ML17KC2

MERIT® SERIES

Two-Stage | Quantum™ Coil | R-454B | 3-Phase | 60Hz

COMMERCIAL
PRODUCT SPECIFICATIONS (EHB)

3 to 5 Tons
SEER2 up to 17.0
Cooling Capacity | 33,400 to 60,000 Btuh



MERIT® SERIES

LENNOX QUANTUM™ COIL

2025 COMPLIANT REFRIGERANT

MODEL NUMBER IDENTIFICATION

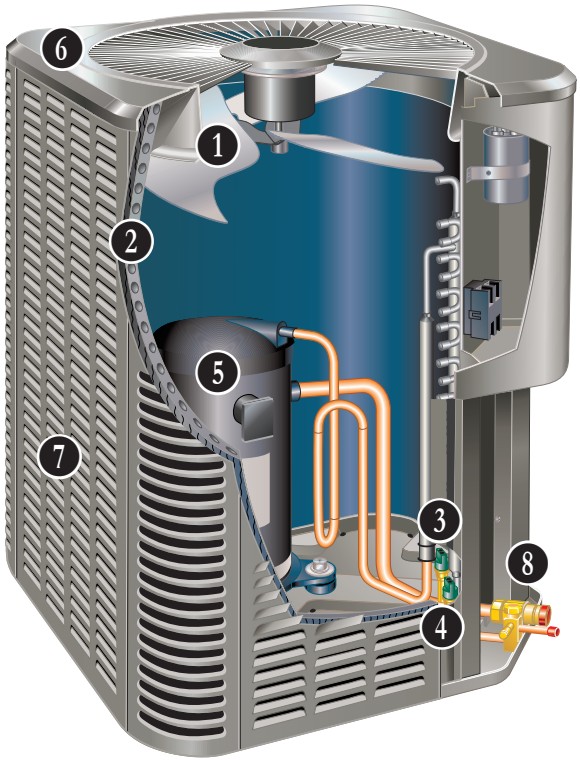
ML 17 K C 2 - 036 - 233 A 01

- **Product Tier**: ML = Merit® Series
- **Nominal SEER2**: 17 = 17.0
- **Refrigerant Type**: K = R-454B
- **Unit Type**: C = Air Conditioner (Condenser)
- **Cooling Stages**: 2 = Two-Stage Compressor
- **Nominal Cooling Capacity**: 036 = 3 tons; 048 = 4 tons; 060 = 5 tons
- **Voltage**: 233 = 208/230V-3ph-60Hz; 463 = 460V-3ph-60Hz
- **Ratings Revision Level**
- **Revision Level**

Form Number 211055 | November 2026
Supersedes all previous versions

FEATURE HIGHLIGHTS

1. Outdoor Coil Fan
2. Quantum™ Coil
3. High Pressure Switch
4. Low Pressure Switch
5. Two-Stage Scroll Compressor
6. Heavy Gauge Steel Cabinet
7. Louvered Steel Panels
8. Refrigerant Line Connections and Access



CONTENTS

Approvals And Warranty 3
Dimensions - Unit 8
Electrical Data 7
Features 3
Installation Clearances 9
Model Number Identification. 1
Optional Accessories - Order Separately 7
Optional Conventional Temperature Control Systems. 6
Sound Data 8
Specifications 7
TXV Substitution - R-454B 10
TXV Usage. 10

APPROVALS AND WARRANTY

APPROVALS

- AHRI Standard 210-240-2023 certified
- AHRI Certified system match-ups and expanded ratings, visit www.LennoxPros.com
- 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
- All other covered components - Limited one year

NOTE - Refer to Lennox® Basic Limited Warranty at www.Lennox.com for additional details.

