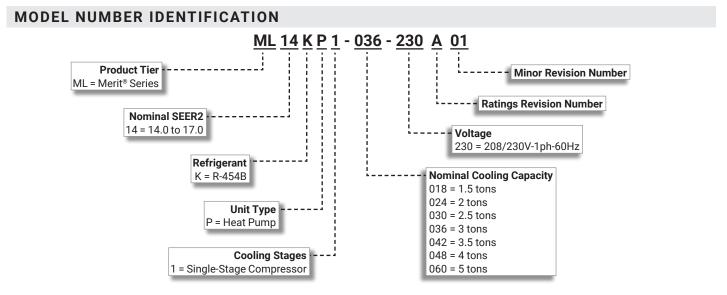
# HEAT PUMPS

LENNOX

1.5 to 5 Tons SEER2 up to 17.0 HSPF2 up to 8.2 Cooling Capacity | 18,000 to 58,000 Btuh Heating Capacity | 17,400 to 60,000 Btuh







**MERIT® SERIES** Single-Stage | Quantum<sup>™</sup> Coil | R-454B | 1-Phase | 60Hz RESIDENTIAL **PRODUCT SPECIFICATIONS (EHB)** 

# **ML14KP1**



- 1. Outdoor Coil Fan
- 2. Quantum<sup>™</sup> Coil
- 3. Expansion Valve Outdoor Unit
- 4. High Capacity Liquid Line Drier
- 5. Four-Way Reversing Valve
- 6. Scroll Compressor
- 7. Defrost Control
- 8. Heavy Gauge Steel Cabinet
- 9. Refrigerant Line Access

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Approvals And Warranty
Controls - Order Separately
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Model Number Identification.
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Sound Data
Specifications
TXV Substitution
TXV Usage

# APPROVALS AND WARRANTY

## **APPROVALS**

- AHRI Standard 210-240-2023 certified
- AHRI Certified system match-ups and expanded ratings, visit <u>www.LennoxPros.com</u>
- ENERGY STAR<sup>®</sup> certified
- 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
- 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 five years in residential/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 Warrenty at www.Lennox.com for additional details.

# **FEATURES**

#### **APPLICATIONS**

- 1.5 through 5 tons
- Single phase power supply
- Sound levels low as 74 dBA
- Vertical air discharge
- 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-454B Refrigerant

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

# Outdoor Coil Fan

- Direct drive PSC fan
- Vertical air discharge
- Louvered steel top fan guard
- Totally enclosed fan motor
- Ball bearings
- Inherently protected

#### 2 Quantum<sup>™</sup> 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

#### 3 Expansion Valve - Outdoor Unit

- Designed and sized for heat pump systems
- · Sensing bulb senses suction temperature during heating cycle

#### **High Pressure Switch**

- Protects the system from high pressure conditions
- Automatic reset





# FEATURES

# **REFRIGERATION SYSTEM (continued)**

#### Low Pressure Switch

- Shuts off unit if suction pressure falls below setting
- · Loss of charge and freeze-up protection
- Automatic reset

## High Capacity Liquid Line Drier

- Factory installed in the liquid line
- Drier traps moisture or dirt that could contaminate the system
- 100% molecular-sieve, bead type, bi-flow drier

#### 5 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

#### **Optional Accessories**

#### Check/Expansion Valve Kits

- Field installed on indoor units (if required)
- See TXV Usage table
- Chatleff-style fitting

#### Freezestat

- · Senses suction line temperature
- Cycles compressor off when suction line temperature falls below freezestat 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

# **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**

# 6 Single-Stage Scroll Compressor

- High efficiency with uniform suction flow
- Constant discharge flow, high volumetric efficiency and quiet operation
- Low gas pulses during compression reduces operational sound levels
- Compressor motor is internally protected from excessive current and temperature
- Muffler in discharge line reduces operating sound levels
- Compressor is installed in the unit on resilient rubber mounts for vibration free operation

#### Scroll Compressor Operation

- 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. If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged

# Compressor Crankcase Heater (Factory installed on -036-042-048-060 models)

• Prevents migration of liquid refrigerant into compressor and ensures proper compressor lubrication





# FEATURES

# **COMPRESSOR** (Continued)

#### **Optional Accessories**

Compressor Crankcase Heater (Optional for -018-024-030 models)

