R32 SINGLE-ZONE SYSTEMS - A-COIL WITH LGRED°

ENGINEERING MANUAL

KSSMA18AA, KSSMA18BA (18,000 Btu/h)
KSSMA24BA (24,000 Btu/h)

KSSMA25BA (24,000 Btu/h)
KSSMA30BA (30,000 Btu/h)
KSSMA36BA, KSSMA36CA (36,000 Btu/h)
KSSMA42CA (42,000 Btu/h)
KSSMA48CA, KSSMA48DA (48,000 Btu/h)

PROPRIETARY DATA NOTICE

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A summary list of safety precautions is on page 6.

For more technical materials such as submittals, catalogs, installation, owner's, and service manuals, visit www.lghvac.com.

Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR® criteria. Ask your contractor for details or visit www.energystar.gov.

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LG Air Conditioner Technical Solution (LATS) Software

A properly designed and installed refrigerant piping system is critical to the optimal performance of LG air-conditioning systems. To assist engineers, LG offers, free of charge, LG Air Conditioner Technical Solution (LATS) software—a total design solution for LG air conditioning systems. Contact your LG Rep for the best software program for your application.

NOTICE

To reduce the risk of designing an improper applied system or one that will not operate correctly, LG requires that LATS software be used on all projects.

Figure 1: LATS Example (Tree Diagram; Illustrative Purposes Only. System will Vary Depending On Model).

Formats

LATS is available to LG customers in two user interfaces: LATS HVAC and LATS Revit. Both LATS formats are available through www.myLGHVAC.com, or contact an LG Sales Representative.

LATS HVAC is a Windows®-based application that aids engineers in designing LG Variable Refrigerant Flow (VRF), Multi F / Multi F MAX, Single-Zone, DOAS, and Energy Recovery Ventilator (ERV) systems.

**Windows® is a registered mark of Microsoft® Corporation.*

LATS Revit integrates the LG LATS program with Revit® software**. It permits engineers to layout and validate LG VRF, Multi F / Multi F MAX, Single-Zone, and DOAS directly into Revit drawings.

***Revit® is a registered mark of Autodesk, Inc.*

Features

All LG product design criteria have been loaded into the program, making LATS simple to use: double click or drag and drop the component choices. Build systems in Tree Mode where the refrigerant system can be viewed. Switch to a Schematic diagram to see the electrical and communications wiring.

LATS software permits the user to input region data, indoor and outdoor design temperatures, modify humidity default values, zoning, specify type and size of outdoor units and indoor units, and input air flow and external static pressure (ESP) for ducted indoor units.

The program can also:

- Import building loads from a separate Excel file.
- Present options for outdoor unit auto selection.
- Automatically calculate component capacity based on design conditions for the chosen region.
- Verify if the height differences between the various system components are within system limits.
- Provide the correct size of each refrigerant piping segment and LG Y-Branches and Headers.
- Adjust overall piping system length when elbows are added.
- Check for component piping limitations and flag if any parameters are broken.
- Factor operation and capacity for defrost operation.
- Calculate refrigerant charge, noting any additional trim charge.
- Suggest accessories for indoor units and outdoor units.
- Run system simulation.

NOTICE

Features depend on which LATS program is being used, and the type of system being designed. Contact your LG representative for the best software program for your application.

NOTICE

Any field changes, such as re-routing, shortening or lengthening a pipe segment, adding or eliminating elbows and/or fittings, re-sizing, adding, or eliminating indoor units, changing the mounting height, or moving the location of a device or fitting during installation must be done with caution and ALWAYS VERIFIED in LATS SOFTWARE BEFORE supplies are purchased or installed. Doing so will lead to a more profitable installation, reduce the potential for rework, and will reduce the potential for multiple visits to the job site to complete the system set up.

LATS Generates a Complete Project Report

LATS software also generates a report containing project design parameters, cooling and heating design data, system component performance, and capacity data. The report includes system combination ratio and refrigerant charge calculations; and provides detailed bill of material, including outdoor units, indoor units, control devices, accessories, refrigerant pipe sizes segregated by building, by system, by pipe size, and by pipe segments. LATS can generate an Excel GERP report that can be imported into the LG SOPS pricing and ordering system.

Proper Design to Install Procedure

LG encourages a two report design-to-install-procedure. After the design engineer determines building / zone loads and other details, the engineer opens the LATS program and inputs the project's information. When the design is complete, the "Auto Piping" and "System Check" functions must be used to verify piping sizes, limitations, and if any design errors are present. If errors are found, engineers must adjust the design, and run Auto Piping and System Check again. When the design passes the checks, then the engineer prints out a project "Shop Drawing" (LATS Tree Diagram) and provides it to the installing contractor. The contractor must follow the LATS Tree Diagram when building the piping system, but oftentimes the design changes on the building site:

- Architect has changed location and/or purpose of room(s).
- Outdoor unit cannot be placed where originally intended.
- Structural elements prevent routing the piping as planned.
- Air conditioning system conflicts with other building systems (plumbing, gas lines, etc.).

The contractor must mark any deviation from the design on the Shop Drawing, including as-built straight lines and elbows. This "Mark Up" drawing must be returned to the design engineer or Rep, who must input contractor changes into the LATS file. (Copy the original LATS software file, save and rename as a separate file, and modify all piping lengths by double-clicking on each length and editing information.) Like the shop drawing, the Auto Piping and System Check must also be run on this new "As Built" drawing. The design engineer or Rep must then provide the final As Built file to the contractor. The Mark Up version must be compared to the As Built version for:

- Differences in pipe diameter(s). If incorrect diameters have been installed, the piping must be changed out. If pipe diameters have changed, check if Y-Branches will also need to be changed.
- Changes to outdoor unit and indoor unit capacities. Capacities changes will impact line length changes.
- Additional refrigerant charge quantity ("Trim Charge"). Trim charge will change if piping lengths and diameters change. The As Built version must reflect installed piping lengths to ensure correct trim charge.

All documents submitted by the contractor, as well as the Shop Drawing and the As Built Drawing files must be provided for commissioning purposes. Model and serial numbers for all system components must also be submitted. If the steps previously detailed are not followed, and all documents are not provided to the commissioning agent, the project runs the risk of not being commissioned and voiding any limited warranty LG offers on the equipment.

NOTICE

Any field changes, such as re-routing, shortening or lengthening a pipe segment, adding or eliminating elbows and/or fittings, re-sizing, adding, or eliminating indoor units, changing the mounting height, or moving the location of a device or fitting during installation must be done with caution and ALWAYS VERIFIED in LATS SOFTWARE BEFORE supplies are purchased or installed. Doing so will lead to a more profitable installation, reduce the potential for rework, and will reduce the potential for multiple visits to the job site to complete the system commissioning.

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TABLE OF SYMBOLS

A2L	*Indicates that this appliance uses a flammable refrigerant. If the refrigerant is leaked and exposure to an external ignition source, there is a risk of fire.*
⚠ DANGER	*Indicates a hazardous situation that, if not avoided, WILL RESULT IN DEATH OR SERIOUS INJURY.[1]*
⚠ WARNING	*Indicates a hazardous situation that, if not avoided, COULD RESULT IN DEATH OR SERIOUS INJURY.[1]*
⚠ CAUTION	*Indicates a hazardous situation that, if not avoided, COULD RESULT IN MINOR OR MODERATE INJURY.[1]*
NOTICE	*Indicates information considered important, but not hazard-related; indicates situations that may result in equipment or property damage accidents.[1]*
⃠	*This symbol indicates an action that should not be performed.*

[1]Signal words, symbols, and definitions taken from American National Standards Institute (ANSI) Z535.6. See https://www.ansi.org/ for more information.

A2L R32 Refrigerant

LG Electronic split system heating and air conditioning (HVAC) products now contain R32 refrigerant. While R32 refrigerant is slightly flammable, it has a higher efficiency, a lower Global Warming Potential (GWP) value, and is more environmentally friendly than R410A.
R32 Ozone Depletion Potential (ODP) Value: 0.
R32 Global Warming Potential (GWP) Value: 675.

The amount of refrigerant depends on outdoor unit to indoor unit configuration. All refrigerant piping system components (copper piping, joints, and other fittings) must be selected and installed to conform with Refrigeration Safety Regulation standards. Use LG Air Conditioner Technical Solution (LATS) Software to verify the refrigerant amount needed for each installation.

⚠ WARNING

- *This HVAC system contains fluorinated greenhouse gases in the form of R32 refrigerant. ⃠ Do not leak refrigerant gas into the atmosphere.*
- *Only use R32 as the refrigerant in these HVAC systems. If other substances are added, it may cause an explosion.*
- *R32 refrigerant is slightly flammable. When handled properly, it does not leak. If the refrigerant leaks in the installation area and comes in contact with a flame, it may generate a fire and / or harmful gas.*
- *If a leak occurs, immediately turn off any combustion devices, ventilate the installation area, and contact the dealer / contractor where the HVAC unit was purchased. ⃠ Do not operate the unit until the refrigerant leaked is repaired.*

⚠ CAUTION

- *Piping wall thickness must comply with all applicable local, state, and federal regulations for the design pressures listed by the manufacturer. ⃠ Unapproved piping must not be used.*
- *To prevent piping from softening, ⃠ do not heat the piping more than necessary.*

PRODUCT DATA

UNIT NOMENCLATURE

LGRED°

System and Outdoor Unit Nomenclature

1. Refrigerant
K = R32

2. Component
S = System
U = Outdoor Unit

3. Product Category
S = Single

4. Product Type
M = A-Coil
X = Null

5. Product Grade
A = LGRED

6. Nominal Capacity (Btu/h)

18 = 18,000 Btu/h	30 = 30,000 Btu/h	42 = 42,000 Btu/h
24 / 25 = 24,000 Btu/h	36 = 36,000 Btu/h	48 = 48,000 Btu/h

7. Generation: 1, 2, or A

8. Function
A = 208~230V

A-Coil Unit Nomenclature

1. LG

2. Refrigerant
K = R32

3. Product Category
M = A-Coil

4. Cabinet Classification
M = Cased Multi-Position

5. Heat Exchanger Type
A = A-Coil Aluminum Fin and Tube

6. Nominal Capacity (Btu/h)

18 = 18,000 Btu/h	30 = 30,000 Btu/h	42 = 42,000 Btu/h	60 = 60,000 Btu/h
24 = 24,000 Btu/h	36 = 36,000 Btu/h	48 = 48,000 Btu/h	

7.Cabinet Width

A = 14.5 inch	B = 17.5 inch	C = 21 inch	D = 24.5 inch

8. Generation
1

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PAIRING TABLE

The following table shows the available outdoor and indoor unit, along with the factory provided controller.

Table 1: R32 Single-Zone System - A-Coil with LGRED Pairing Table

Outdoor Unit Model	A-Coil Unit Model	A-Coil Unit Model
KUSXA181A KUSXA241A 	LKMMA18A1 - 14.5 inch 	LKMMA18B1 - 17.5 inch LKMMA24B1 - 17.5 inch 
KUSXA301A 	LKMMA24B1 - 17.5 inch LKMMA30B1 - 17.5 inch 	
KUSXA361A 	LKMMA36B1 - 17.5 inch 	LKMMA36C1 - 21 inch 
KUSXA422A KUSXA482A 	LKMMA42C1 - 21 inch LKMMA48C1 - 21 inch 	LKMMA48D1 - 24.5 inch 

General

System

LG single-zone systems - A-Coil with LGRED comprise of a single frame outdoor unit connected to a single A-Coil unit with a single refrigerant circuit. An LG single-zone system - A-Coil with LGRED is a system that can operate in either cooling or heating mode. The system is capable of changing mode within a maximum time of three (3) minutes to ensure indoor temperature can be properly maintained. LG components are manufactured in a facility registered to ISO 9001 and ISO 14001, which is a set of standards applying to environmental protection set by the International organization for Standardization (ISO). The system components comply with CSA Standard for Safety and bear the CSA label. Wiring in these units are in accordance with the national Electrical Code (NEC). LG single-zone systems - A-Coil with LGRED have published performance ratings certified by AHRI (Air-Conditioning, Heating, and Refrigeration Institute) and are listed in the AHRI Standard 210 / 240 certified product directory.

Temperature Operating Ranges

- Operating range for outdoor units of 5°F to +118°F (DB) for cooling (Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit [sold separately]; -13°F to +64°F (WB) for heating.
- Refer to the third-party thermostat instructions for third-party furnace operating ranges and temperature setting ranges.

Refrigerant System

The system is designed for use with R32 refrigerant, and consists of a single refrigeration circuit. The refrigeration circuit is pressure-tested at the factory and shipped with a holding charge of helium gas. The outdoor unit is provided with factory installed components, including a refrigerant strainer, accumulator, four-way reversing valve, electronic expansion valve (EEV), high and low side charging ports, service valves, and interconnecting piping. All refrigerant lines from the outdoor unit to the indoor unit are field-installed and must be insulated separately. The 42,000 and 48,000 Btu/h capacities include a sub-cooled heat exchanger, vapor injection, and vapor bypass circuit.

Electrical

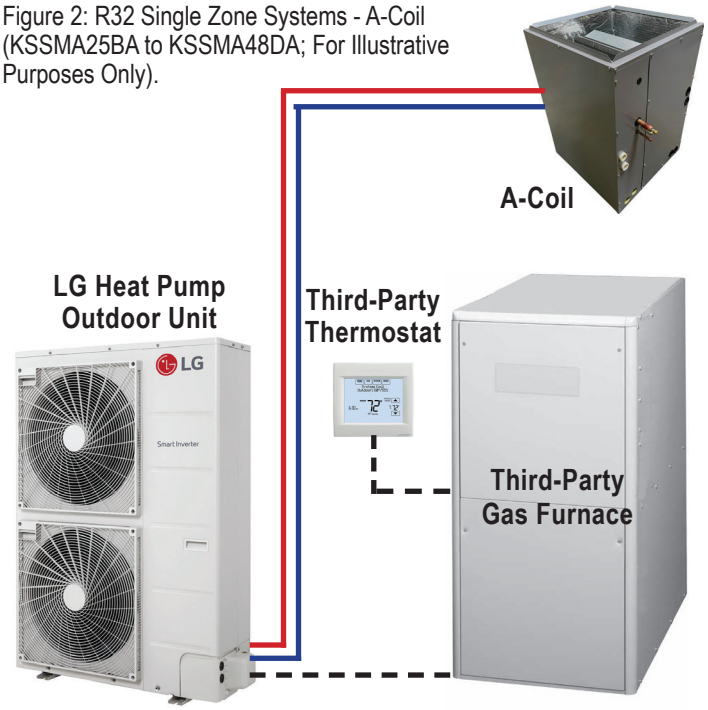
The system was designed to operate using 208–230/60/1 power with voltage variances of ±10% and includes overcurrent protection. The indoor unit is powered through the outdoor unit.

Controls

LG outdoor units are factory wired with necessary electrical control components, printed circuit boards, thermistors, sensors, terminal blocks, and lugs for power wiring. Factory installed microprocessor controls in the outdoor unit and indoor unit perform functions to efficiently operate the single zone system.

An LG wired controller cannot be used with the outdoor unit and third-party A-Coil / gas furnace. A third-party thermostat that supports dual-fuel function is required. The outdoor unit include an embedded communication kit with a terminal block to connect to the third-party wired thermostat and the third-party gas furnace. An outdoor air sensor (field supplied) is required to sense the outdoor air temperature for dual fuel system.

Figure 2: R32 Single Zone Systems - A-Coil (KSSMA25BA to KSSMA48DA; For Illustrative Purposes Only).



Microprocessor-based algorithms provide component protection, soft-start capability, refrigeration system pressure, temperature, defrost, and ambient control.

Outdoor Unit

Sound Levels

The outdoor units have sound levels not exceeding 56 dB(A) tested in an anechoic chamber under ISO Standard 3745.

Casing / Frame

The outdoor condensing unit case is constructed from pre-coated metal (PCM) that has been tested in accordance with ASTM B-117 salt spray procedure for a minimum of 1,000 hours. Case has a removable panel to allow access to major internal components, and legs to secure the unit during installation.

Compressors

All of the outdoor units are equipped with one hermetically sealed, digitally controlled, inverter-driven R1 scroll compressor to modulate capacity (modulation in 1 Hz increments). Teflon® coated bearings, overcurrent protection and vibration isolation are integrated with the compressor.

Frequency ranges for the 18,000 ~ 48,000 Btu/h outdoor units are:
18k, 24k Btu/h = 10 to 75 Hz Cooling; 10 to 100 Hz Heating
30k, 36k Btu/h = 10 to 120 Hz Cooling; 10 to 135 Hz Heating
42k, 48K Btu/h = 10 to 120 Hz Cooling; 10 to 135 Hz Heating

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Coil
Heat pump outdoor unit coils are made of nonferrous louvered aluminum fins protected with an integral coil guard. The coil for each outdoor unit has a minimum of 14 fins per inch (FPI); heat exchanger has two rows. The coil fins have a factory applied corrosion resistant GoldFin™ material with hydrophilic coating tested in accordance with ASTM B-117 salt spray test procedure for a minimum of 1,000 hours. Coils are factory tested to a maximum allowable pressure of 626 psig.