FEATURES

APPLICATIONS

- 3 through 5 ton
- 208/230V or 460V-3ph models
- Sound levels as low as 71 dBA
- Applicable to indoor air handlers or gas furnaces with indoor add-on coils
- Shipped completely factory assembled, piped and wired

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

1 Outdoor Coil Fan

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

2 Quantum™ Coil

- Enhanced aluminum alloy tube/enhanced fin coil
- Superior corrosion resistance
- Lennox designed and fabricated coil
- 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 High Pressure Switch

- Protects the system from high pressure conditions that can be a result of fan failure or a blocked/dirty coil
- Automatic reset

4 Low Pressure Switch

- Protects the compressor from low pressure conditions such as low refrigerant charge, or low/no indoor airflow
- Provides loss of charge and freeze-up protection
- Automatic reset

High-Capacity Liquid Line Drier

- Furnished for field installation
- Drier traps moisture or dirt that could contaminate the system
- 100% molecular-sieve, bead type drier

FEATURES

REFRIGERATION SYSTEM (continued)

Optional Accessories

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

Freezestat
- Protects the system from ice buildup on the indoor coil due to conditions such as low/no airflow, or low refrigerant charge
- 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

5 Two-Stage Scroll Compressor
- High volumetric efficiency
- Uniform suction flow
- Constant discharge flow
- Quiet operation
- A 24-volt DC solenoid valve inside the compressor controls staging
- When the solenoid is de-energized the lift ring assembly moves to unblock the compressor ports and the compressor operates at part-load or approximately 67% of its full-load capacity
- The “loading” and “unloading” of the two stage scroll is done “on the fly” without shutting off the single-speed compressor motor between stages
- Compressor motor is internally protected from excessive current and temperature
- Compressor is installed in the unit on specially formulated, resilient rubber mounts for better sound dampening and vibration free operation

Compressor Crankcase Heater (048-060 models)
- Prevents liquid refrigerant migration into compressor and ensures proper compressor lubrication

Optional Accessories

Compressor Crankcase Heater (036 models)
- Prevents liquid refrigerant migration into compressor and ensures proper compressor lubrication

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

Compressor Sound Cover
- Reinforced vinyl compressor cover
- 1-1/2 inch thick batt fiberglass insulation
- All open edges are sealed with a one-inch wide hook and loop fastening tape

FEATURES

CABINET

6
- Heavy-gauge steel construction
- Pre-painted powder paint cabinet finish

7
- 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

Zinc-Coated Steel Unit Base
- Resists rust and corrosion

8 Refrigerant Line Connections, Electrical Inlets and Service Valves
- Braze connection suction and liquid lines
- Located on corner of unit cabinet
- Suction 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

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 are available to raise unit off of mounting surface away from damaging moisture
- Four feet are furnished per order number

CONTROLS

Optional Accessories

Blower Motor Relay Kit (for use with furnaces equipped with constant torque blower motors)
- Allows furnace blower speed changes when matched with two-stage air conditioners

Indoor Blower Speed Control Relay Kit
- Relay kit provides the option of changing blower speeds on standard permanent split capacitor (PSC) multi-tap blower motors during cooling operation
- Provides optimum humidity control conditions by automatically reducing indoor blower speed during continuous fan operation or low stage compressor operation to reduce humidity levels

Low Ambient Kit
- Heat pumps can operate in cooling mode down to 45°F outdoor air temperature without additional controls
- Two low ambient control options are available for field installation:
  1. Low Ambient Control Kit (30°F)
  2. Electronic Head Pressure Controller (0°F). Transformer included.

NOTE - Freezestat should be installed on compressors equipped with a low ambient kit.

Thermostats
- For thermostat options, see Optional Conventional Temperature Control Systems on page 6

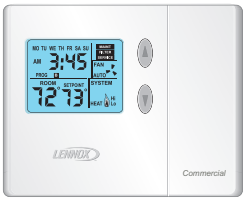
OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

CS7500 Commercial 7-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 and Rooftop Units
- Economizer Relay Control
- Backlit Display
- Wallplate Furnished
- FDD, ASHRAE and IECC Compliant

CS3000 Commercial 5-2 Day Programmable Thermostat



- 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 CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Description		Catalog No.
CS7500 Commercial 7-Day Programmable Thermostat		
CS7500 7-Day Thermostat		**24K41**
Sensors/Accessories	[2] Remote non-adjustable wall-mount 20k	**47W36**
	[2] Remote non-adjustable wall-mount 10k	**47W37**
	Remote non-adjustable discharge air (duct mount)	**19L22**
	Outdoor temperature sensor	**X2658**
CS3000 Commercial 5-2 Day Programmable Thermostat		
CS3000 5-2 Day Thermostat		**11Y05**
Sensors/Accessories	Remote non-adjustable wall mount 10k averaging	**47W37**
	Thermostat wall mounting plate	**X2659**
Universal Thermostat Guard with Lock (clear)		
	Inside Dimensions (H x W) 5 7/8 x 8 3/8 in.	**39P21**

[1] Up to nine of the same type remote temperature sensors can be connected in parallel.