• Prevents migration of liquid refrigerant into compressor and ensures proper compressor lubrication

#### Compressor Sound Cover

- Reinforced vinyl compressor cover
- 1-1/2 inch thick batt of fiberglass insulation
- · Hook and loop fastening tape on all open edges

## CONTROLS

#### Defrost Control

- Time/temperature defrost control
- Defrost cycle every 30, 60 or 90 minutes of compressor "on" time at outdoor coil temperatures below 42°F
- Factory setting 90 minutes
- · Anti-short cycle, timed-off control 5 minutes
- Compressor delay 30 seconds (field selectable) cycles the compressor in and out of defrost mode
- High and low pressure switch monitoring (five-trip lockout)
- Two diagnostic LEDs furnished for troubleshooting
- · Conveniently located in control box

#### **Optional Accessories**

#### M30 Smart Wi-Fi Thermostat

- Wi-Fi-enabled, electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat
- 4 Heat/2 Cool
- Auto-changeover
- Dual-fuel control with optional outdoor sensor
- Controls dehumidification during cooling mode and humidification during heating mode
- Offers enhanced capabilities including humidification / dehumidification / dewpoint measurement and control, Humiditrol<sup>®</sup> control, and equipment maintenance reminders
- Easy to read 4.3 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<sup>™</sup>
- One-Touch Away Mode A quick and easy way to set the cooling and heating setpoints while away

- Smart Away<sup>™</sup> 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 Amazon Alexa® and Google Assistant
- Service Dashboard features online real-time monitoring of installed Lennox® thermostats
- **NOTE** See the Lennox<sup>®</sup> M30 Smart Wi-Fi Thermostat Product Specifications document for more information.

#### Remote Outdoor Temperature Sensor

- Used with the Lennox<sup>®</sup> M30 Smart Thermostat
- Outdoor sensor allows thermostat to display outdoor temperature
- **NOTE** Senor is required for high and low balance points option.

#### Thermostat

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

#### Compressor Low Ambient Cut-Off

- · Non-adjustable switch (low ambient cut-out)
- Prevents compressor operation in cooling mode when outdoor temperature is below 35°F

#### Compressor Hard Start Kit

- Single-phase units are equipped with a PSC compressor motor
- This type of motor normally does not need a potential relay and start capacitor
- For conditions such as low voltage, kit may be required to increase the compressor starting torque

#### Indoor Blower Off Delay Relay Kit

• Delays the indoor blower-off time during the cooling cycle

#### Low Ambient Kit

- Heat pump can operate in the cooling mode down to 45°F outdoor air temperature without additional controls
- Allows unit to operate properly down to 30°F in the cooling mode
- **NOTE** Crankcase heater and freezestat should be installed on compressors equipped with a low ambient kit.
- **NOTE** A compressor lock-out thermostat should be added to terminate compressor operation below recommended operation conditions.



# FEATURES

# **CONTROLS** (continued)

#### Mild Weather Kit

- Units can operate in the heating mode at outdoor air temperatures up to  $75^\circ\mathrm{F}$
- Field installed kit allows heating operation above 75°F

#### Outdoor Thermostat Kit

- Outdoor thermostat locks out some of the electric heating elements on indoor units where two-stage control is applicable
- Outdoor thermostat maintains the heating load on low power input as long as possible before allowing the full power load to come on the line
- Thermostat Kit and Mounting Box must be ordered separately

# 8 CABINET

- Heavy gauge steel cabinet
- Pre-painted powder paint cabinet finish
- · Louvered heavy gauge steel panels
- Control box conveniently located with all controls factory wired
- · Corner patch plate allows compressor access
- Drainage holes provided in base section

#### Zinc-Coated Steel Unit Base

- Resists rust and corrosion
- 9 Refrigerant Line Connections, Electrical Inlets, Service Valves
  - Sweat connection vapor and liquid lines
  - Located on corner of unit cabinet
  - Fully serviceable brass service valves
  - 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 cabinet for easy access
  - See dimension drawing

#### Braze-Free/Press Fitting Flexibility

• Units can accommodate braze-free or press fittings for installation versatility