Fans and Motors
The 18,000 Btu/h (KUSXA181A) and 24,000 Btu/h (KUSXA241A) outdoor units include one direct drive, variable speed axial / propeller type fan with a horizontal air discharge; the 30,000 Btu/h (KUSX-A301A), 36,000 Btu/h (KUSXA361A), 42,000 Btu/h (KUSXA422A), and 48,000 Btu/h (KUSXA482A) include two fans. Fan blades are made of Acrylonitrile Butadiene Styrene (ABS) material, and have a Brushless Digitally Controlled (BLDC) fan motor. The fan motor has inherent protection, permanently lubricated bearings, and variable speed with a maximum speeds up to 760 rpm (18k, 24k, Cooling / Heating); and 750 rpm (30k, 36k, 42k and 48k; Cooling / Heating). Raised guards are provided to limit contact with moving parts.

A-Coil Unit
LG A-Coil units are factory built and are comprised of aluminum fins mechanically bonded to aluminium tubing. Each A-Coil unit has a minimum of three rows of coils that are pressure tested to 626 psig at the factory.

Configuration
The cased A-Coil unit is designed to operate in vertical upflow, vertical downflow, horizontal left, and horizontal right configurations.

For Vertical Upflow Configurations: Supply air exits from the top, and return air enters from the bottom.

Vertical Downflow Configurations: Return air enters from the top, and supply air exits from the bottom.

For Horizontal Configurations: Return air can enter from the right side or left side. Additionally for horizontal installations, a blowoff guard is necessary to prevent furnace air from blowing condensate out of the A-Coil. The condensate blowoff guard is included with the A-Coil.

Supply Air
LG A-Coils are to be housed above the blower section of third-party furnaces. The third-party furnace provides the supply air that passes through the A-Coil. Return air plenum sub-base is to be field provided. The supply air opening has a male flange for duct connection.

Casing / Frame
The A-Coil unit case is comprised of 22-gauge coated metal and the external surfaces are finished with Black STS color. The cold surfaces of the case are internally insulated. The A-Coil comes with a vertical and a horizontal drain pan.

Refrigerant
In addition to the factory pre-charge, outdoor units that are 36,000 Btu/h and above require an additional 0.88 ounces per feet. The additional charge must be calculated separately and the refrigerant must be charged accordingly.

Refrigerant Control
A thermostatic expansion valve (TXV) comes built-in to regulate the rate of refrigerant flow into the evaporator coil. Temperature is detected by the sensing bulb, which is located near the evaporator outlet.

Refrigerant Leak Detector
The A-Coil Unit has a built-in leak detector sensor to detect any refrigerant leaks.

Figure 3: A-Coil Components.

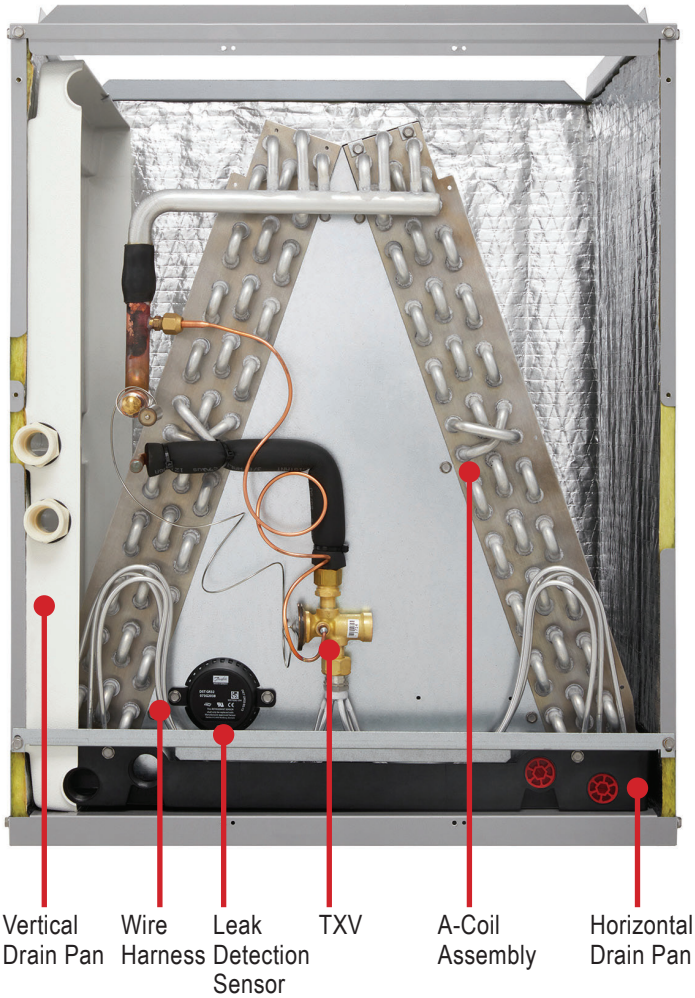


Table 2: R32 Single-Zone System - A-Coil with LGRED Specifications.

System (Model) (A-Coil Unit / Outdoor Unit)	KSSMA18AA (LKMMA18A1 / KUSXA181A)	KSSMA18BA (LKMMA18B1 / KUSXA181A)	KSSMA24BA (LKMMA24B1 / KUSXA241A)
Cooling Capacity (Min/Rated/Max) (Btu/h)	6,800~17,000~19,000	7,200~18,000~20,000	8,900~21,600~24,000
Cooling Power Input[1] (Min/Rated/Max) (kW)	0.52~1.48~1.70	0.58~1.57~1.88	0.75~1.96~2.38
EER2 (@95°F)	11.50	11.50	11.00
SEER2	15.2	15.2	15
Heating Capacity (Min/Rated/Max) (Btu/h)	7,000~20,000~22,000	7,000~20,000~22,000	11,000~24,000~26,000
Heating Power Input[1] (Min/Rated/Max) (kW)	0.54~1.80~2.07	0.52~1.80~2.07	0.77~2.20~2.53
COP (@47°F)	3.26	3.26	3.20
HSPF2	8.1	8.1	8.6
Rated Low Heating Capacity (Btu/h)			
Outdoor 17°F (WB)/Indoor 70°F (DB)	13,000	13,000	16,000
Low COP (@17°F)	2.34	2.26	2.15
Maximum Heating Capacity (Btu/h)			
Outdoor 17°F (WB)/Indoor 70°F (DB)	19,800	19,800	24,200
Outdoor 5°F (WB)/Indoor 70°F (DB)	18,000	18,000	22,000
Outdoor -4 °F (WB)/Indoor 70°F (DB)	16,000	16,000	19,000
Outdoor -13°F (WB)/Indoor 70°F (DB)	14,000	14,000	16,500
ENERGY STAR / Cold Climate	Yes / Yes	Yes / Yes	No / No
Power Supply (To Outdoor Unit; V / Hz / Ø)	208-230 / 60 / 1		
Power Supply Wiring (Outdoor Unit) (No. x AWG)[2]	3 x 12	3 x 12	3 x 12
A-Coil Unit Data			
Nominal Capacity (Btu/h)	17,000	18,000	21,600
Type	14.5 inch	17.5 inch	17.5 inch
Coil Material	Aluminum	Aluminum	Aluminum
Net Dimensions (W x H x D) (in.)	14-1/2 x 24 x 21	17-1/2 x 24 x 21	17-1/2 x 24 x 21
Shipping Dimensions (W x H x D) (in.)	15 x 25-1/8 x 25	18 x 25-1/8 x 25	18 x 25-1/8 x 25
Net / Shipping Weight (lbs.)	44 / 49	46 / 52	46 / 52
Air Flow Range through A-Coil (CFM) (Min. ~ Max.)	450 ~ 600	450 ~ 600	600 ~ 800
Corresponding ESP Range (in. w.g.) (Min. ~ Max.)	0.1~0.8	0.1~0.8	0.1~0.8
Dehumidification Rate (pts./hr.)	2.75	2.75	4.23
Liquid Piping (in., O.D.)[4]	3/8 Braze	3/8 Braze	3/8 Braze
Vapor Piping (in., O.D.)[4]	3/4 Braze	3/4 Braze	3/4 Braze

EEV: Electronic Expansion Valve TXV = Thermostatic Expansion Valve ODU: Outdoor Unit

This data is rated 0 ft above sea level with 24.6 of refrigerant line per indoor component and a 0 ft level difference outdoor and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB) and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).
Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 59ºF wet bulb (WB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

[1]Power Input is rated at high speed.

[2]All wiring must comply with applicable local and national codes.
a. All power supply wiring to the outdoor unit is field supplied, solid or stranded.
b. Power Supply Wiring to the third-party Furnace is to be specified by the manufacturer.
c. Control Cable between the Outdoor Unit and the third-party Furnace (No. x AWG): 6 x 18.
d. The 24V Control Power to the A-Coil is to be sourced from the third-party Furnace.

[3]Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[4]Adapters for piping connections are shipped with the outdoor unit.

Table 3: R32 Single-Zone System - A-Coil with LGRED Specifications, continued.

System (Model) (A-Coil Unit / Outdoor Unit)		KSSMA18AA (LKMMA18A1 / KUSXA181A)	KSSMA18BA (LKMMA18B1 / KUSXA181A)	KSSMA24BA (LKMMA24B1 / KUSXA241A)
Outdoor Unit Data				
Operating Range[1]	Cooling (°F DB)	5 to +118[1]		
	Heating (°F WB)	-13 to +64		
Sound Pressure[2] dB(A)	Cooling	51	51	51
	Heating	52	52	52
Max. External Static Pressure (in. w.g.)		0.04	0.04	0.04
Net Dimensions (W x H x D) (in.)		37-13/32 x 32-27/32 x 13		
Shipping Dimensions (W x H x D) (in.)		44-7/8 x 36-5/32 x 18-5/32		
Net / Shipping Weight (lbs.)		141.8 / 160.1	141.8 / 160.1	141.8 / 160.1
Exterior Color Codes		Munsell 2.5Y 7.5/1 (RAL 7044)		
Fan Type x Qty.		Axial x 1	Axial x 1	Axial x 1
Fan Motor Output (W) x Qty.		124 x 1	124 x 1	124 x 1
Fan Motor / Drive		Brushless Digitally Controlled / Direct		
Airflow Rate Max. (CFM)		2,048	2,048	2,048
Compressor (Type x Qty.)		R1 Scroll x 1	R1 Scroll x 1	R1 Scroll x 1
Heat Exchanger				
Material and Fin Coating		Outdoor Unit Coil: Copper Tube / Aluminum Fin (Gold Fin™ Coating); A-Coil Unit: Aluminum Tubes / Aluminum Fins		
Rows / Columns / Fin per inch x Qty.	Outdoor Unit Coil	2 x 38 x 14	2 x 38 x 14	2 x 38 x 14
	Indoor Unit Coil	3 x 18 x 16	3 x 18 x 16	3 x 18 x 16
Refrigerant				
Type[3] / Control		R32 / Outdoor Unit: EEV; A-Coil Unit: TXV		
Pre-Charge + Additional Charge for A-Coil (lbs.)		4.2 + 0	4.2 + 0	4.2 + 0
Additional Charge (oz./ft.)		0.38	0.38	0.38
Piping				
Liquid[4] (in., O.D.)		3/8 Flare	3/8 Flare	3/8 Flare
Vapor[4] (in., O.D.)		5/8 Flare	5/8 Flare	5/8 Flare
Condensation Line (O.D., I.D., in.)		1-1/4/ 1	1-1/4/ 1	1-1/4/ 1
Pipe Length[5] (Minimum/Maximum) (ft.)		16.4 / 164	16.4 / 164	16.4 / 164
Piping Length[5] (no add'l refrigerant, ft.)		24.6	24.6	24.6
Max Elevation Difference (ft.)		98.4	98.4	98.4

EEV: Electronic Expansion Valve TXV = Thermostatic Expansion Valve ODU: Outdoor Unit

This data is rated 0 ft above sea level with 24.6 of refrigerant line per indoor component and a 0 ft level difference outdoor and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB) and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).
Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 59ºF wet bulb (WB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

[1]Optional Low Ambient Wind Baffle Kit allows operation down to -4°F in cooling mode.

[2]Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[3]Take appropriate actions at the end of HVAC equipment life to recover, recycle, reclaim or destroy R32 refrigerant according to applicable regulations (40 CFR Part 82, Subpart F) under section 608 of CAA.

[4]Adapters for piping connections are shipped with the outdoor unit.

[5]Piping lengths are equivalent.

Table 4: R32 Single-Zone System - A-Coil with LGRED Specifications.

System (Model) (A-Coil Unit / Outdoor Unit)	KSSMA25BA (LKMMA24B1 / KUSXA301A)	KSSMA30BA (LKMMA30B1 / KUSXA301A)	KSSMA36BA (LKMMA36B1 / KUSXA361A)	KSSMA36CA (LKMMA36C1 / KUSXA361A)
Cooling Capacity (Min/Rated/Max) (Btu/h)	9,000~23,000~24,000	11,100~30,000~31,000	13,000~34,400~36,000	13,000~34,400~37,000
Cooling Power Input[1] (Min/Rated/Max) (kW)	0.75~1.97~2.38	0.89~2.54~3.05	1.03~2.94~3.27	1.03~2.94~3.47
EER2 (@95°F)	11.70	11.80	11.70	11.70
SEER2	15.5	15.7	15.5	16
Heating Capacity (Min/Rated/Max) (Btu/h)	11,000~26,000~28,000	13,000~32,000~35,000	15,000~37,000~38,000	15,000~37,000~38,000
Heating Power Input[1] (Min/Rated/Max) (kW)	0.79~2.20~2.53	0.97~2.93~3.34	1.06~3.21~3.63	1.09~3.21~3.63
COP (@47°F)	3.46	3.20	3.38	3.38
HSPF2	8.8	8.8	8.9	8.9
Rated Low Heating Capacity (Btu/h)				
Outdoor 17°F (WB)/Indoor 70°F (DB)	16,000	22,000	24,000	24,000
Low COP (@17°F)	2.22	2.23	2.12	2.12
Maximum Heating Capacity (Btu/h)				
Outdoor 17°F (WB)/Indoor 70°F (DB)	25,000	33,700	37,000	37,000
Outdoor 5°F (WB)/Indoor 70°F (DB)	24,000	30,600	33,000	33,000
Outdoor -4 °F (WB)/Indoor 70°F (DB)	20,200	27,000	30,000	31,000
Outdoor -13°F (WB)/Indoor 70°F (DB)	18,000	23,000	26,000	27,000
ENERGY STAR / Cold Climate	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Power Supply (To Outdoor Unit; V / Hz / Ø)	208-230 / 60 / 1			
Power Supply Wiring (Outdoor Unit) (No. x AWG)[2]	3 x 10	3 x 10	3 x 10	3 x 10
A-Coil Unit Data				
Nominal Capacity (Btu/h)	23,000	30,000	34,400	34,400
Type	17.5 inch	17.5 inch	17.5 inch	21 inch
Coil Material	Aluminum	Aluminum	Aluminum	Aluminum
Net Dimensions (W x H x D) (in.)	17-1/2 x 24 x 21	17-1/2 x 26 x 21	17-1/2 x 26 x 21	21 x 26 x 21
Shipping Dimensions (W x H x D) (in.)	18 x 25-1/8 x 25	18-1/4 x 27-1/4 x 25	18-1/4 x 27-1/4 x 25	21-1/2 x 27 x 25
Net / Shipping Weight (lbs.)	46 / 52	54 / 60	54 / 60	55 / 62
Air Flow Range through A-Coil (CFM) (Min. ~ Max.)	675 ~ 900	750 ~ 1,000	840 ~ 1,200	840 ~ 1,200
Corresponding ESP Range (in. w.g.) (Min. ~ Max.)	0.1~0.8	0.1~0.8	0.1~0.8	0.1~0.8
Dehumidification Rate (pts./hr.)	4.23	5.6	7.17	7.17
Liquid Piping (in., O.D.)[4]	3/8 Braze	3/8 Braze	3/8 Braze	3/8 Braze
Vapor Piping (in., O.D.)[4]	3/4 Braze	3/4 Braze	3/4 Braze	3/4 Braze

EEV: Electronic Expansion Valve TXV = Thermostatic Expansion Valve ODU: Outdoor Unit

This data is rated 0 ft above sea level with 24.6 of refrigerant line per indoor component and a 0 ft level difference outdoor and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB) and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).
Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 59ºF wet bulb (WB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

[1]Power Input is rated at high speed.

[2]All wiring must comply with applicable local and national codes.
a. All power supply wiring to the outdoor unit is field supplied, solid or stranded.
b. Power Supply Wiring to the third-party Furnace is to be specified by the manufacturer.
c. Control Cable between the Outdoor Unit and the third-party Furnace (No. x AWG): 6 x 18.
d. The 24V Control Power to the A-Coil is to be sourced from the third-party Furnace.

[3]Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[4]Adapters for piping connections are shipped with the outdoor unit.

Table 5: R32 Single-Zone System - A-Coil with LGRED Specifications, continued.