[2] 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

SPECIFICATIONS

Size			036	048	060
Nominal Tonnage			3	4	5
Sound Rating Number (dBA)		Low	71	75	76
		High	73	74	75
Connections (Sweat)		Liquid line (OD) - in.	3/8	3/8	3/8
		Suction line (OD) - in.	7/8	7/8	1-1/8
Compressor Type			Two-Stage Scroll	Two-Stage Scroll	Two-Stage Scroll
Refrigerant (15 ft. Line Set)	[1] R-454B charge furnished		6 lbs. 8 oz.	7 lbs. 14 oz.	9 lbs. 5 oz.
Indoor Unit Expansion Valve (TXV)			**26Z70**	**26Z71**	**26Z72**
Outdoor Coil	Net face area - ft.[2]	Outer coil	16.33	16.33	24.93
		Inner coil	15.75	15.75	24.13
		Tube diameter - in.	5/16	5/16	5/16
		Rows	2	2	2
		Fins - in.	22	22	22
Outdoor Fan		HP	1/8	1/6	1/4
		Diameter - in.	22	22	22
		Blades	3	3	3
		Cfm	2890	3200	3620
		Rpm	825	825	825
		Watts	165	240	265
Shipping Data - lbs.			188	206	246

ELECTRICAL DATA

		208/230-3-60	460-3-60	208/230-3-60	460-3-60	208/230-3-60	460-3-60
Line voltage data (Volts-Phase-Hz)							
[2] Maximum overcurrent protection (MOCP) amps		20	10	25	15	30	15
[3] Minimum circuit ampacity (MCA)		12.5	6.1	15.1	8.7	17.5	8.8
Compressor	Rated load amps	9.9	4.8	11.9	6.8	13.8	6.9
	Locked rotor amps	82	44.3	112	61.8	150	58
Fan Motor	Full load amps	0.74	0.74	1	0.50	1.7	0.90
	Locked rotor amps	1.65	1.65	1.9	1.2	3.2	2.3

OPTIONAL ACCESSORIES - ORDER SEPARATELY

Compressor Crankcase Heater (240V)		**93M04**	•	- - -	Factory	Factory
Compressor Low Ambient Cut-Off Switch		**45F08**	•		•	•
Compressor Sound Cover Kit		**18J42**	•		•	•
Compressor Timed-Off Control		**47J27**	•		•	•
Freezestat	3/8 in.	**93G35**	•		•	•
Blower Motor Relay Kit		**85W66**	•		•	•
Indoor Blower Speed Control Relay Kit		**40K58**	•		•	•
[4] Low Ambient Kit (Fan Cycling) (30°F)		**34M72**	•		•	•
[4] Electronic Head Pressure Controller (0°F)		**X5867**	•		•	•
Refrigerant Line Sets Liquid x Suction OD | Insulation Thickness | Length	3/8 x 7/8 | 3/8 | 30 ft.	**89J60**	•		•	
	3/8 x 7/8 | 3/8 | 40 ft.	**89J61**				
	3/8 x 7/8 | 3/8 | 50 ft.	**89J62**				
	3/8 x 1-1/8 x 3/8 - 50 ft.	**73P91**				•
Unit Stand-Off Kit		**94J45**	•		•	•

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

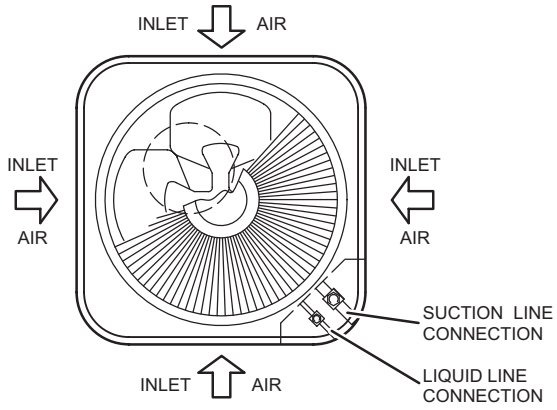
[1] 1 Refrigerant charge sufficient for the line set length listed in parenthesis. For longer line set requirements see the Installation Instructions or unit Charging Label for information about line set length and additional refrigerant charge required.