#### **Optional Accessories**

#### Unit Stand-Off Kit

- · Black high density polyethylene feet
- Raises unit off mounting surface
- · Four feet furnished per order number

	IS					
Size			018	024	030	036
Nominal Tonnage			1.5	2	2.5	3
Sound Rating Number		dBA	74 3/8	74	74	75
Connections				3/8	3/8	3/8
(sweat) Vapor line (OD) - in.			3/4	3/4	3/4	7/8
Refrigerant	<sup>1</sup> R-454B charge 1	4 lbs. 7 oz.	5 lbs. 3 oz.	6 lbs. 7 oz.	7 lbs. 2 oz.	
Indoor Unit Expansion			26Z70	26Z70	26Z70	26Z70
Outdoor	Net face area - ft. <sup>2</sup> (	Outer coil	24.5	24.5	18.7	22.2
Coil		Inner coil			18.0	21.5
	Tube dian	neter - in.	5/16	5/16	5/16	5/16
		Rows	1	1	2	2
		Fins - in.	22	22	22	22
Outdoor		HP	1/8	1/8	1/6	1/5
Fan	Dian	neter - in.	22	22	22	26
		Blades	3	3	3	3
		Cfm	2840	2840	2670	3590
		Rpm	825	825	825	839
		Watts	127	127	162	200
Shipping Data - Ibs.			185	185	185	220
ELECTRICAL DA	ATA			'		'
	ine voltage data (Volts-P	hase-Hz)	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
	rcurrent protection (MOC	·	15	20	25	35
	<sup>3</sup> Minimum circuit ampaci	· · ·	9.7	13.6	16.6	22.2
Compressor	· · · ·	ad Amps	7.2	10.3	12.5	16.7
e e inpresee e	Locked Ro	• •	47	60.2	67	93.5
Fan Motor	Full Lo	0.7	0.7	1.0	1.4	
	RDER SEPARATE					
M30 Smart Wi-Fi Ther	-	15Z69	•	•	•	•
Remote Outdoor Tem		X2658	•	•	•	•
	ESSORIES - ORD			I		1
OI HOUNAL AOU						
Compressor Crankca		1	ANAILLI	•	•	Factory
Compressor Crankcas	se Heater	93M04	·	•	•	Factory
Compressor Hard Sta	se Heater Irt Copeland	93M04 10J42	• •		•	,
Compressor Hard Sta Kit	<b>se Heater</b> Irt Copeland LG	93M04	٠			,
Compressor Hard Sta Kit Compressor Sound C	se Heater Int Copeland LG Cover	93M04 10J42 88M91 18J42	•	•	•	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amb	se Heater Int Copeland LG Cover bient Cut-Off	93M04 10J42 88M91 18J42 45F08	•	•	•	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat	se Heater Trt Copeland LG Cover bient Cut-Off 3/8 in.	93M04 10J42 88M91 18J42 45F08 93G35	• • • • • • •	•	•	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del	se Heater Trt Copeland LG Cover bient Cut-Off 3/8 in.	93M04 10J42 88M91 18J42 45F08 93G35 58M81	• • • •	•	• • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit	se Heater Trt Copeland LG Cover bient Cut-Off 3/8 in.	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89	• • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amb Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit	se Heater Irt Copeland LG Cover bient Cut-Off 3/8 in. lay Relay	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97	• • • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit Outdoor	se Heater Int Copeland LG Cover bient Cut-Off 3/8 in. lay Relay Thermostat	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23	• • • • • • • • •	• • • • •	• • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit Outdoor Thermostat Kit	se Heater Int Copeland LG Cover bient Cut-Off 3/8 in. lay Relay Thermostat Mounting Box	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23 31461	• • • • • • • • • • • •	• • • • • • • •	• • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit Outdoor Thermostat Kit Refrigerant	se Heater Int Copeland LG Sover bient Cut-Off 3/8 in. lay Relay Thermostat Mounting Box 3/8 x 3/4   3/8   20 ft.	