System (Model) (A-Coil Unit / Outdoor Unit)		KSSMA25BA (LKMMA24B1 / KUSXA301A)	KSSMA30BA (LKMMA30B1 / KUSXA301A)	KSSMA36BA (LKMMA36B1 / KUSXA361A)	KSSMA36CA (LKMMA36C1 / KUSXA361A)
Outdoor Unit Data					
Operating Range[1]	Cooling (°F DB)	5 to +118[1]			
	Heating (°F WB)	-13 to +64			
Sound Pressure[2] dB(A)	Cooling	52	52	52	52
	Heating	54	54	54	54
Max. External Static Pressure (in. w.g.)		0.04	0.04	0.04	0.04
Net Dimensions (W x H x D) (in.)		37-13/32 x 54-11/32 x 13			
Shipping Dimensions (W x H x D) (in.)		45-5/32 x 57-19/32 x 18-5/32			
Net / Shipping Weight (lbs.)		190.2 / 214.3	190.2 / 214.3	190.2 / 214.3	190.2 / 214.3
Exterior Color Codes		Munsell 2.5Y 7.5/1 (RAL 7044)			
Fan Type x Qty.		Axial x 2	Axial x 2	Axial x 2	Axial x 2
Fan Motor Output (W) x Qty.		124 x 2	124 x 2	124 x 2	124 x 2
Fan Motor / Drive		Brushless Digitally Controlled / Direct			
Airflow Rate Max. (CFM)		1,942 x 2	1,942 x 2	1,942 x 2	1,942 x 2
Compressor (Type x Qty.)		R1 Scroll x 1	R1 Scroll x 1	R1 Scroll x 1	R1 Scroll x 1
Heat Exchanger					
Material and Fin Coating		Outdoor Unit Coil: Copper Tube / Aluminum Fin (Gold Fin™ Coating); A-Coil Unit: Aluminum Tubes / Aluminum Fins			
Rows / Columns / Fin per inch x Qty.	Outdoor Unit Coil	2 x 64 x 14	2 x 64 x 14	2 x 64 x 14	2 x 64 x 14
	Indoor Unit Coil	3 x 18 x 16	3 x 22 x 16	3 x 22 x 16	3 x 22 x 16
Refrigerant					
Type[3] / Control		R32 / Outdoor Unit: EEV; A-Coil Unit: TXV			
Pre-Charge + Additional Charge for A-Coil (lbs.)		6.63 + 0.88	6.63 + 0.88	6.63 + 0.88	6.63 + 0.88
Additional Charge (oz./ft.)		0.43	0.43	0.43	0.43
Piping					
Liquid[4] (in., O.D.)		3/8 Flare	3/8 Flare	3/8 Flare	3/8 Flare
Vapor[4] (in., O.D.)		5/8 Flare	5/8 Flare	5/8 Flare	5/8 Flare
Condensation Line (O.D., I.D., in.)		1-1/4/ 1	1-1/4/ 1	1-1/4/ 1	1-1/4/ 1
Pipe Length[5] (Minimum/Maximum) (ft.)		16.4 / 246	16.4 / 246	16.4 / 246	16.4 / 246
Piping Length[5] (no add'l refrigerant, ft.)		24.6	24.6	24.6	24.6
Max Elevation Difference (ft.)		98.4	98.4	98.4	98.4

EEV: Electronic Expansion Valve TXV = Thermostatic Expansion Valve ODU: Outdoor Unit

This data is rated 0 ft above sea level with 24.6 of refrigerant line per indoor component and a 0 ft level difference outdoor and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB) and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).
Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 59ºF wet bulb (WB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

[1]Optional Low Ambient Wind Baffle Kit allows operation down to -4°F in cooling mode.

[2]Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[3]Take appropriate actions at the end of HVAC equipment life to recover, recycle, reclaim or destroy R32 refrigerant according to applicable regulations (40 CFR Part 82, Subpart F) under section 608 of CAA.

[4]Adapters for piping connections are shipped with the outdoor unit.

[5]Piping lengths are equivalent.

Table 6: R32 Single-Zone System - A-Coil with LGRED Specifications.

System (Model) (A-Coil Unit / Outdoor Unit)	KSSMA42CA (LKMMA42C1 / KUSXA422A)	KSSMA48CA (LKMMA48C1 / KUSXA482A)	KSSMA48DA (LKMMA48D1 / KUSXA482A)
Cooling Capacity (Min/Rated/Max) (Btu/h)	16,000~41,000~44,000	18,000~45,500~48,000	18,000~45,500~49,000
Cooling Power Input[1] (Min/Rated/Max) (kW)	1.21~3.45~3.82	1.40~3.89~4.23	1.36~3.89~4.39
EER2 (@95°F)	11.90	11.70	11.70
SEER2	16	15.9	16.1
Heating Capacity (Min/Rated/Max) (Btu/h)	18,000~45,000~47,000	18,000~50,000~52,000	20,000~50,000~52,000
Heating Power Input[1] (Min/Rated/Max) (kW)	1.30~3.81~4.31	1.35~4.21~4.76	1.47~4.21~4.76
COP (@47°F)	3.46	3.48	3.48
HSPF2	8.9	8.9	9.1
Rated Low Heating Capacity (Btu/h)			
Outdoor 17°F (WB)/Indoor 70°F (DB)	29,000	32,600	32,600
Low COP (@17°F)	2.30	2.34	2.34
Maximum Heating Capacity (Btu/h)			
Outdoor 17°F (WB)/Indoor 70°F (DB)	43,000	45,000	46,000
Outdoor 5°F (WB)/Indoor 70°F (DB)	41,000	43,000	43,000
Outdoor -4 °F (WB)/Indoor 70°F (DB)	37,800	39,000	40,000
Outdoor -13°F (WB)/Indoor 70°F (DB)	33,000	34,000	35,000
ENERGY STAR / Cold Climate	Yes / Yes	Yes / Yes	Yes / Yes
Power Supply (To Outdoor Unit; V / Hz / Ø)	208-230 / 60 / 1		
Power Supply Wiring (Outdoor Unit) (No. x AWG)[2]	3 x 10	3 x 10	3 x 10
A-Coil Unit Data			
Nominal Capacity (Btu/h)	41,000	45,500	45,500
Type	21 inch	21 inch	24.5 inch
Coil Material	Aluminum	Aluminum	Aluminum
Net Dimensions (W x H x D) (in.)	21 x 30 x 21	21 x 30 x 21	24-1/2 x 34 x 21
Shipping Dimensions (W x H x D) (in.)	21-1/2 x 31 x 25	21-1/2 x 31 x 25	25 x 35-1/8 x 25
Net / Shipping Weight (lbs.)	63 / 70	63 / 70	73 / 82
Air Flow Range through A-Coil (CFM) (Min. ~ Max.)	1,050 ~ 1,400	1,200 ~ 1,600	1,200 ~ 1,600
Corresponding ESP Range (in. w.g.) (Min. ~ Max.)	0.1~0.8	0.1~0.8	0.1~0.8
Dehumidification Rate (pts./hr.)	7.9	8.06	8.06
Liquid Piping (in., O.D.)[4]	3/8 Braze	3/8 Braze	3/8 Braze
Vapor Piping (in., O.D.)[4]	3/4 Braze	3/4 Braze	3/4 Braze

EEV: Electronic Expansion Valve TXV = Thermostatic Expansion Valve ODU: Outdoor Unit

This data is rated 0 ft above sea level with 24.6 of refrigerant line per indoor component and a 0 ft level difference outdoor and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB) and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).
Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 59ºF wet bulb (WB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

[1]Power Input is rated at high speed.

[2]All wiring must comply with applicable local and national codes.
a. All power supply wiring to the outdoor unit is field supplied, solid or stranded.
b. Power Supply Wiring to the third-party Furnace is to be specified by the manufacturer.
c. Control Cable between the Outdoor Unit and the third-party Furnace (No. x AWG): 6 x 18.
d. The 24V Control Power to the A-Coil is to be sourced from the third-party Furnace.

[3]Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[4]Adapters for piping connections are shipped with the outdoor unit.

Table 7: R32 Single-Zone System - A-Coil with LGRED Specifications, continued.

System (Model) (A-Coil Unit / Outdoor Unit)		KSSMA42CA (LKMMA42C1 / KUSXA422A)	KSSMA48CA (LKMMA48C1 / KUSXA482A)	KSSMA48DA (LKMMA48D1 / KUSXA482A)
Outdoor Unit Data				
Operating Range[1]	Cooling (°F DB)	5 to +118[1]		
	Heating (°F WB)	-13 to +64		
Sound Pressure[2] dB(A)	Cooling	54	54	54
	Heating	56	56	56
Max. External Static Pressure (in. w.g.)		0.04	0.04	0.04
Net Dimensions (W x H x D) (in.)		37-13/32 x 54-11/32 x 13		
Shipping Dimensions (W x H x D) (in.)		45-5/32 x 57-19/32 x 18-5/32		
Net / Shipping Weight (lbs.)		213.4 / 232.4	213.4 / 232.4	213.4 / 232.4
Exterior Color Codes		Munsell 2.5Y 7.5/1 (RAL 7044)		
Fan Type x Qty.		Axial x 2	Axial x 2	Axial x 2
Fan Motor Output (W) x Qty.		124 x 2	124 x 2	124 x 2
Fan Motor / Drive		Brushless Digitally Controlled / Direct		
Airflow Rate Max. (CFM)		1,942 x 2	1,942 x 2	1,942 x 2
Compressor (Type x Qty.)		R1 Scroll x 1	R1 Scroll x 1	R1 Scroll x 1
Heat Exchanger				
Material and Fin Coating		Outdoor Unit Coil: Copper Tube / Aluminum Fin (Gold Fin™ Coating); A-Coil Unit: Aluminum Tubes / Aluminum Fins		
Rows / Columns / Fin per inch x Qty.	Outdoor Unit Coil	3 x 64 x 14	3 x 64 x 14	3 x 64 x 14
	Indoor Unit Coil	3 x 26 x 16	3 x 26 x 16	3 x 28 x 16
Refrigerant				
Type[3] / Control		R32 / Outdoor Unit: EEV; A-Coil Unit: TXV		
Pre-Charge + Additional Charge for A-Coil (lbs.)		7.50 + 0.88	7.50 + 0.88	7.50 + 0.88
Additional Charge (oz./ft.)		0.43	0.43	0.43
Piping				
Liquid[4] (in., O.D.)		3/8 Flare	3/8 Flare	3/8 Flare
Vapor[4] (in., O.D.)		5/8 Flare	5/8 Flare	5/8 Flare
Condensation Line (O.D., I.D., in.)		1-1/4/ 1	1-1/4/ 1	1-1/4/ 1
Pipe Length[5] (Minimum/Maximum) (ft.)		16.4 / 246	16.4 / 246	16.4 / 246
Piping Length[5] (no add'l refrigerant, ft.)		24.6	24.6	24.6
Max Elevation Difference (ft.)		98.4	98.4	98.4

EEV: Electronic Expansion Valve TXV = Thermostatic Expansion Valve ODU: Outdoor Unit

This data is rated 0 ft above sea level with 24.6 of refrigerant line per indoor component and a 0 ft level difference outdoor and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80°F dry bulb (DB) and 67°F wet bulb (WB) and outdoor ambient conditions of 95°F dry bulb (DB) and 75°F wet bulb (WB).
Heating capacity rating obtained with air entering the indoor component at 70°F dry bulb (DB) and 59°F wet bulb (WB) and outdoor ambient conditions of 47°F dry bulb (DB) and 43°F wet bulb (WB).

[1]Optional Low Ambient Wind Baffle Kit allows operation down to -4°F in cooling mode.

[2]Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[3]Take appropriate actions at the end of HVAC equipment life to recover, recycle, reclaim or destroy R32 refrigerant according to applicable regulations (40 CFR Part 82, Subpart F) under section 608 of CAA.

[4]Adapters for piping connections are shipped with the outdoor unit.

[5]Piping lengths are equivalent.

Table 8: R32 Single Zone LGRED Four-Way Cassette Electrical Data Table.

Nominal Tons	Unit Model No.	Hertz	Voltage	Voltage Range (Min. to Max.)	MCA	MOP	Compressor Quantity	Condenser Fan Motor(s)	
								Condenser Fan Qty.	Condenser Fan Motor FLA
1.5	KSSMA18AA	60	208 - 230	187 - 253	19.1	30	1	1	1.6
1.5	KSSMA18BA				19.1	30	1	1	1.6
2	KSSMA24BA				19.1	30	1	1	1.6
2	KSSMA25BA				32	35	1	2	1.6 x 2
2.5	KSSMA30BA				32	35	1	2	1.6 x 2
3	KSSMA36BA				32	35	1	2	1.6 x 2
3	KSSMA36CA				32	35	1	2	1.6 x 2
3.5	KSSMA42CA				32	40	1	2	1.6 x 2
4	KSSMA48CA				32	40	1	2	1.6 x 2
4	KSSMA48DA				32	40	1	2	1.6 x 2

Voltage tolerance is ±10%.

Maximum allowable voltage unbalance is 2%.

MCA = Minimum Circuit Ampacity.

Maximum Overcurrent Protection (MOP) is calculated as follows: (Largest motor FLA x 2.25) + (Sum of other motor FLA) rounded down to the nearest standard fuse size.

FLA = Full Load Amps

Table 9: R32 Single-Zone Systems - A-Coil with LGRED Outdoor Unit Functions, Controls, Options Table.

Outdoor Unit Type		KUSXA181A (18K)	KUSXA241A (24K)	KUSXA301A, KUSXA361A, KUSXA422A, KUSXA482A (30K, 36K, 42K, 48K)
Reliability	Defrost/Deicing	√	√	√
	High Pressure Sensor	√	√	√
	Pressure Switch	√	√	√
	Restart Delay (Three [3] Minutes)	√	√	√
	Self Diagnosis	√	√	√
	Soft Start	√	√	√
Convenience	Night Quiet Operation	√	√	√
	Mode Lock	√ Cooling Only or Heating Only		
	Pump Down (Forced Cooling Operation)	√	√	√
	Network Solution (LGAP)	X	X	X
Central Controllers	AC Smart 5	X	X	X
	ACP 5	X	X	X
Integration Solutions	MultiSITE Communication Manager.	X	X	X
	ACP 5 BACnet® Gateway	X	X	X
	LonWorks® Gateway	X	X	X

√: Standard Feature

O: Option. Optional accessories must be purchased separately.

X: Not Available

[1]Not all controllers can support all features. Contact your LG representative for details.

BACnet is a registered trademark of ASHRAE. LonWorks is a registered trademark of Echelon Corp.

Accessories Table

Table 10: Accessories Overview. (Sold Separately)

Accessory	Model Number
Low Ambient Wind Baffle For 18k and 24k Capacities (One [1] Required), 30k to 48k Capacities (Two [2] Required)	ZLABGP04A
LG Airzone Aidoo Pro Wi-Fi Controller	AZAI6WSPLGE

LG Airzone Aidoo Pro Wi-Fi Controller (AZAI6WSPLGE)

When the Airzone Aidoo Pr" is installed, the outdoor unit controls the compressor by sensing the room temperature and the setting temperature (Inverter Linear Control) for maximum efficiency. Device to manage and integrate units remotely from the Cloud. Online control with the Airzone Cloud App (available for iOS and Android). Wireless Wi-Fi connection. Self-powered by external power supply provided.

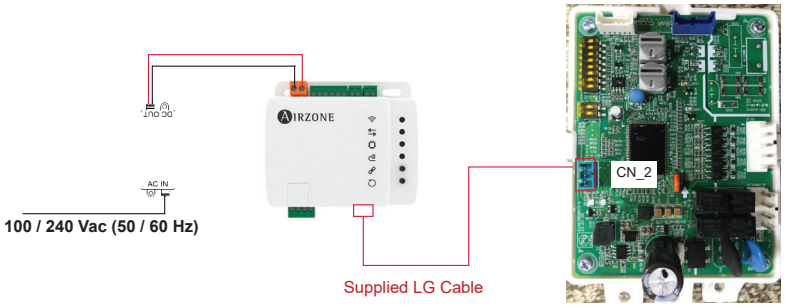
Features:

- Control of the parameters of the unit.
- Temperature and operating mode time schedules.
- Cloud and / or third-party smart thermostat integrations (3PTI).
- On / off output and input.
- Automatic mode change.
- Temperature limits for hot and cold.

Buy Link: Airzone AZAI6WSPLGE AIDOO Pro 3 Wire WiFi Controller for LG Mini Splits.

For further information about Airzone Aidoo Pro, go to www.airzonecontrol.com.

1. Connect Airzone to Outdoor Unit Control Box Communication Kit PCB CN_2 connector.

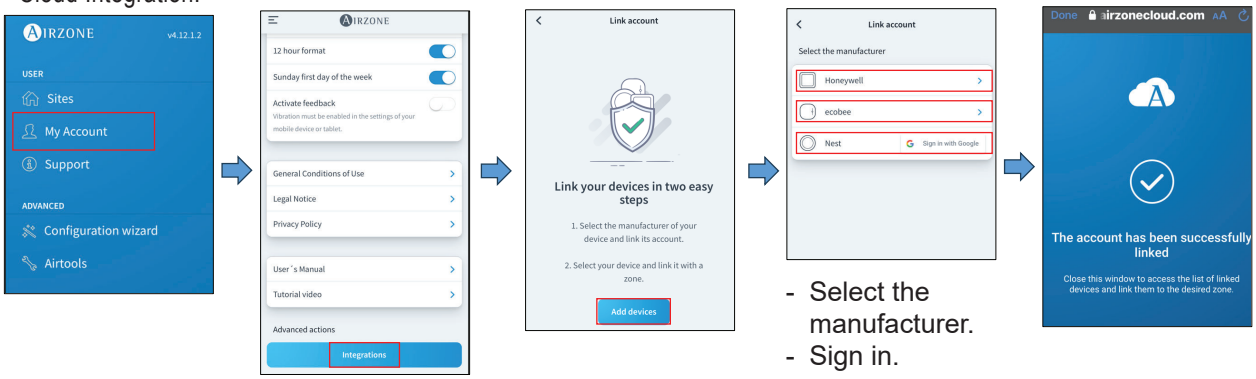


Outdoor Unit Control Box Communication Kit PCB

Download the app and follow the steps below for the settings. Access the support section to see the user manual.

