use this table for C35, CH23, CH35 and CR33 Field Installed TXV Match-Ups.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Thermal Expansion Valve (TXV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL18XPV-024</td>
<td>12J18</td>
</tr>
<tr>
<td>EL18XPV-036</td>
<td>12J19</td>
</tr>
<tr>
<td>EL18XPV-048</td>
<td>12J20</td>
</tr>
<tr>
<td>EL18XPV-060</td>
<td>12J20</td>
</tr>
</tbody>
</table>

CX35 and CHX35 coils and all Lennox air handlers are shipped with a factory installed TXV. In most cases, no change out of the valve is needed. If a change out is required it will be listed in the "TXV SUBSTITUTIONS" table. The correct TXV must be ordered separately and field installed.

C35 and CH35 coils - Replace the factory installed RFC orifice with the expansion valve listed.

CR33 and CH23 coils - Use the expansion valve listed.

## AHRI STANDARD 210/240

Cooling or heating capacities are net values, including the effects of blower motor heat, and do not include supplementary heat. Power input is the total power input to the compressor(s) and fan(s), plus any controls and other items required as part of the system for normal operation.

Units which do not have an indoor air-circulating blower furnished as part of the model, i.e., split system with indoor coil only, is established by subtracting from the total cooling capacity 1250 Btu/h per 1,000 cfm, and by adding the same amount to the heating capacity.

Total power input for both heating and cooling is increased by 365 W per 1,000 cfm of indoor air circulated.

## TXV SUBSTITUTION

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

<table>
<thead>
<tr>
<th>Outdoor Unit</th>
<th>Indoor Unit</th>
<th>TXV Furnished</th>
<th>TXV Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Tons</td>
<td>Size</td>
<td>Tons</td>
</tr>
<tr>
<td>024</td>
<td>2</td>
<td>42</td>
<td>3.5</td>
</tr>
<tr>
<td>024</td>
<td>2</td>
<td>48</td>
<td>4</td>
</tr>
<tr>
<td>024</td>
<td>2</td>
<td>49</td>
<td>4</td>
</tr>
<tr>
<td>024</td>
<td>2</td>
<td>50/60</td>
<td>5</td>
</tr>
<tr>
<td>024</td>
<td>2</td>
<td>51/61</td>
<td>5</td>
</tr>
<tr>
<td>036</td>
<td>3</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>036</td>
<td>3</td>
<td>30</td>
<td>2.5</td>
</tr>
<tr>
<td>048</td>
<td>4</td>
<td>30/36</td>
<td>2.5/3</td>
</tr>
<tr>
<td>048</td>
<td>4</td>
<td>36</td>
<td>3</td>
</tr>
</tbody>
</table>

TXV Ranges:

- **12J18** - 1.5 to 2.5 ton systems - Use on 2.5 ton (030) and lower systems.
- **12J19** - 3 ton systems - Use down to 2 ton (024) systems.
- **12J20** - 3.5 to 5 ton systems - Use down to 3 ton (036) systems.