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23 31461 89J56	• • • • • • • • • • • •	• • • • • • • •	• • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit Outdoor Thermostat Kit Refrigerant Line Sets	se Heater           Int         Copeland           LG           Cover           bient Cut-Off           3/8 in.           lay Relay           Thermostat           Mounting Box           3/8 x 3/4   3/8   20 ft.           3/8 x 3/4   3/8   30 ft.	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23 31461 89J56 89J57	• • • • • • • • • • • •	• • • • • • • •	• • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit Outdoor Thermostat Kit Refrigerant Line Sets Liquid x Suction OD	se Heater Int Copeland LG Cover bient Cut-Off 3/8 in. lay Relay Thermostat Mounting Box 3/8 x 3/4   3/8   20 ft. 3/8 x 3/4   3/8   30 ft. 3/8 x 3/4   3/8   40 ft.	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23 31461 89J56 89J57 89J58	• • • • • • • • • • • •	• • • • • • • •	• • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit Outdoor Thermostat Kit Refrigerant Line Sets Liquid x Suction OD   Insulation Thickness  _	se Heater Int Copeland LG Sover bient Cut-Off 3/8 in. lay Relay Thermostat Mounting Box 3/8 x 3/4   3/8   20 ft. 3/8 x 3/4   3/8   30 ft. 3/8 x 3/4   3/8   40 ft. 3/8 x 3/4   3/8   50 ft.	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23 31461 89J56 89J57 89J58 89J59	• • • • • • • • • • • •	• • • • • • • •	• • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amb	se Heater           Int         Copeland           LG         LG           cover         3/8 in.           bient Cut-Off         3/8 in.           lay Relay         Thermostat           Mounting Box         3/8 x 3/4   3/8   20 ft.           3/8 x 3/4   3/8   20 ft.         3/8 x 3/4   3/8   30 ft.           3/8 x 3/4   3/8   30 ft.         3/8 x 3/4   3/8   40 ft.           3/8 x 3/4   3/8   40 ft.         3/8 x 3/4   3/8   50 ft.           3/8 x 7/8   3/8   30 ft.         3/8 x 7/8   3/8   30 ft.	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23 31461 89J56 89J57 89J58 89J59 89J60	• • • • • • • • • • • •	• • • • • • • •	• • • • • • •	•
Compressor Hard Sta Kit Compressor Sound C Compressor Low Amt Freezestat Indoor Blower Off Del <sup>4</sup> Low Ambient Kit Mild Weather Kit Outdoor Thermostat Kit Refrigerant Line Sets Liquid x Suction OD   Insulation Thickness  _	se Heater Int Copeland LG Cover bient Cut-Off 3/8 in. lay Relay Thermostat Mounting Box 3/8 x 3/4   3/8   20 ft. 3/8 x 3/4   3/8   30 ft. 3/8 x 3/4   3/8   40 ft. 3/8 x 3/4   3/8   50 ft.	93M04 10J42 88M91 18J42 45F08 93G35 58M81 54M89 11B97 10Z23 31461 89J56 89J57 89J58 89J59	• • • • • • • • • • • •	• • • • • • • •	• • • • • • •	•