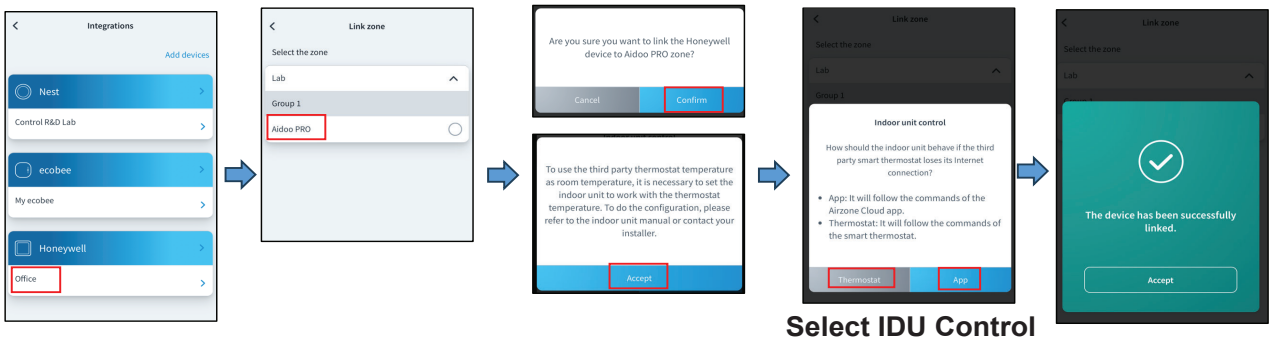
2. Integrate the Cloud to the Airzone Aidoo Pro, and connect the third-party thermostat.

- Cloud Integration.



- Select the manufacturer.
- Sign in.

- Link third-party thermostat to Airzone Aidoo Pro.



Select IDU Control

Product Data

LG Monitoring View (LGMV) Diagnostic Software and Cable

LG Monitoring View (LGMV) is a maintenance and troubleshooting tool for Multi V™ air conditioning systems. LGMV formats are available for computer or mobile phone use.

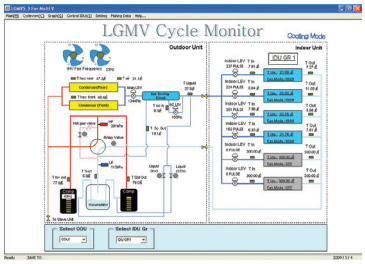
The main screen for LGMV allows the user to view the following real time data:

- Actual inverter compressor speed
- Target inverter compressor speed
- Actual outdoor fan speed
- Target outdoor unit fan speed
- Actual superheat
- Target superheat
- Actual subcooler circuit superheat
- Target subcooler circuit superheat
- Main EEV position
- Subcooling EEV position
- Inverter compressor current transducer value
- Outdoor air temperature
- Actual high pressure/saturation temperature
- Actual low pressure/saturation temperature
- Suction temperature
- Inverter compressor discharge temperature
- Constant speed compressor discharge temperature
- Front outdoor coil pipe temperature
- Back outdoor coil pipe temperature
- Liquid line pipe temperature
- Subcooler inlet temperature
- Subcooler outlet temperature
- Average indoor unit (IDU) pipe temperature
- Inverter compressor operation indicator light
- Four-way reversing valve operation indicator light
- Pressure graph showing actual low pressure and actual high pressure levels
- Error code display
- Operating mode indicator
- Target high pressure
- Target low pressure
- PCB (printed circuit board) version
- Software version
- Installer name
- Model no. of outdoor units
- Site name
- Total number of connected indoor units
- Communication indicator lights
- Indoor unit capacity
- Indoor unit operating mode
- Indoor unit fan speed
- Indoor unit EEV position
- Indoor unit room temperature
- Indoor unit inlet pipe temperature
- Indoor unit outlet pipe temperature
- Indoor unit error code

Additional screens can be accessed by tabs on the main screen

1. Cycleview: Graphic of internal components including
   - Compressors showing actual speeds
   - EEVs
   - Indoor Units
   - Liquid injection valves
   - Temperature and pressure sensors
   - Four-way reversing valve
   - Outdoor fans showing status and speeds
2. Graph:
   Full screen graph of actual high and low pressures and high and low pressure limits. A sliding bar enables user to go back in time and view data.
3. Control IDU: Enables user to turn on all IDUs default setpoints of 86°F in heat mode or 64°F in cool mode.
4. Setting: Converts metric values to imperial values.
5. Making Data: Recording of real time data to a separate file created to be stored on the user's computer.
6. Loading Data: Recorded data from a saved ".CSV" file can be loaded to create an LGMV session.
7. Electrical Data: Screen is changed to show the following:
   - Inverter compressor
     - Amps / Volts / Power Hz
     - Inverter control board fan Hz
   - Constant compressor
     - Current transducer value
     - Phase

Figure 4: Sample Cycleview (Computer View Example).



In lieu of connecting to the outdoor unit, user has the option to connect to the indoor unit with a connector kit. When connected through the indoor unit, user will not be able to record data.

This software can be used to both pre-set-up new systems and troubleshoot existing systems. LGMV data can be recorded to a ".CSV" file and emailed to an LG representative to assist with diagnostic evaluations.

LGMV is available in different formats. Contact your LG Sales Representative for system requirements and for more information.

LG

ThinQ

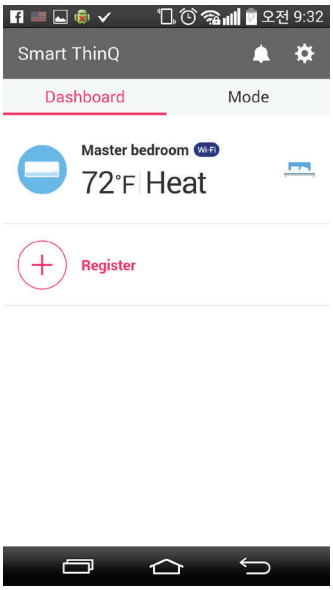
LG ThinQ is a built-in Wi-Fi module, along with a free smart phone app that provides monitoring and remote control capabilities for certain LG single zone systems. The app has the following features and benefits:

- Sign in to the app using LG credentials, or using Google® or Facebook® login credentials. Users only have to log in to the app once; the app remembers login details for subsequent logins.
- View current temperature settings of the air conditioning unit and change temperature, fan speed, and air flow direction from anywhere in the house or at a remote location (through the use of wireless connection). Multiple users can control the household air conditioning unit remotely.
- Monitor filter usage of the unit.
- Set up weekly schedules to start and stop air conditioner activity.
- Set up the unit to run in different Modes, depending on the user's schedule. Set up specific temperatures for when the user is home, away on vacation, or sleeping.
- Troubleshoot problems, and view tips on general maintenance of the system using the Smart Diagnosis function.

**Google is a registered trademark of Google Inc.; Facebook is a registered trademark of Facebook.*

Contact your LG Sales Representative or visit www.lghvac.com for system requirements, how to download the app, a user's manual, or other information.

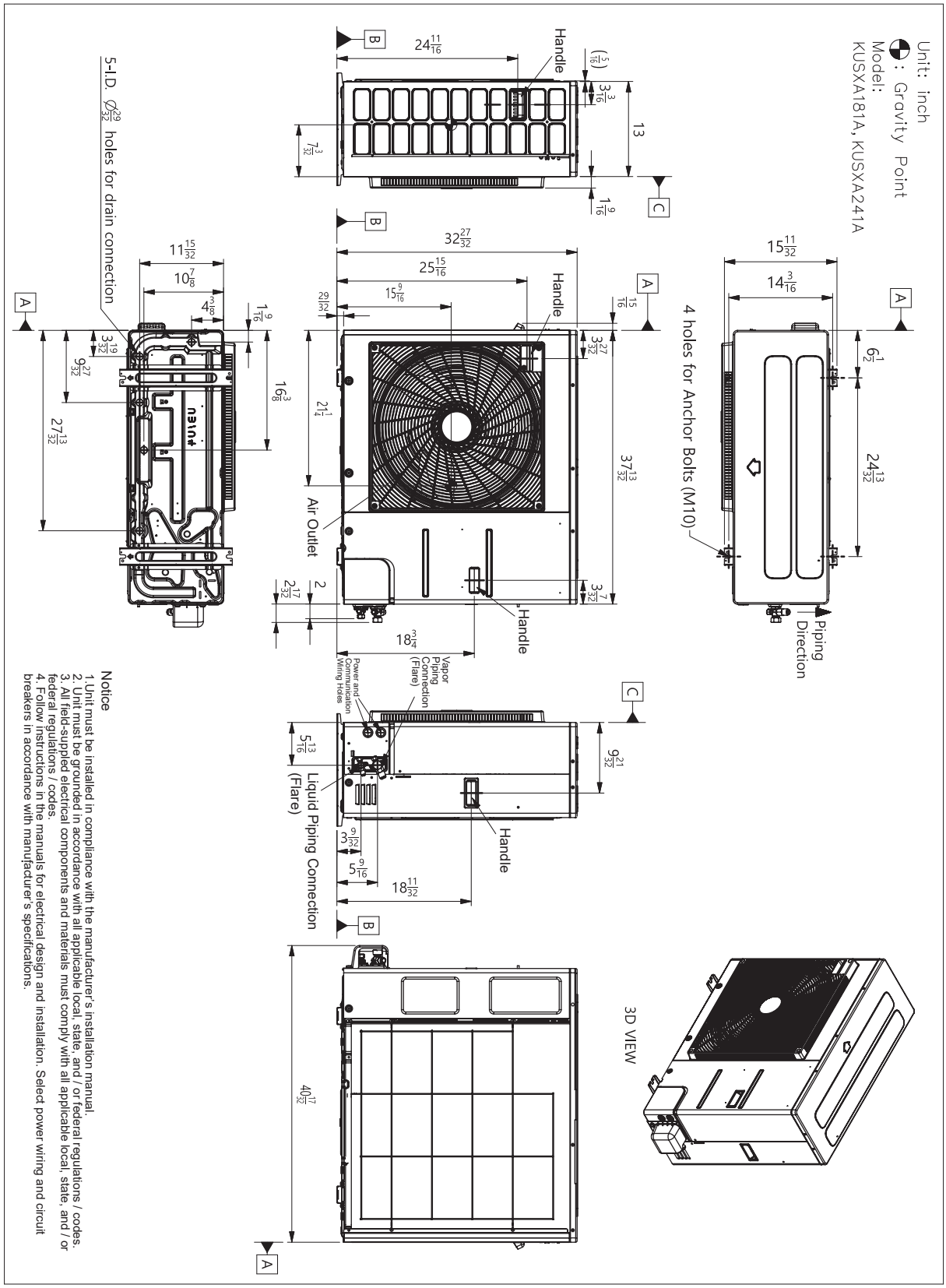
Figure 5: Example of an LG Smart ThinQ Screen (appearances my differ depending on version of software).



OUTDOOR UNIT DIMENSIONS

KUSXA181A , KUSXA241A

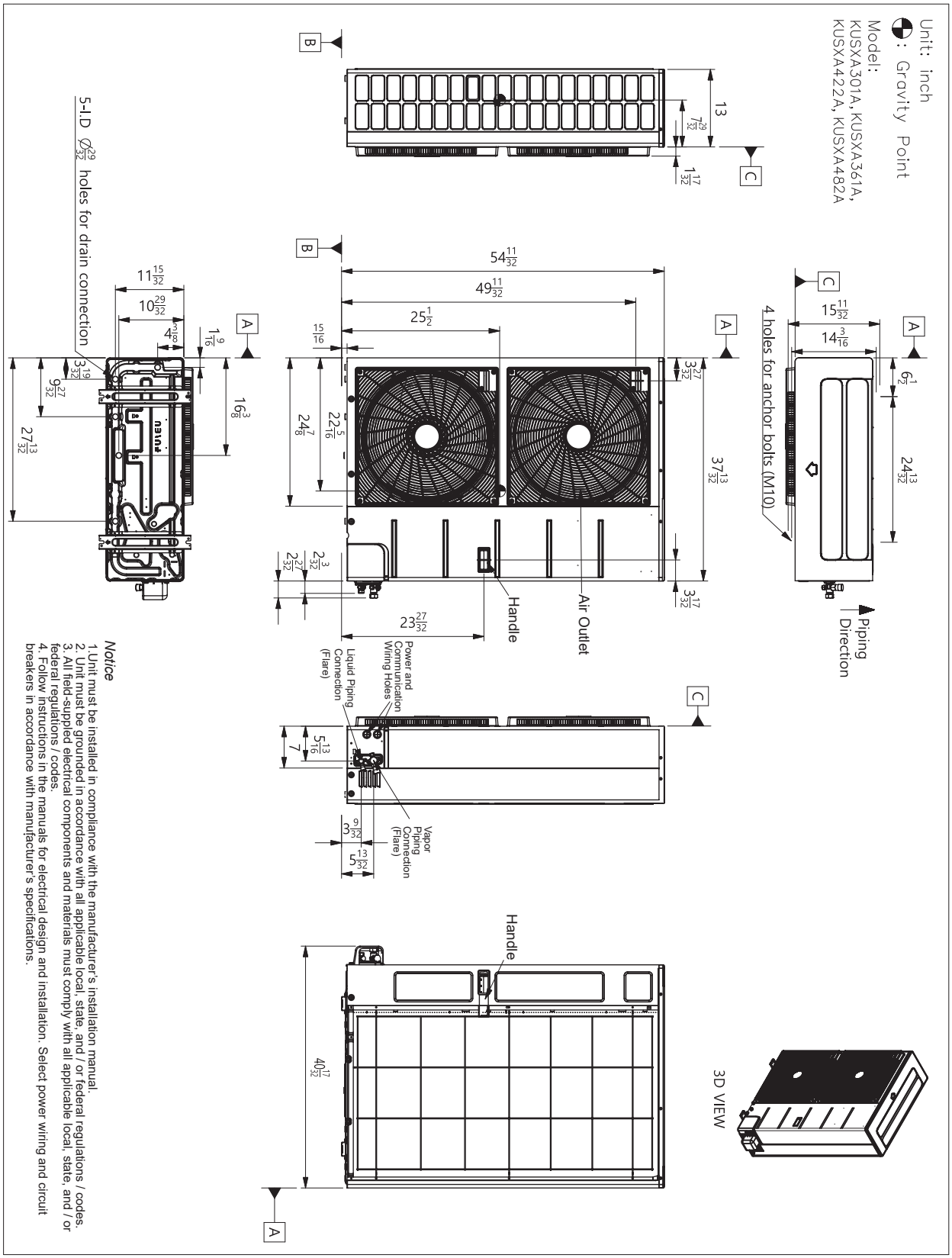
Figure 6: KUSXA181A , KUSXA241A Outdoor Unit Dimensions.



OUTDOOR UNIT DIMENSIONS

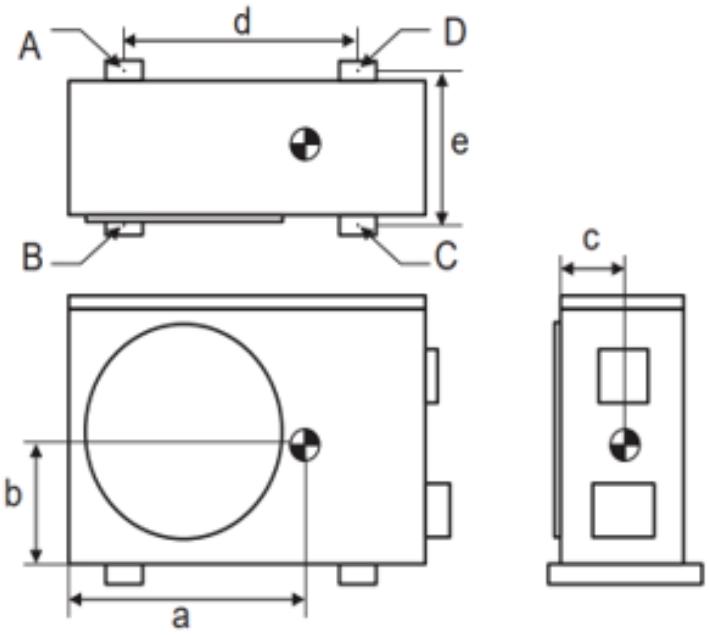
KUSXA301A, KUSXA361A, KUSXA422A, KUSXA482A

Figure 7: KUSXA301A, KUSXA361A, KUSXA422A, KUSXA482A Outdoor Unit Dimensions.



OUTDOOR UNIT CENTER OF GRAVITY / CORNER WEIGHT

Figure 8: Outdoor Unit Center of Gravity and Corner Weight Diagram (Illustrative Purposes Only. Appearances Will Differ Depending On Model).



NOTICE

Diagram is for illustrative purposes only. Actual appearance depends on model type.

Table 11: Outdoor Unit Center of Gravity and Corner Weights.