[2] HACR type breaker or fuse.

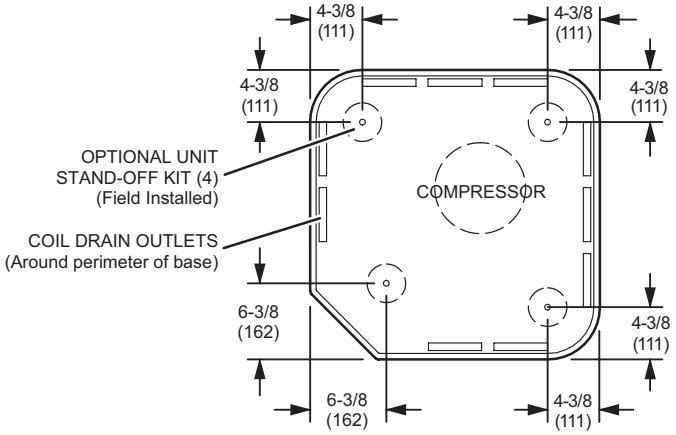
[3] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

[4] Crankcase Heater and Freezestat are recommended with Low Ambient Kit.

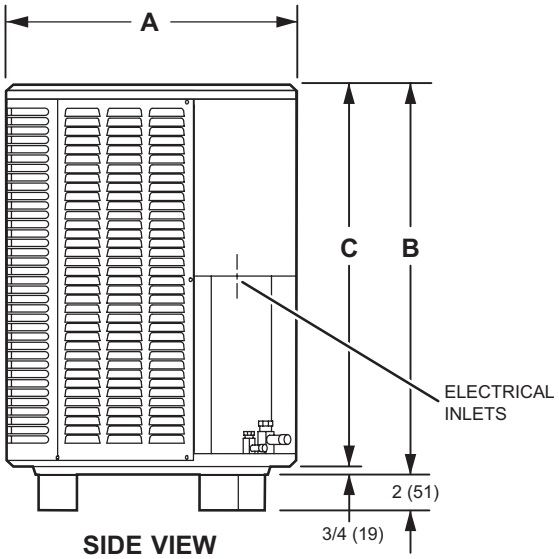
DIMENSIONS - UNIT



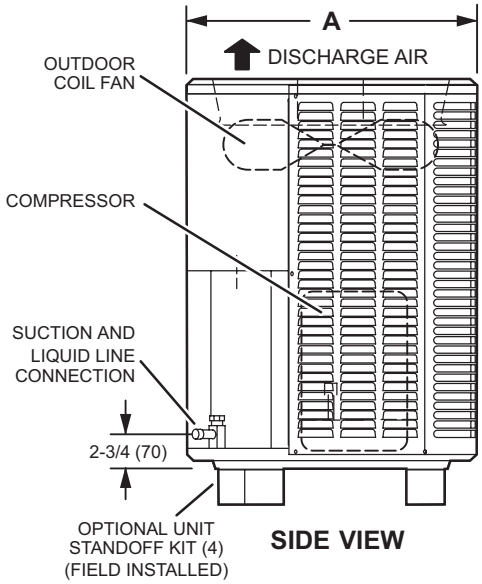
TOP VIEW



TOP VIEW BASE SECTION



SIDE VIEW



SIDE VIEW

Size	A Width and Depth		B Height		C	
	inches	mm	inches	mm	inches	mm
036	28-1/4	718	33-3/4	857	33	838
048	32-1/4	718	33-3/4	857	33	838
060	32-1/4	819	43-1/4	1099	42-1/4	1073

SOUND DATA

Size	Octave Band Sound Power Levels dBA, re 10^{-12} Watts Center Frequency - HZ							[1] Sound Rating Number (dBA)	[2] Estimated Sound Pressure Level at Distance From Unit (dBA at distance in ft.)				
	125	250	500	1000	2000	4000	8000		3	5	10	15	50
036 Low	54.8	62.2	66.9	66.2	63	58.4	54.5	71	64	59	53	50	39
036 High	54.6	61.5	66.8	69.2	63.3	58.3	54.3	73	66	61	55	52	41
048 Low	57.8	63.9	69.5	70.7	66.4	63.3	59.8	75	68	63	57	54	43
048 High	56.7	63.6	68.6	70.4	65.5	61.6	54.9	74	67	62	56	53	42
060 Low	57.8	64.2	70.7	69.8	67.4	66	61.9	76	69	64	58	55	44
060 High	57.6	63.1	69.2	70.9	67	64.4	59.2	75	68	63	57	54	43