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

<sup>1</sup> 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.

<sup>2</sup> HACR type breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

<sup>4</sup> Crankcase Heater and Freezestat are recommended with Low Ambient Kit.

SPECIFICATIONS				
Size		042	048	060
Nominal Tonnage		3.5	4	5
Sound Rating Number	dBA	78	79	79
Connections Liquid line (OI	D) - in.	3/8	3/8	3/8
(sweat) Vapor line (OI	D) - in.	7/8	7/8	1-1/8
<sup>2</sup> Refrigerant <sup>1</sup> R-454B charge furr		8 lbs. 5 oz.	8 lbs. 6 oz.	9 lbs. 6 oz.
Indoor Unit Expansion Valve (TXV)		26Z71	26Z71	26Z72
	ter coil	24.93	24.93	29.09
Coil Inn	er coil	24.13	24.13	28.16
Tube diamete	er - in.	5/16	5/16	5/16
	Rows	2	2	2
Fir	ns - in.	22	22	22
Outdoor	HP	1/3	1/3	1/3
Fan Diamete	er - in. ⊢	26	26	26
	Blades	4	4	4
-	Cfm	4110	4110	4060
	Rpm	825	825	825
	Watts	213	213	224
Shipping Data - Ibs.		250	250	260
ELECTRICAL DATA	1	200	200	200
		200/220 4 60	000/000 4 60	008/000 4 60
Line voltage data (Volts-Phas	· · -	208/230-1-60	208/230-1-60	208/230-1-60
<sup>2</sup> Maximum overcurrent protection (MOCP)	· –	35	50	50
<sup>3</sup> Minimum circuit ampacity (	. ,	22.3	30.6	32.2
Compressor Rated Load	·	15.8	22.4	23.7
Locked Rotor		96	126	157
Fan Motor Full Load	Amps	2.6	2.6	2.6
CONTROLS - ORDER SEPARATELY				
M30 Smart Wi-Fi Thermostat	15Z69	•	•	٠
Remote Outdoor Temperature Sensor	X2658	•	•	•
<b>OPTIONAL ACCESSORIES - ORDER SEPA</b>	ARATE	ELY		
Compressor Hard Start Kit Copeland	10J42		•	•
•	38M91	•		
	45F08	•	•	•
•	18J42	•	•	•
	93G35	•	•	•
	58M81	•	•	•
	54M89	•	•	•
	11B97	•	•	•
	10Z23	•	•	•
· · · · · · · · · · · · · · · · ·	31461	•	•	•
Modifiang Box	89J60	-	· · · · · · · · · · · · · · · · · · ·	-
	89J61			
		•	•	
· · · · · · · · · · · · · · · · · · ·	89J62			
	73P91			•
Unit Stand-Off Kit	94J45	•	•	•

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

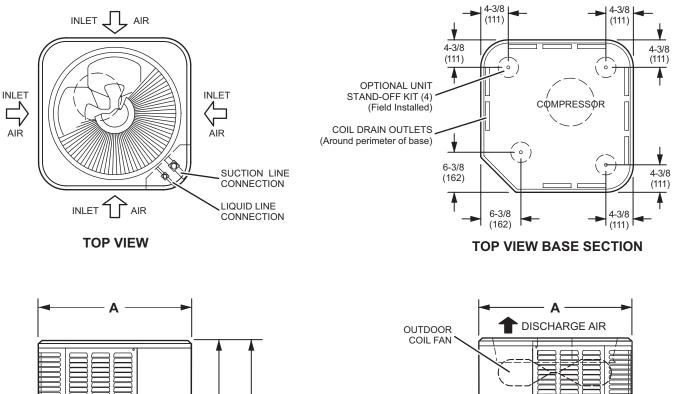
<sup>1</sup> Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the Installation Instructions for information about line set length and additional refrigerant charge required.

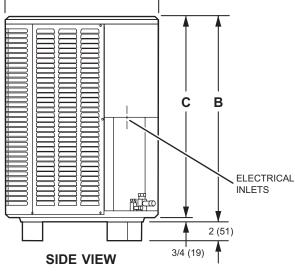
<sup>2</sup> HACR type breaker or fuse.

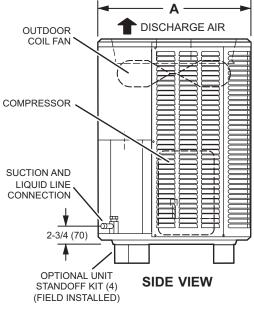
<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

<sup>4</sup> Crankcase Heater and Freezestat are recommended with Low Ambient Kit.

#### DIMENSIONS







Size	A Width and	l Depth	E Hei	3 ght	С		
	in.	mm	in.	mm	in.	mm	
018	28-1/4	718	43-1/4	1099	42-1/2	1080	
024	28-1/4	718	43-1/4	1099	42-1/2	1080	
030	28-1/4	718	33-1/4	845	32-1/2	826	
036	32-1/4	819	33-1/4	845	32-1/2	826	
042	32-1/4	819	37-1/4	946	36-1/2	927	
048	32-1/4	819	37-1/4	946	36-1/2	927	
060	32-1/4	819	43-1/4	1099	42-1/2	1080	