Model No.	Weight (lb.)		Center of Gravity (in.)			Leg (in.)		Corner Weight (lb.)			
	Shipping	Net	a	b	c	d	e	A	B	C	D
KUSXA181A	160.1	141.8	23-7/32	12-19/32	5-29/32	24-13/32	14-3/16	20.0	28.0	54.7	39.0
KUSXA241A	160.1	141.8	23-7/32	12-19/32	5-29/32	24-13/32	14-3/16	20.0	28.0	54.7	39.0
KUSXA301A	214.3	190.2	27-7/32	21-15/32	6-5/8	24-13/32	14-3/16	15.8	18.1	84.9	74.4
KUSXA361A	214.3	190.2	27-7/32	21-15/32	6-5/8	24-13/32	14-3/16	15.8	18.1	84.9	74.4
KUSXA422A	232.4	213.4	27-7/32	21-15/32	6-5/8	24-13/32	14-3/16	17.4	19.9	93.4	81.8
KUSXA482A	232.4	213.4	27-7/32	21-15/32	6-5/8	24-13/32	14-3/16	17.4	19.9	93.4	81.8

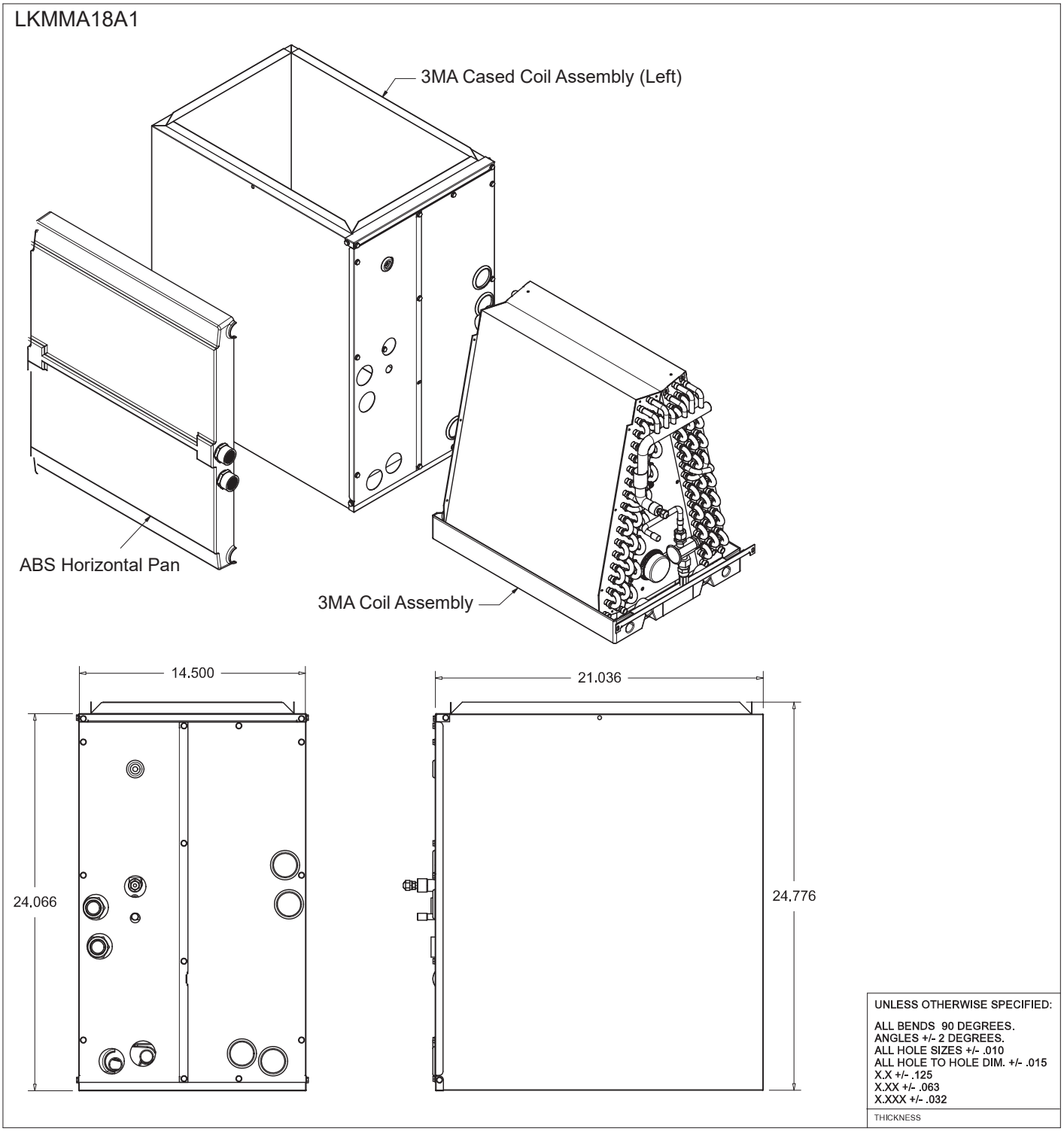
NOTICE

- *Design features and information of outdoor unit may be changed without notifications due to LG's policy of innovation.*
- *The center of gravity and corner weight may be different from the actual values because these are simulation results.*

A-COIL UNIT DIMENSIONS

LKMMA18A1

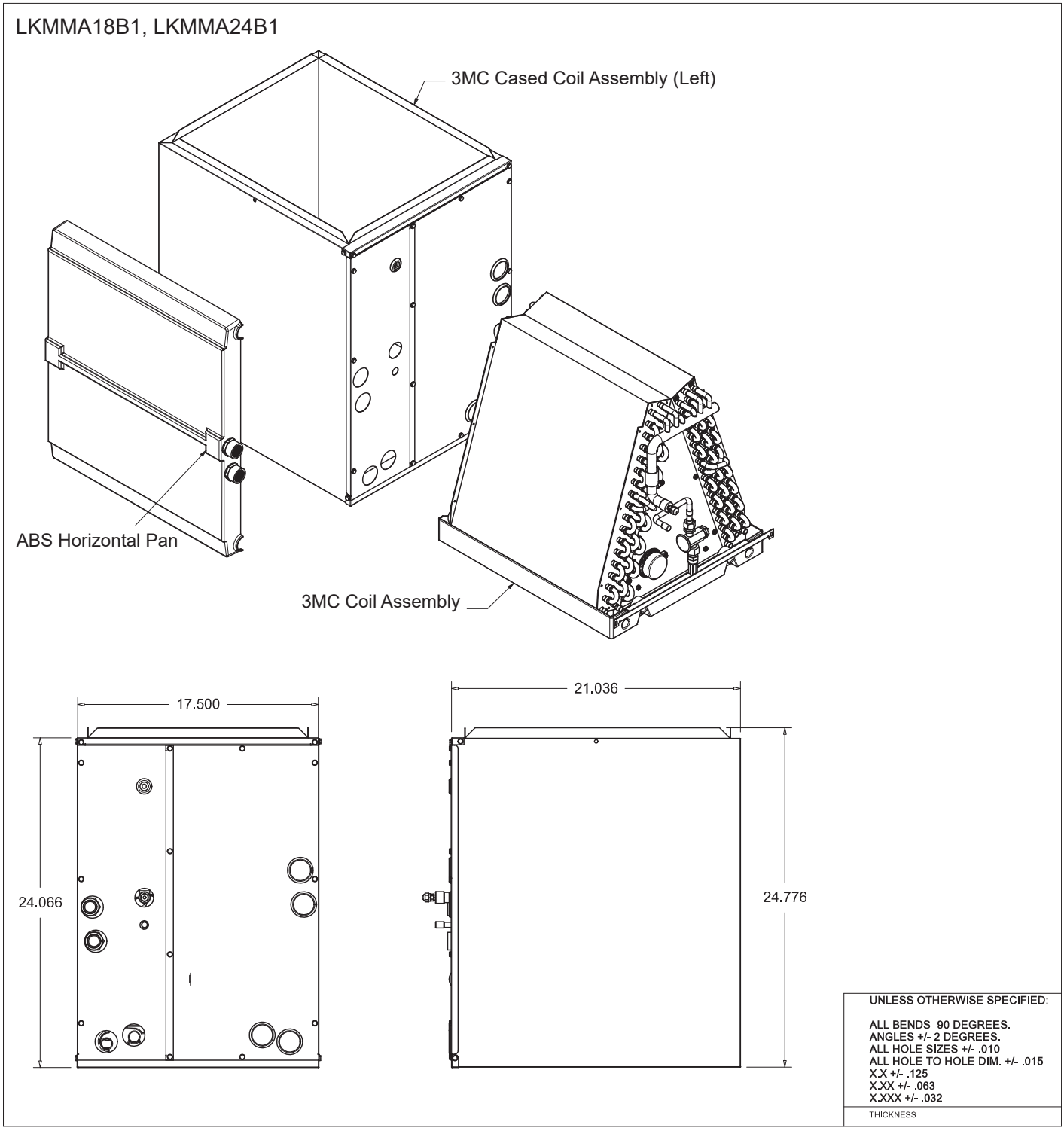
Figure 9: LKMMA18A1 A-Coil Unit Dimensions.



A-COIL UNIT DIMENSIONS

LKMMA18B1, LKMMA24B1

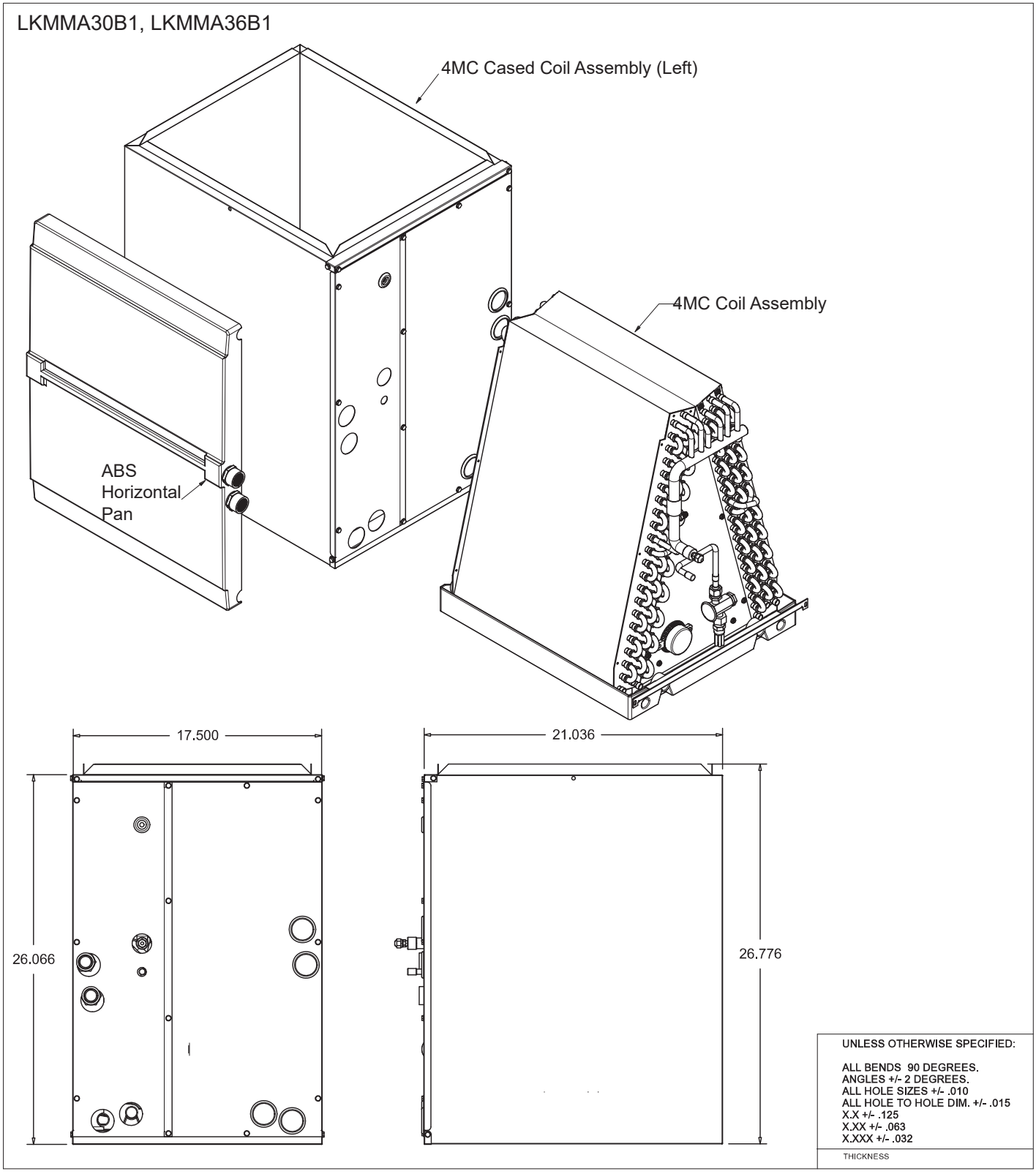
Figure 10: LKMMA18B1, LKMMA24B1 A-Coil Unit Dimensions.



A-COIL UNIT DIMENSIONS

LKMMA30B1, LKMMA36B1

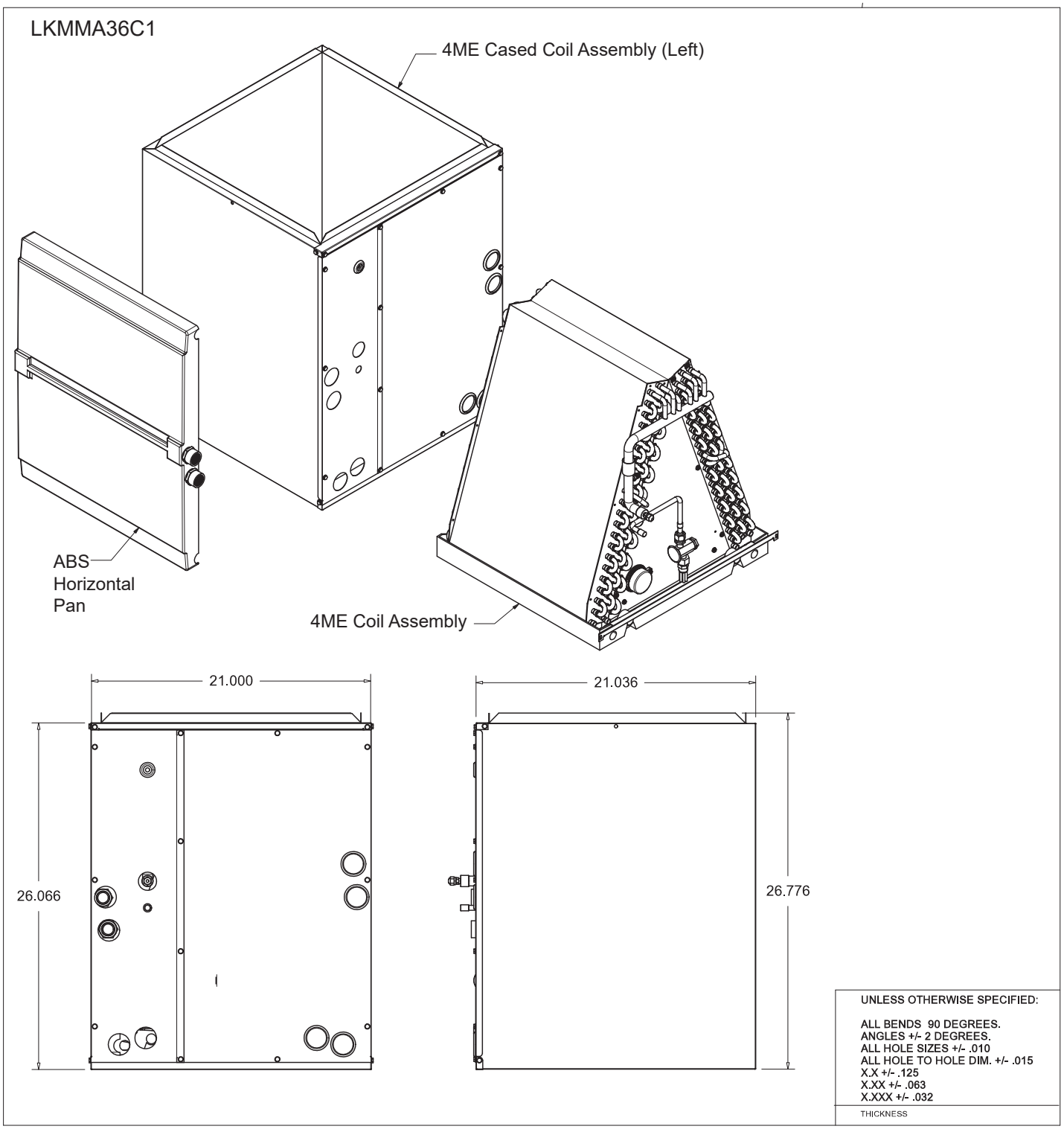
Figure 11: LKMMA30B1, LKMMA36B1 A-Coil Unit Dimensions.