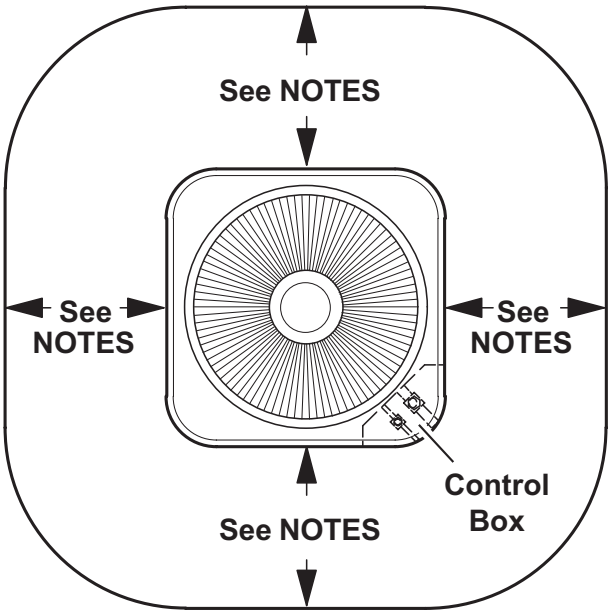
NOTE - The octave sound power data does not include tonal correction.

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

[2] Estimated sound pressure level at distance based on AHRI Standard 275 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.

INSTALLATION CLEARANCES

SINGLE-UNIT INSTALLATION

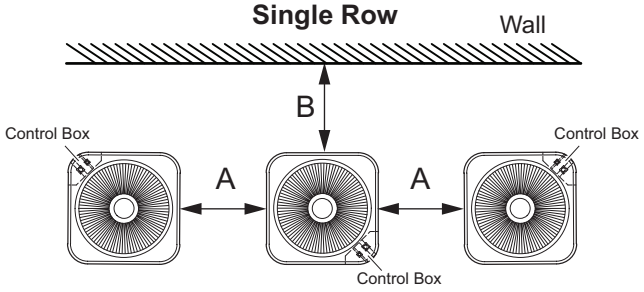


Single-Unit Installation Notes:

- Service Clearance - 24 in. (610 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.

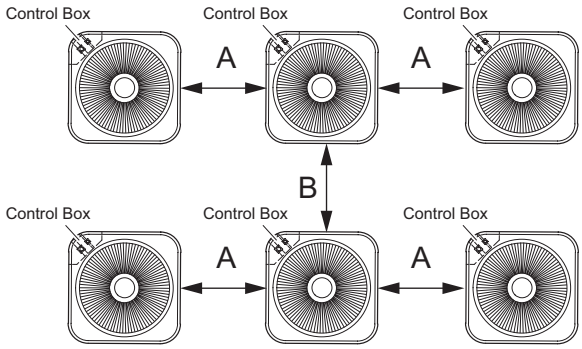
MULTI-UNIT INSTALLATIONS

Single Row



	A	B
Required Minimum Clearances	12 in. (305 mm) [18 in. (457 mm) recommended]	12 in. (305 mm)

Multiple Rows



	A	B
Required Minimum Clearances	12 in. (305 mm) [18 in. (457 mm) recommended]	24 in. (610 mm)

Multi-Unit Installation Notes:

- Recommended service clearance of 24 in. (610 mm) on one side.
- 48 in. (1219 mm) clearance required on top of the unit.

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
036	**26Z70**
048	**26Z71**
060	**26Z72**

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 Furnished	Indoor TXV Replacement
Size	Tons	Size	Tons		
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**
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.

REVISIONS

Sections	Description of Change
Electrical Data	Updated.









LENNOX

Visit us at www.Lennox.com
For the latest technical information, www.LennoxCommercial.com
Contact us at 1-800-4-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.

©2026 Lennox Industries, Inc.