#### **EXPANDED SOUND DATA**

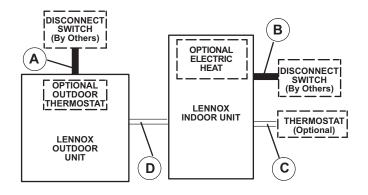
Octave Band Sound Power Levels dBA, re 10 <sup>-12</sup> Watts Size Center Frequency - HZ					<sup>1</sup> Sound Rating	<sup>2</sup> Estimated Sound Pressure Level at Distance From Unit (dBA at distance in ft.)							
OILC	125	250	500	1000	2000	4000	8000	Number (dBA)	3	5	10	15	50
018	56.5	62	68.0	71.5	66.0	57.0	50	74	67	62	56	53	42
024	56.0	62	66.5	71.0	66	60	55.0	74	67	62	56	53	42
030	56.0	64	69.5	70.0	65	59	52.5	74	67	62	56	53	42
036	59	68	71.5	68.5	66	61	54	75	68	63	57	54	43
042	62	71.0	74.5	72.5	70	63	55.5	78	71	66	60	57	46
048	61	70.5	75.5	73.0	70	64	56.0	79	72	67	61	58	47
060	61.5	70.0	73.0	71	71	68	63	79	73	68	62	59	48

NOTE - the octave sound power data does not include tonal correction.

<sup>1</sup> Tested according to AHRI Standard 270-2008 test conditions.

<sup>2</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.

# FIELD WIRING



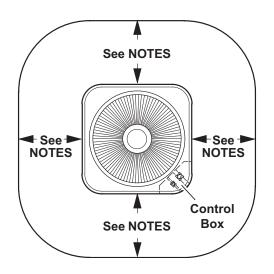
- A Two Wire Power (see Electrical Data)
- B Two or Three Wire Power (size to heater capacity)
- C Twelve Wire Low Voltage 18 ga. minimum Fourteen Wire Low Voltage with Optional Outdoor Thermostat

D - Eight Wire Low Voltage 18 ga. minimum

Ten Wire Low Voltage with Optional Outdoor Thermostat NOTE - Field Wiring Not Furnished

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

#### INSTALLATION CLEARANCES



#### NOTES:

- Service Clearance 30 in. (762 mm) on one of the sides adjacent to the Control Box.
- One of other three sides must be 36 in. (914 mm).
- One of the two remaining sides may be 12 in. (305 mm).
- The remaining side may be 6 in. (152 mm).
- 48 in. (1219 mm) clearance required on top of unit
- 24 in. (610 mm) required between two units

# **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
018	26Z70
024	26Z70
030	26Z70
036	26Z70
042	26Z71
048	26Z71
060	26Z72

# AHRI STANDARD 210-240-2023

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 - 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.

Outdo	or Unit	Indoo	r Unit	Indoor	Indoor
Size	Tons	Size	Tons	TXV Furnished	TXV Replacement
018	1.5	42	3.5	26Z71	26Z70
018	1.5	48	4	26Z71	26Z70
018	1.5	49	4	26Z71	26Z70
018	1.5	50/60	4/5	26Z71	26Z70
018	1.5	51/61	4/5	26Z71	26Z70
018	1.5	60	5	26Z72	26Z70
024	2	42	3.5	26Z71	26Z70
024	2	48	4	26Z71	26Z70
024	2	49	4	26Z71	26Z70
024	2	50/60	4/5	26Z71	26Z70
024	2	51/61	4/5	26Z71	26Z70
024	2	60	5	26Z72	26Z70
030	2.5	42	3.5	26Z71	26Z70
030	2.5	48	4	26Z71	26Z70
030	2.5	49	4	26Z71	26Z70
030	2.5	50/60	4/5	26Z71	26Z70
030	2.5	51/61	4/5	26Z71	26Z70
030	2.5	60	5	26Z72	26Z70
036	3	42	3.5	26Z71	26Z70
036	3	48	4	26Z71	26Z70
036	3	49	4	26Z71	26Z70
036	3	50/60	4/5	26Z71	26Z70
036	3	51/61	4/5	26Z71	26Z70
036	3	60	5	26Z72	26Z70
042	3.5	24	2	26Z70	26Z71
042	3.5	30	2.5	26Z70	26Z71
042	3.5	30/36	2.5/3	26Z70	26Z71
042	3.5	36	3	26Z70	26Z71
042	3.5	60	5	26Z72	26Z71
048	4	30/36	2.5/3	26Z70	26Z71
048	4	36	3	26Z70	26Z71
048	4	60	5	26Z72	26Z71
060	5	50/60	4/5	26Z71	26Z72
060	5	51/61	4/5	26Z71	26Z72

#### **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.









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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.