A-COIL UNIT DIMENSIONS

LKMMA36C1

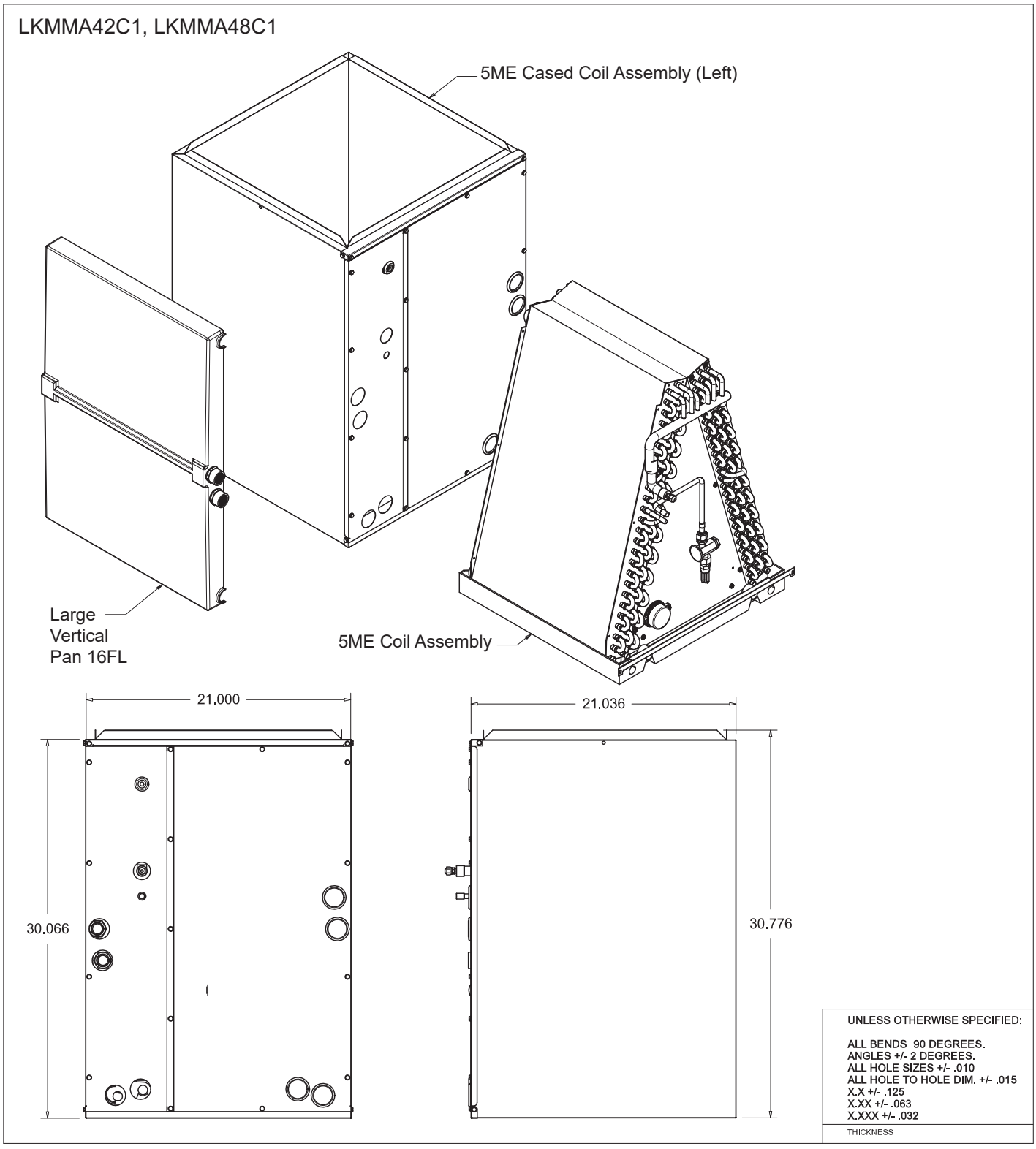
Figure 12: LKMMA36C1 A-Coil Unit Dimensions.



A-COIL UNIT DIMENSIONS

LKMMA42C1, LKMMA48C1

Figure 13: LKMMA42C1, LKMMA48C1 A-Coil Unit Dimensions.

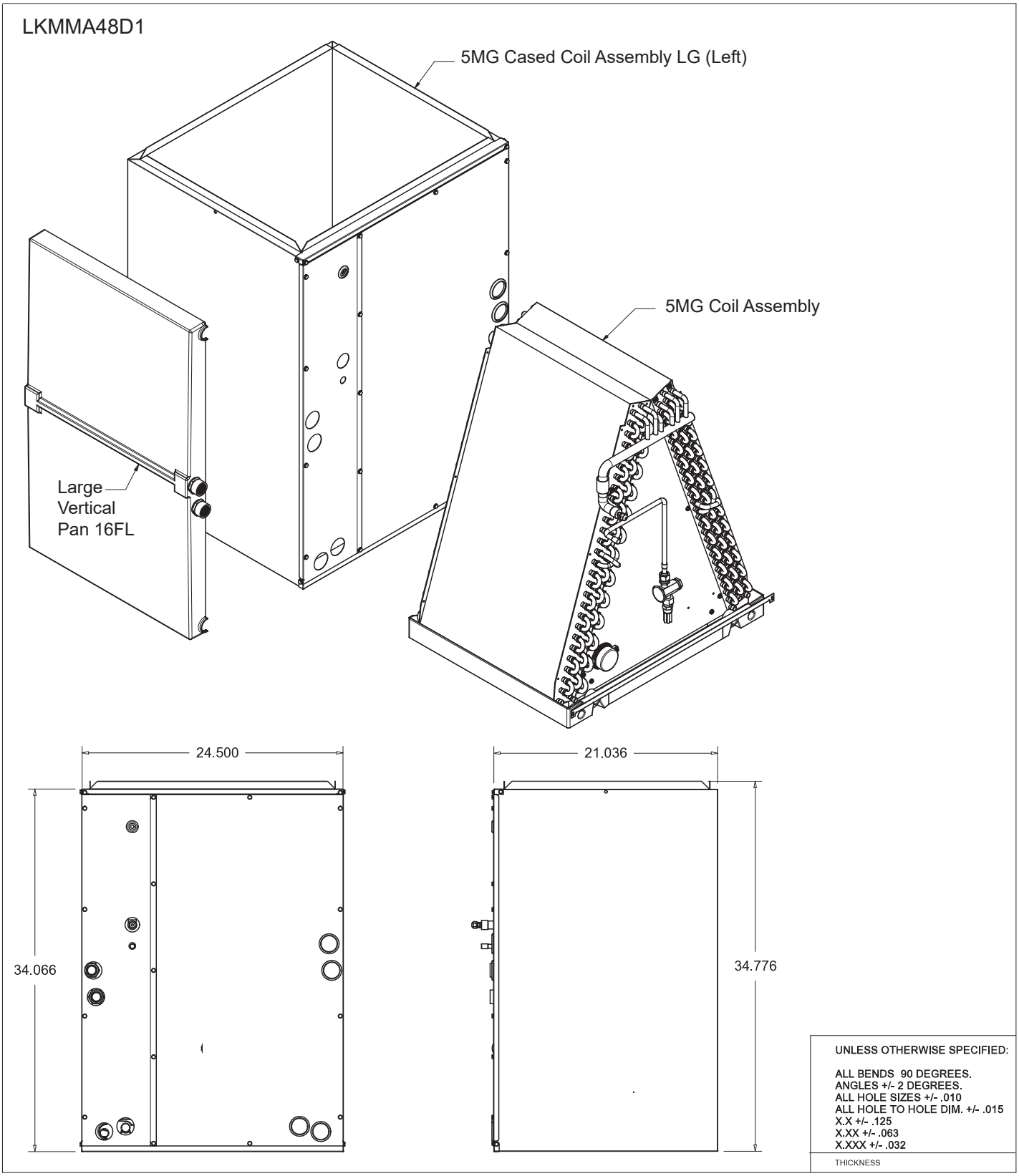


A-COIL UNIT DIMENSIONS

LKMMA48D1

LGRED°

Figure 14: LKMMA48D1 A-Coil Unit Dimensions.



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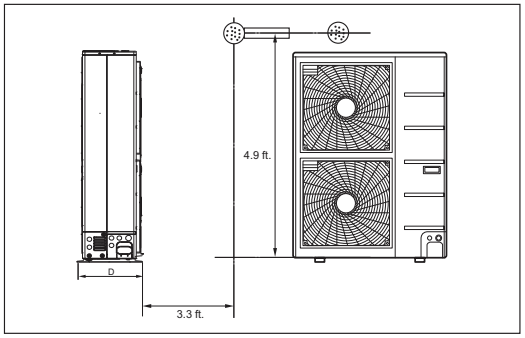
ACOUSTIC DATA

Sound Pressure for Outdoor Units

Figure 15: R32 Single-Zone Systems - A-Coil with LGRED Outdoor Unit Sound Pressure Level Measurement Location (For Illustrative Purposes Only; Appearance Depends on Model).



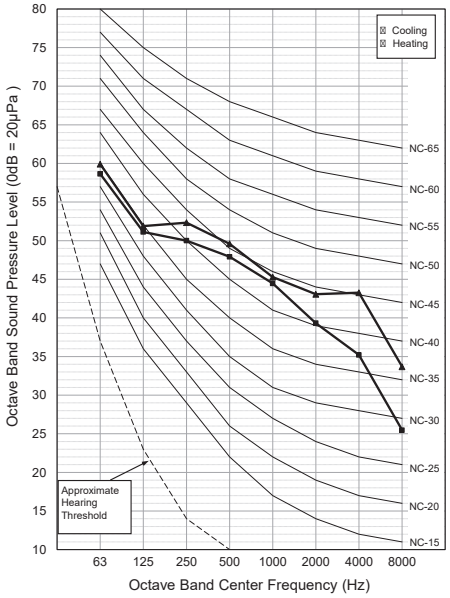
- Measurements taken with no attenuation and units operating at full load normal operating condition.
- Measurements are taken 3.3 ft. away from the front of the unit.
- Sound level will vary depending on a range of factors such as construction (acoustic absorption coefficient) of particular area in which the equipment is installed.
- Sound levels are measured in dB(A)±1.
- Reference acoustic pressure 0dB=20μPa.
- Tested in anechoic chamber per ISO Standard 3745.

Table 12: R32 Single-Zone Systems - A-Coil with LGRED Outdoor Unit Sound Pressure Levels (dB[A]).

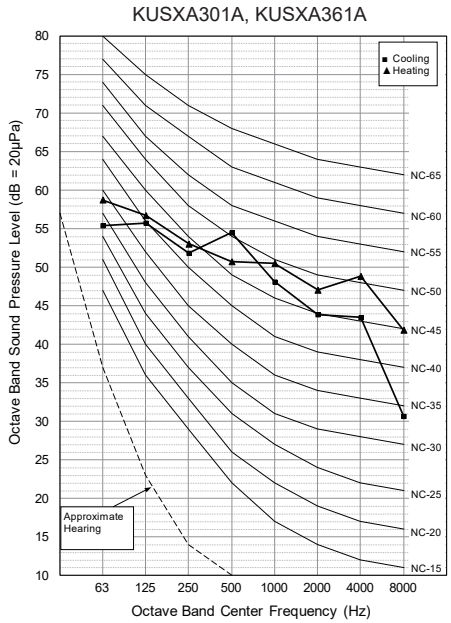
Model	Sound Pressure Levels (dB[A])	
	Cooling	Heating
KUSXA181A	51	52
KUSXA241A	51	52
KUSXA301A	52	54
KUSXA361A	52	54
KUSXA422A	54	56
KUSXA482A	54	56

Figure 16: R32 Single-Zone Systems - A-Coil with LGRED Outdoor Unit Sound Pressure Level Diagrams.

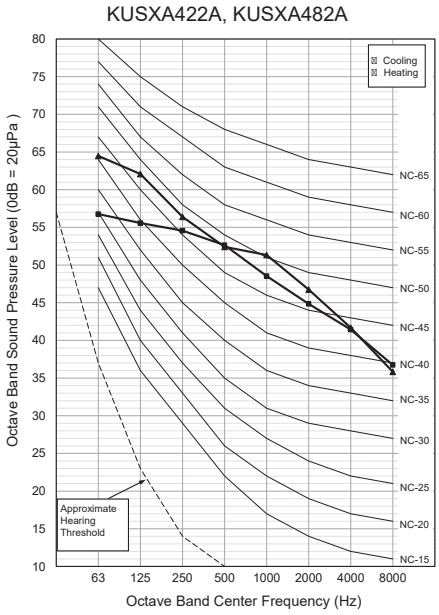
KUSXA181A, KUSXA241A



KUSXA301A, KUSXA361A



KUSXA422A, KUSXA482A



ACOUSTIC DATA

Sound Power for Outdoor Units

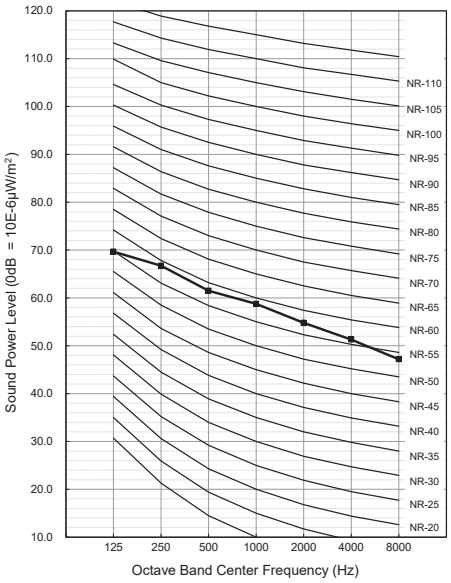
Table 13: R32 Single-Zone Systems - A-Coil with LGRED Outdoor Unit Sound Power Levels (dB[A]).

Model	Sound Power Levels (dB[A])
KUSXA181A	67
KUSXA241A	67
KUSXA301A	69
KUSXA361A	69
KUSXA422A	71
KUSXA482A	71

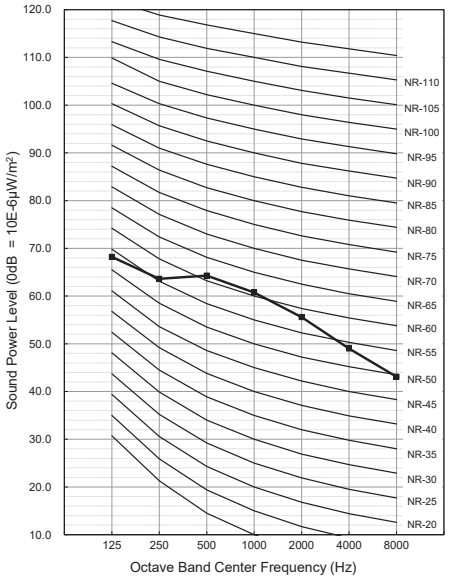
- Data is valid under diffuse field conditions.
- Data is valid under nominal operating conditions.
- Sound power level is measured using rated conditions and tested in a reverberation chamber under ISO Standard 3741.
- Sound level will vary depending on a range of factors such as construction (acoustic absorption coefficient) of particular area in which the equipment is installed.
- Reference acoustic intensity: 0dB = 10E-6μW/m2

Figure 17: R32 Single-Zone Systems - A-Coil with LGRED Outdoor Unit Sound Power Level Diagrams.

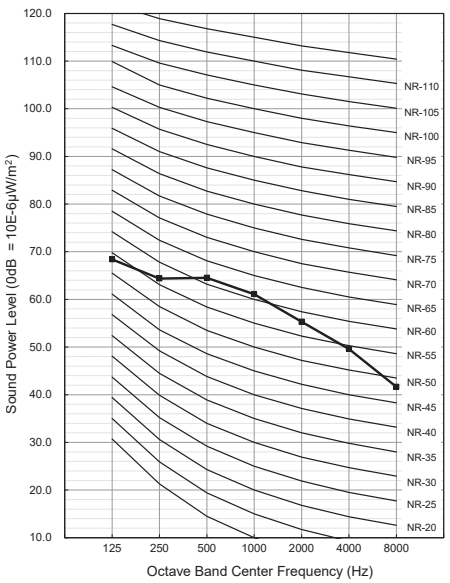
KUSXA181A, KUSXA241A



KUSXA301A, KUSXA361A



KUSXA422A, KUSXA482A



PERFORMANCE DATA

COOLING CAPACITY

LGRED°

KSSMA18AA (LKMMA18A1 / KUSXA181A)

Table 14: KSSMA18AA (LKMMA18A1 / KUSXA181A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	16.72	13.24	0.87	17.76	13.98	0.90	18.79	13.54	0.94	19.54	13.83	0.95	20.86	13.94	0.96	21.90	14.21	0.99
-0.4	16.71	13.32	0.88	17.75	14.07	0.91	18.78	13.62	0.95	19.53	13.91	0.96	20.85	14.03	0.98	21.89	14.29	1.00
5	16.69	13.43	0.90	17.73	14.20	0.93	18.77	13.74	0.96	19.51	14.03	0.98	20.83	14.15	1.00	21.87	14.42	1.02
10	16.68	13.54	0.91	17.72	14.30	0.94	18.75	13.85	0.98	19.49	14.14	1.00	20.83	14.26	1.01	21.85	14.53	1.03
15	16.67	13.65	0.92	17.70	14.42	0.95	18.74	13.96	1.00	19.48	14.25	1.01	20.81	14.38	1.03	21.84	14.65	1.05
20	16.65	13.75	0.94	17.69	14.53	0.98	18.72	14.07	1.01	19.47	14.36	1.02	20.79	14.48	1.04	21.83	14.76	1.06
25	16.64	13.86	0.95	17.67	14.64	0.99	18.71	14.17	1.03	19.46	14.48	1.04	20.78	14.60	1.05	21.81	14.87	1.08
30	16.62	13.96	0.96	17.66	14.76	1.00	18.69	14.29	1.04	19.44	14.59	1.05	20.76	14.71	1.07	21.79	14.99	1.09
35	16.61	14.07	0.98	17.64	14.86	1.02	18.68	14.40	1.05	19.43	14.70	1.06	20.74	14.82	1.08	21.77	15.11	1.10
40	16.60	14.18	1.00	17.63	14.98	1.03	18.66	14.50	1.07	19.41	14.81	1.08	20.72	14.94	1.10	21.76	15.22	1.12
45	16.58	14.29	1.01	17.62	15.09	1.04	18.65	14.61	1.08	19.39	14.91	1.09	20.71	15.04	1.11	21.74	15.33	1.13
50	16.58	14.39	1.02	17.60	15.20	1.06	18.63	14.72	1.09	19.38	15.03	1.11	20.69	15.16	1.13	21.72	15.44	1.15
55	16.57	14.49	1.03	17.60	15.32	1.07	18.62	14.83	1.11	19.36	15.14	1.12	20.67	15.26	1.14	21.70	15.56	1.16
60	16.55	14.60	1.05	17.58	15.42	1.08	18.61	14.94	1.12	19.35	15.25	1.13	20.66	15.38	1.15	21.69	15.67	1.18
65	16.54	14.70	1.06	17.57	15.54	1.10	18.60	15.04	1.13	19.33	15.36	1.15	20.65	15.49	1.17	21.68	15.78	1.20
70	16.53	14.81	1.07	17.55	15.64	1.11	18.58	15.15	1.15	19.32	15.46	1.16	20.63	15.60	1.18	21.66	15.90	1.21
75	16.13	14.57	1.13	17.15	15.41	1.17	18.17	14.94	1.22	18.92	15.26	1.23	20.22	15.41	1.25	21.25	15.72	1.28
80	15.73	14.32	1.18	16.75	15.17	1.23	17.77	14.71	1.28	18.51	15.05	1.29	19.81	15.21	1.31	20.83	15.53	1.34
85	15.34	14.06	1.25	16.36	14.91	1.29	17.38	14.49	1.34	18.11	14.83	1.35	19.41	15.01	1.37	20.43	15.34	1.40
90	14.94	13.79	1.30	15.96	14.65	1.35	16.97	14.26	1.39	17.71	14.60	1.42	19.00	14.80	1.45	20.02	15.14	1.47
95	14.52	13.65	1.36	15.53	14.52	1.40	16.54	14.14	1.46	**17.00**	**14.28**	**1.478**	18.56	14.72	1.51	19.57	15.06	1.54
100	14.16	13.29	1.42	15.17	14.15	1.47	16.18	13.80	1.52	16.78	14.06	1.54	18.21	14.41	1.57	19.22	14.76	1.60
105	13.81	12.92	1.48	14.82	13.78	1.53	15.83	13.48	1.58	16.56	13.84	1.60	17.85	14.09	1.64	18.86	14.45	1.67
110	13.45	12.47	1.53	14.47	13.34	1.59	15.48	13.05	1.65	16.21	13.42	1.67	17.50	13.69	1.70	18.51	14.06	1.73
115	13.10	12.10	1.59	14.11	12.97	1.65	15.12	12.71	1.71	15.86	13.08	1.73	17.14	13.36	1.76	18.15	13.73	1.79
118	12.89	12.02	1.63	13.90	12.88	1.69	14.91	12.64	1.75	15.64	13.02	1.77	16.93	13.32	1.80	17.94	13.70	1.83
122	12.82	11.98	1.68	13.83	12.86	1.73	14.84	12.62	1.79	15.57	13.00	1.81	16.86	13.30	1.86	17.87	13.69	1.89

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

COOLING CAPACITY

KSSMA18BA (LKMMA18B1 / KUSXA181A)

Table 15: KSSMA18BA (LKMMA18B1 / KUSXA181A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	17.70	14.19	0.92	18.80	14.98	0.95	19.89	14.51	1.00	20.69	14.81	1.01	22.09	14.94	1.02	23.19	15.22	1.04
-0.4	17.69	14.27	0.93	18.79	15.07	0.97	19.88	14.60	1.01	20.68	14.90	1.02	22.08	15.03	1.03	23.18	15.31	1.05
5	17.67	14.39	0.95	18.77	15.21	0.99	19.87	14.72	1.02	20.66	15.03	1.03	22.06	15.16	1.05	23.16	15.45	1.08
10	17.66	14.51	0.97	18.76	15.32	1.00	19.85	14.84	1.03	20.64	15.15	1.05	22.05	15.28	1.07	23.14	15.57	1.09
15	17.65	14.62	0.98	18.74	15.45	1.01	19.84	14.96	1.05	20.63	15.27	1.07	22.03	15.40	1.09	23.12	15.70	1.11
20	17.63	14.73	1.00	18.73	15.57	1.03	19.82	15.07	1.07	20.61	15.39	1.08	22.01	15.52	1.10	23.11	15.81	1.12
25	17.62	14.85	1.01	18.71	15.69	1.04	19.81	15.19	1.09	20.60	15.52	1.10	22.00	15.64	1.11	23.09	15.93	1.14
30	17.60	14.96	1.02	18.70	15.81	1.05	19.79	15.31	1.10	20.58	15.63	1.11	21.98	15.76	1.13	23.07	16.06	1.15
35	17.59	15.07	1.03	18.68	15.92	1.08	19.78	15.42	1.11	20.57	15.75	1.12	21.96	15.88	1.14	23.05	16.18	1.17
40	17.58	15.20	1.05	18.67	16.05	1.09	19.76	15.54	1.13	20.55	15.87	1.14	21.94	16.00	1.17	23.04	16.31	1.19
45	17.56	15.31	1.07	18.66	16.17	1.10	19.75	15.65	1.14	20.53	15.98	1.15	21.93	16.12	1.18	23.02	16.42	1.20
50	17.55	15.41	1.08	18.64	16.29	1.12	19.73	15.78	1.15	20.52	16.10	1.18	21.91	16.24	1.20	23.00	16.55	1.22
55	17.54	15.53	1.09	18.63	16.41	1.13	19.72	15.89	1.18	20.50	16.22	1.19	21.89	16.35	1.21	22.98	16.67	1.23
60	17.52	15.64	1.11	18.61	16.52	1.14	19.70	16.00	1.19	20.49	16.34	1.20	21.88	16.48	1.22	22.97	16.78	1.25
65	17.51	15.75	1.12	18.60	16.65	1.17	19.69	16.12	1.20	20.47	16.46	1.22	21.86	16.59	1.24	22.95	16.91	1.27
70	17.50	15.87	1.13	18.58	16.76	1.18	19.67	16.23	1.22	20.46	16.57	1.23	21.84	16.72	1.25	22.93	17.03	1.28
75	17.08	15.61	1.20	18.16	16.51	1.24	19.24	16.00	1.29	20.03	16.35	1.30	21.41	16.51	1.32	22.50	16.84	1.35
80	16.66	15.35	1.25	17.74	16.25	1.30	18.82	15.76	1.35	19.60	16.13	1.37	20.98	16.30	1.39	22.06	16.64	1.42
85	16.24	15.06	1.32	17.32	15.98	1.37	18.40	15.53	1.42	19.17	15.89	1.43	20.55	16.08	1.45	21.63	16.43	1.49
90	15.82	14.78	1.38	16.90	15.70	1.43	17.97	15.28	1.48	18.75	15.64	1.50	20.12	15.86	1.53	21.20	16.22	1.55
95	15.37	14.62	1.44	16.44	15.56	1.49	17.51	15.15	1.54	**18.00**	**15.30**	**1.565**	19.65	15.78	1.60	20.72	16.14	1.63
100	14.99	14.23	1.50	16.06	15.16	1.55	17.13	14.79	1.61	17.77	15.06	1.63	19.28	15.44	1.67	20.35	15.81	1.70
105	14.62	13.84	1.57	15.69	14.77	1.62	16.76	14.44	1.68	17.53	14.82	1.70	18.90	15.10	1.73	19.97	15.48	1.77
110	14.24	13.36	1.62	15.32	14.29	1.69	16.39	13.99	1.74	17.16	14.38	1.77	18.53	14.67	1.80	19.60	15.06	1.83
115	13.87	12.97	1.69	14.94	13.89	1.74	16.01	13.62	1.81	16.79	14.02	1.83	18.15	14.31	1.86	19.22	14.71	1.90
118	13.65	12.87	1.72	14.72	13.80	1.79	15.79	13.54	1.85	16.56	13.95	1.88	17.93	14.27	1.91	19.00	14.68	1.94
122	13.57	12.84	1.78	14.64	13.78	1.83	15.71	13.52	1.90	16.49	13.93	1.92	17.85	14.25	1.96	18.92	14.67	2.00

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

LGRED°

KSSMA24BA (LKMMA24B1 / KUSXA241A)

Table 16: KSSMA24BA (LKMMA24B1 / KUSXA241A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	21.24	17.03	1.16	22.56	17.98	1.20	23.87	17.41	1.25	24.83	17.78	1.27	26.51	17.92	1.28	27.83	18.26	1.31
-0.4	21.23	17.12	1.17	22.55	18.09	1.21	23.86	17.52	1.27	24.82	17.88	1.28	26.50	18.03	1.30	27.82	18.37	1.32
5	21.20	17.27	1.20	22.52	18.25	1.24	23.84	17.67	1.28	24.79	18.03	1.30	26.47	18.20	1.32	27.79	18.54	1.35
10	21.19	17.41	1.21	22.51	18.39	1.25	23.82	17.80	1.30	24.77	18.18	1.32	26.46	18.33	1.34	27.77	18.69	1.36
15	21.18	17.54	1.23	22.49	18.54	1.27	23.81	17.95	1.32	24.76	18.32	1.34	26.44	18.48	1.36	27.74	18.84	1.39
20	21.16	17.68	1.25	22.48	18.69	1.30	23.78	18.09	1.34	24.73	18.47	1.35	26.41	18.62	1.38	27.73	18.97	1.41
25	21.14	17.82	1.27	22.45	18.82	1.31	23.77	18.22	1.36	24.72	18.62	1.38	26.40	18.77	1.39	27.71	19.12	1.43
30	21.12	17.95	1.28	22.44	18.97	1.32	23.75	18.37	1.38	24.70	18.75	1.39	26.38	18.92	1.42	27.68	19.27	1.45
35	21.11	18.09	1.30	22.42	19.11	1.35	23.74	18.51	1.39	24.68	18.90	1.41	26.35	19.05	1.43	27.66	19.42	1.46
40	21.10	18.24	1.32	22.40	19.26	1.36	23.71	18.65	1.42	24.66	19.04	1.43	26.33	19.20	1.46	27.65	19.57	1.49
45	21.07	18.37	1.34	22.39	19.41	1.38	23.70	18.78	1.43	24.64	19.18	1.45	26.32	19.34	1.48	27.62	19.71	1.50
50	21.06	18.50	1.35	22.37	19.54	1.41	23.68	18.93	1.45	24.62	19.33	1.48	26.29	19.49	1.50	27.60	19.86	1.53
55	21.05	18.63	1.36	22.36	19.69	1.42	23.66	19.07	1.48	24.60	19.46	1.49	26.27	19.62	1.52	27.58	20.01	1.55
60	21.02	18.77	1.39	22.33	19.83	1.43	23.64	19.20	1.49	24.59	19.61	1.50	26.26	19.77	1.53	27.56	20.14	1.57
65	21.01	18.90	1.41	22.32	19.98	1.46	23.63	19.34	1.50	24.56	19.75	1.53	26.23	19.91	1.56	27.54	20.29	1.59
70	21.00	19.04	1.42	22.30	20.11	1.48	23.60	19.48	1.53	24.55	19.88	1.55	26.21	20.06	1.57	27.52	20.44	1.60
75	20.50	18.73	1.50	21.79	19.82	1.56	23.09	19.20	1.62	24.04	19.62	1.63	25.69	19.82	1.66	27.00	20.21	1.70
80	19.99	18.41	1.57	21.29	19.50	1.63	22.58	18.92	1.70	23.52	19.35	1.71	25.18	19.56	1.74	26.47	19.96	1.78
85	19.49	18.07	1.66	20.78	19.18	1.71	22.08	18.63	1.78	23.00	19.07	1.80	24.66	19.30	1.82	25.96	19.72	1.87
90	18.98	17.73	1.73	20.28	18.84	1.80	21.56	18.33	1.85	22.50	18.77	1.88	24.14	19.03	1.92	25.44	19.46	1.95
95	18.44	17.54	1.81	19.73	18.67	1.87	21.01	18.18	1.94	**21.60**	**18.36**	**1.964**	23.58	18.93	2.01	24.86	19.37	2.05
100	17.99	17.08	1.88	19.27	18.20	1.95	20.56	17.75	2.02	21.32	18.07	2.05	23.14	18.52	2.09	24.42	18.97	2.13
105	17.54	16.61	1.96	18.83	17.72	2.03	20.11	17.33	2.10	21.04	17.79	2.13	22.68	18.12	2.17	23.96	18.58	2.21
110	17.09	16.03	2.03	18.38	17.15	2.12	19.67	16.78	2.19	20.59	17.26	2.21	22.24	17.60	2.26	23.52	18.07	2.30
115	16.64	15.56	2.12	17.93	16.67	2.19	19.21	16.35	2.27	20.15	16.82	2.30	21.78	17.18	2.34	23.06	17.65	2.38
118	16.38	15.45	2.16	17.66	16.56	2.24	18.95	16.25	2.33	19.87	16.74	2.35	21.52	17.12	2.40	22.80	17.61	2.44
122	16.28	15.41	2.23	17.57	16.54	2.30	18.85	16.22	2.38	19.79	16.71	2.41	21.42	17.10	2.46	22.70	17.60	2.51

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

COOLING CAPACITY

KSSMA25BA (LKMMA24B1 / KUSXA301A)

Table 17: KSSMA25BA (LKMMA24B1 / KUSXA301A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	22.62	17.92	1.16	24.02	18.92	1.20	25.42	18.32	1.25	26.44	18.70	1.27	28.23	18.86	1.28	29.63	19.22	1.31
-0.4	22.60	18.02	1.17	24.01	19.03	1.21	25.40	18.43	1.27	26.42	18.82	1.28	28.21	18.98	1.30	29.62	19.33	1.32
5	22.58	18.18	1.20	23.98	19.21	1.24	25.39	18.59	1.28	26.40	18.98	1.30	28.19	19.15	1.32	29.59	19.51	1.35
10	22.57	18.32	1.21	23.97	19.35	1.25	25.36	18.73	1.30	26.37	19.13	1.32	28.18	19.29	1.34	29.57	19.66	1.37
15	22.55	18.46	1.23	23.95	19.51	1.27	25.35	18.89	1.32	26.36	19.28	1.34	28.15	19.45	1.37	29.54	19.82	1.39
20	22.53	18.60	1.25	23.93	19.66	1.30	25.33	19.03	1.34	26.34	19.43	1.35	28.12	19.59	1.38	29.53	19.96	1.41
25	22.51	18.75	1.27	23.91	19.81	1.31	25.31	19.18	1.37	26.32	19.59	1.38	28.11	19.75	1.39	29.50	20.12	1.44
30	22.49	18.89	1.28	23.89	19.96	1.32	25.29	19.33	1.38	26.30	19.74	1.39	28.09	19.91	1.42	29.48	20.28	1.45
35	22.48	19.03	1.30	23.87	20.11	1.35	25.27	19.48	1.39	26.28	19.89	1.41	28.06	20.05	1.44	29.45	20.44	1.46
40	22.46	19.19	1.32	23.86	20.26	1.37	25.25	19.62	1.42	26.26	20.04	1.44	28.03	20.21	1.46	29.44	20.59	1.49
45	22.44	19.33	1.34	23.84	20.42	1.38	25.24	19.76	1.44	26.23	20.18	1.45	28.02	20.35	1.48	29.41	20.74	1.51
50	22.43	19.46	1.35	23.82	20.57	1.41	25.21	19.92	1.45	26.22	20.34	1.48	28.00	20.51	1.51	29.39	20.89	1.53
55	22.41	19.61	1.37	23.81	20.72	1.42	25.20	20.06	1.48	26.19	20.48	1.49	27.97	20.65	1.52	29.36	21.05	1.55
60	22.39	19.75	1.39	23.78	20.87	1.44	25.17	20.21	1.49	26.18	20.64	1.51	27.96	20.81	1.53	29.35	21.19	1.58
65	22.37	19.89	1.41	23.77	21.02	1.46	25.16	20.35	1.51	26.16	20.78	1.53	27.93	20.95	1.56	29.33	21.35	1.59
70	22.36	20.04	1.42	23.74	21.17	1.48	25.13	20.49	1.53	26.14	20.92	1.55	27.91	21.11	1.58	29.30	21.51	1.60
75	21.82	19.71	1.51	23.20	20.85	1.56	24.58	20.21	1.62	25.59	20.65	1.63	27.36	20.85	1.66	28.75	21.27	1.70
80	21.29	19.38	1.58	22.67	20.52	1.63	24.05	19.91	1.70	25.04	20.36	1.71	26.81	20.58	1.74	28.19	21.01	1.78
85	20.75	19.02	1.66	22.13	20.18	1.71	23.51	19.61	1.78	24.50	20.06	1.80	26.26	20.31	1.83	27.64	20.75	1.87
90	20.21	18.66	1.73	21.59	19.82	1.80	22.96	19.29	1.85	23.96	19.75	1.88	25.71	20.02	1.92	27.09	20.48	1.95
95	19.64	18.46	1.81	21.01	19.65	1.87	22.37	19.13	1.94	**23.00**	**19.32**	**1.966**	25.11	19.92	2.01	26.48	20.38	2.05
100	19.15	17.97	1.88	20.52	19.15	1.95	21.89	18.68	2.02	22.71	19.02	2.05	24.64	19.49	2.09	26.00	19.96	2.13
105	18.68	17.47	1.97	20.05	18.65	2.04	21.42	18.23	2.11	22.40	18.72	2.13	24.15	19.06	2.17	25.52	19.55	2.22
110	18.20	16.87	2.04	19.58	18.05	2.12	20.94	17.66	2.19	21.93	18.16	2.22	23.68	18.52	2.26	25.04	19.02	2.30
115	17.72	16.37	2.12	19.09	17.55	2.19	20.46	17.20	2.27	21.45	17.70	2.30	23.19	18.07	2.34	24.56	18.58	2.38
118	17.44	16.26	2.16	18.81	17.43	2.24	20.18	17.10	2.33	21.16	17.62	2.36	22.91	18.02	2.40	24.28	18.53	2.44
122	17.34	16.21	2.23	18.71	17.40	2.30	20.07	17.07	2.38	21.07	17.59	2.41	22.81	17.99	2.47	24.18	18.52	2.51

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

LGRED°

KSSMA30BA (LKMMA30B1 / KUSXA301A)

Table 18: KSSMA30BA (LKMMA30B1 / KUSXA301A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	29.50	23.93	1.50	31.33	25.26	1.55	33.15	24.46	1.62	34.48	24.98	1.64	36.82	25.19	1.66	38.65	25.67	1.69
-0.4	29.48	24.06	1.51	31.32	25.42	1.57	33.13	24.62	1.64	34.47	25.13	1.66	36.80	25.34	1.68	38.63	25.82	1.71
5	29.45	24.27	1.55	31.28	25.65	1.60	33.12	24.83	1.66	34.43	25.34	1.68	36.77	25.57	1.71	38.60	26.05	1.75
10	29.43	24.46	1.57	31.27	25.84	1.62	33.08	25.02	1.68	34.40	25.55	1.71	36.75	25.76	1.73	38.57	26.26	1.77
15	29.42	24.65	1.59	31.23	26.05	1.64	33.07	25.23	1.71	34.38	25.74	1.73	36.72	25.97	1.77	38.53	26.47	1.80
20	29.38	24.84	1.62	31.22	26.26	1.68	33.03	25.42	1.73	34.35	25.95	1.75	36.68	26.16	1.79	38.52	26.66	1.82
25	29.37	25.04	1.64	31.18	26.45	1.69	33.02	25.61	1.77	34.33	26.16	1.79	36.67	26.37	1.80	38.48	26.87	1.86
30	29.33	25.23	1.66	31.17	26.66	1.71	32.98	25.82	1.79	34.30	26.35	1.80	36.63	26.58	1.84	38.45	27.08	1.88
35	29.32	25.42	1.68	31.13	26.85	1.75	32.97	26.01	1.80	34.28	26.56	1.82	36.60	26.77	1.86	38.42	27.29	1.89
40	29.30	25.63	1.71	31.12	27.06	1.77	32.93	26.20	1.84	34.25	26.76	1.86	36.57	26.98	1.89	38.40	27.50	1.93
45	29.27	25.82	1.73	31.10	27.27	1.79	32.92	26.39	1.86	34.22	26.95	1.88	36.55	27.18	1.91	38.37	27.69	1.95
50	29.25	25.99	1.75	31.07	27.46	1.82	32.88	26.60	1.88	34.20	27.16	1.91	36.52	27.39	1.95	38.33	27.90	1.98
55	29.23	26.18	1.77	31.05	27.67	1.84	32.87	26.79	1.91	34.17	27.35	1.93	36.48	27.58	1.97	38.30	28.11	2.00
60	29.20	26.37	1.80	31.02	27.86	1.86	32.83	26.98	1.93	34.15	27.56	1.95	36.47	27.79	1.98	38.28	28.30	2.04
65	29.18	26.56	1.82	31.00	28.07	1.89	32.82	27.18	1.95	34.12	27.75	1.98	36.43	27.98	2.02	38.25	28.51	2.06
70	29.17	26.76	1.84	30.97	28.27	1.91	32.78	27.37	1.98	34.10	27.94	2.00	36.40	28.19	2.04	38.22	28.72	2.07
75	28.47	26.32	1.95	30.27	27.84	2.02	32.07	26.98	2.09	33.38	27.58	2.11	35.68	27.84	2.15	37.50	28.40	2.20
80	27.77	25.88	2.04	29.57	27.41	2.11	31.37	26.58	2.20	32.67	27.20	2.22	34.97	27.48	2.25	36.77	28.06	2.31
85	27.07	25.40	2.15	28.87	26.95	2.22	30.67	26.18	2.31	31.95	26.79	2.33	34.25	27.12	2.36	36.05	27.71	2.42
90	26.37	24.92	2.24	28.17	26.47	2.33	29.95	25.76	2.40	31.25	26.37	2.43	33.53	26.74	2.49	35.33	27.35	2.52
95	25.62	24.65	2.34	27.40	26.24	2.42	29.18	25.55	2.51	**30.00**	**25.80**	**2.542**	32.75	26.60	2.60	34.53	27.21	2.65
100	24.98	24.00	2.43	26.77	25.57	2.52	28.55	24.94	2.61	29.62	25.40	2.65	32.13	26.03	2.70	33.92	26.66	2.76
105	24.37	23.33	2.54	26.15	24.90	2.63	27.93	24.35	2.72	29.22	25.00	2.76	31.50	25.46	2.81	33.28	26.11	2.87
110	23.73	22.53	2.63	25.53	24.10	2.74	27.32	23.58	2.83	28.60	24.25	2.87	30.88	24.73	2.92	32.67	25.40	2.98
115	23.12	21.86	2.74	24.90	23.43	2.83	26.68	22.97	2.94	27.98	23.64	2.98	30.25	24.14	3.03	32.03	24.81	3.08
118	22.75	21.71	2.79	24.53	23.28	2.90	26.32	22.84	3.01	27.60	23.53	3.05	29.88	24.06	3.10	31.67	24.75	3.16
122	22.62	21.65	2.88	24.40	23.24	2.98	26.18	22.80	3.08	27.48	23.49	3.12	29.75	24.02	3.19	31.53	24.73	3.25

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

COOLING CAPACITY

KSSMA36BA (LKMMA36B1 / KUSXA361A)

Table 19: KSSMA36BA (LKMMA36B1 / KUSXA361A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	33.83	27.12	1.73	35.93	28.63	1.79	38.01	27.72	1.88	39.54	28.31	1.90	42.22	28.55	1.92	44.32	29.09	1.96
-0.4	33.81	27.27	1.75	35.91	28.81	1.81	37.99	27.90	1.90	39.52	28.48	1.92	42.20	28.72	1.94	44.30	29.26	1.98
5	33.77	27.51	1.79	35.87	29.07	1.86	37.97	28.14	1.92	39.48	28.72	1.94	42.16	28.98	1.98	44.26	29.52	2.02
10	33.75	27.72	1.81	35.85	29.28	1.88	37.94	28.35	1.94	39.45	28.96	1.98	42.14	29.20	2.00	44.22	29.76	2.04
15	33.73	27.94	1.84	35.81	29.52	1.90	37.92	28.59	1.98	39.43	29.18	2.00	42.10	29.43	2.04	44.18	30.00	2.09
20	33.69	28.16	1.88	35.80	29.76	1.94	37.88	28.81	2.00	39.39	29.41	2.02	42.06	29.65	2.06	44.17	30.21	2.11
25	33.67	28.37	1.90	35.76	29.98	1.96	37.86	29.02	2.04	39.37	29.65	2.06	42.04	29.89	2.09	44.13	30.45	2.15
30	33.64	28.59	1.92	35.74	30.21	1.98	37.82	29.26	2.06	39.33	29.87	2.09	42.01	30.13	2.13	44.09	30.69	2.17
35	33.62	28.81	1.94	35.70	30.43	2.02	37.80	29.48	2.09	39.31	30.11	2.11	41.97	30.34	2.15	44.05	30.93	2.19
40	33.60	29.05	1.98	35.68	30.67	2.04	37.76	29.69	2.13	39.27	30.32	2.15	41.93	30.58	2.19	44.03	31.17	2.23
45	33.56	29.26	2.00	35.66	30.91	2.06	37.74	29.91	2.15	39.24	30.54	2.17	41.91	30.80	2.21	43.99	31.38	2.25
50	33.54	29.46	2.02	35.62	31.12	2.11	37.71	30.15	2.17	39.22	30.78	2.21	41.87	31.04	2.25	43.96	31.62	2.29
55	33.52	29.67	2.04	35.60	31.36	2.13	37.69	30.37	2.21	39.18	30.99	2.23	41.83	31.25	2.27	43.92	31.86	2.31
60	33.48	29.89	2.09	35.57	31.58	2.15	37.65	30.58	2.23	39.16	31.23	2.25	41.82	31.49	2.29	43.90	32.08	2.36
65	33.46	30.11	2.11	35.55	31.82	2.19	37.63	30.80	2.25	39.12	31.45	2.29	41.78	31.71	2.34	43.86	32.32	2.38
70	33.44	30.32	2.13	35.51	32.03	2.21	37.59	31.02	2.29	39.10	31.67	2.31	41.74	31.95	2.36	43.82	32.55	2.40
75	32.64	29.82	2.25	34.71	31.56	2.34	36.77	30.58	2.42	38.28	31.25	2.44	40.92	31.56	2.48	43.00	32.19	2.54
80	31.84	29.33	2.36	33.90	31.06	2.44	35.97	30.13	2.54	37.46	30.82	2.56	40.10	31.15	2.61	42.16	31.80	2.67
85	31.04	28.79	2.48	33.10	30.54	2.56	35.16	29.67	2.67	36.64	30.37	2.69	39.27	30.73	2.73	41.34	31.41	2.79
90	30.23	28.24	2.59	32.30	30.00	2.69	34.34	29.20	2.77	35.83	29.89	2.82	38.45	30.30	2.88	40.52	30.99	2.92
95	29.37	27.94	2.71	31.42	29.74	2.79	33.46	28.96	2.90	**34.40**	**29.24**	**2.940**	37.55	30.15	3.00	39.60	30.84	3.07
100	28.65	27.20	2.82	30.69	28.98	2.92	32.74	28.27	3.02	33.96	28.79	3.07	36.85	29.50	3.13	38.89	30.21	3.19
105	27.94	26.45	2.94	29.99	28.22	3.04	32.03	27.59	3.15	33.50	28.33	3.19	36.12	28.85	3.25	38.16	29.59	3.32
110	27.21	25.54	3.04	29.28	27.31	3.17	31.32	26.73	3.27	32.79	27.49	3.32	35.41	28.03	3.38	37.46	28.79	3.44
115	26.51	24.78	3.17	28.55	26.55	3.27	30.60	26.03	3.40	32.09	26.79	3.44	34.69	27.36	3.50	36.73	28.11	3.57
118	26.09	24.60	3.23	28.13	26.38	3.36	30.18	25.88	3.48	31.65	26.66	3.52	34.27	27.27	3.59	36.31	28.05	3.65
122	25.93	24.54	3.34	27.98	26.34	3.44	30.02	25.84	3.57	31.51	26.62	3.61	34.11	27.23	3.69	36.16	28.03	3.75

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

LGRED°

KSSMA36CA (LKMMA36C1 / KUSXA361A)

Table 20: KSSMA36CA (LKMMA36C1 / KUSXA361A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	33.83	27.44	1.73	35.93	28.97	1.79	38.01	28.05	1.88	39.54	28.64	1.90	42.22	28.88	1.92	44.32	29.43	1.96
-0.4	33.81	27.59	1.75	35.91	29.15	1.81	37.99	28.23	1.90	39.52	28.82	1.92	42.20	29.06	1.94	44.30	29.61	1.98
5	33.77	27.83	1.79	35.87	29.41	1.86	37.97	28.47	1.92	39.48	29.06	1.94	42.16	29.32	1.98	44.26	29.87	2.02
10	33.75	28.05	1.81	35.85	29.63	1.88	37.94	28.69	1.94	39.45	29.30	1.98	42.14	29.54	2.00	44.22	30.11	2.04
15	33.73	28.27	1.84	35.81	29.87	1.90	37.92	28.93	1.98	39.43	29.52	2.00	42.10	29.78	2.04	44.18	30.35	2.09
20	33.69	28.49	1.88	35.80	30.11	1.94	37.88	29.15	2.00	39.39	29.76	2.02	42.06	30.00	2.06	44.17	30.57	2.11
25	33.67	28.71	1.90	35.76	30.33	1.96	37.86	29.36	2.04	39.37	30.00	2.06	42.04	30.24	2.09	44.13	30.81	2.15
30	33.64	28.93	1.92	35.74	30.57	1.98	37.82	29.61	2.06	39.33	30.22	2.09	42.01	30.48	2.13	44.09	31.05	2.17
35	33.62	29.15	1.94	35.70	30.79	2.02	37.80	29.83	2.09	39.31	30.46	2.11	41.97	30.70	2.15	44.05	31.29	2.19
40	33.60	29.39	1.98	35.68	31.03	2.04	37.76	30.04	2.13	39.27	30.68	2.15	41.93	30.94	2.19	44.03	31.53	2.23
45	33.56	29.61	2.00	35.66	31.27	2.06	37.74	30.26	2.15	39.24	30.90	2.17	41.91	31.16	2.21	43.99	31.75	2.25
50	33.54	29.80	2.02	35.62	31.49	2.11	37.71	30.50	2.17	39.22	31.14	2.21	41.87	31.40	2.25	43.96	31.99	2.29
55	33.52	30.02	2.04	35.60	31.73	2.13	37.69	30.72	2.21	39.18	31.36	2.23	41.83	31.62	2.27	43.92	32.24	2.31
60	33.48	30.24	2.09	35.57	31.95	2.15	37.65	30.94	2.23	39.16	31.60	2.25	41.82	31.86	2.29	43.90	32.45	2.36
65	33.46	30.46	2.11	35.55	32.19	2.19	37.63	31.16	2.25	39.12	31.82	2.29	41.78	32.08	2.34	43.86	32.70	2.38
70	33.44	30.68	2.13	35.51	32.41	2.21	37.59	31.38	2.29	39.10	32.04	2.31	41.74	32.32	2.36	43.82	32.94	2.40
75	32.64	30.18	2.25	34.71	31.93	2.34	36.77	30.94	2.42	38.28	31.62	2.44	40.92	31.93	2.48	43.00	32.56	2.54
80	31.84	29.67	2.36	33.90	31.42	2.44	35.97	30.48	2.54	37.46	31.18	2.56	40.10	31.51	2.61	42.16	32.17	2.67
85	31.04	29.12	2.48	33.10	30.90	2.56	35.16	30.02	2.67	36.64	30.72	2.69	39.27	31.10	2.73	41.34	31.78	2.79
90	30.23	28.58	2.59	32.30	30.35	2.69	34.34	29.54	2.77	35.83	30.24	2.82	38.45	30.66	2.88	40.52	31.36	2.92
95	29.37	28.27	2.71	31.42	30.09	2.79	33.46	29.30	2.90	**34.40**	**29.58**	**2.940**	37.55	30.50	3.00	39.60	31.21	3.07
100	28.65	27.52	2.82	30.69	29.32	2.92	32.74	28.60	3.02	33.96	29.12	3.07	36.85	29.85	3.13	38.89	30.57	3.19
105	27.94	26.76	2.94	29.99	28.55	3.04	32.03	27.92	3.15	33.50	28.66	3.19	36.12	29.19	3.25	38.16	29.93	3.32
110	27.21	25.84	3.04	29.28	27.63	3.17	31.32	27.04	3.27	32.79	27.81	3.32	35.41	28.36	3.38	37.46	29.12	3.44
115	26.51	25.07	3.17	28.55	26.87	3.27	30.60	26.34	3.40	32.09	27.11	3.44	34.69	27.68	3.50	36.73	28.44	3.57
118	26.09	24.89	3.23	28.13	26.69	3.36	30.18	26.19	3.48	31.65	26.98	3.52	34.27	27.59	3.59	36.31	28.38	3.65
122	25.93	24.83	3.34	27.98	26.65	3.44	30.02	26.14	3.57	31.51	26.93	3.61	34.11	27.55	3.69	36.16	28.36	3.75

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

COOLING CAPACITY

KSSMA42CA (LKMMA42C1 / KUSXA422A)

Table 21: KSSMA42CA (LKMMA42C1 / KUSXA422A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	40.32	31.94	2.03	42.82	33.73	2.10	45.31	32.65	2.20	47.13	33.34	2.22	50.32	33.62	2.25	52.82	34.26	2.30
-0.4	40.29	32.12	2.05	42.80	33.93	2.13	45.28	32.86	2.22	47.10	33.55	2.25	50.29	33.83	2.27	52.80	34.47	2.32
5	40.25	32.40	2.10	42.75	34.24	2.17	45.26	33.14	2.25	47.06	33.83	2.27	50.25	34.13	2.32	52.75	34.77	2.37
10	40.23	32.65	2.13	42.73	34.49	2.20	45.21	33.39	2.27	47.01	34.11	2.32	50.23	34.39	2.35	52.71	35.05	2.39
15	40.20	32.91	2.15	42.69	34.77	2.22	45.19	33.67	2.32	46.99	34.36	2.35	50.18	34.67	2.39	52.66	35.33	2.44
20	40.16	33.16	2.20	42.66	35.05	2.27	45.15	33.93	2.35	46.95	34.64	2.37	50.13	34.92	2.42	52.64	35.59	2.47
25	40.13	33.42	2.22	42.62	35.31	2.30	45.12	34.18	2.39	46.92	34.92	2.42	50.11	35.21	2.44	52.59	35.87	2.52
30	40.09	33.67	2.25	42.59	35.59	2.32	45.08	34.47	2.42	46.88	35.18	2.44	50.07	35.49	2.49	52.55	36.15	2.54
35	40.07	33.93	2.27	42.55	35.84	2.37	45.05	34.72	2.44	46.85	35.46	2.47	50.02	35.74	2.52	52.50	36.43	2.57
40	40.04	34.21	2.32	42.53	36.12	2.39	45.01	34.98	2.49	46.81	35.72	2.52	49.97	36.02	2.57	52.48	36.71	2.61
45	40.00	34.47	2.35	42.50	36.40	2.42	44.99	35.23	2.52	46.76	35.97	2.54	49.95	36.28	2.59	52.43	36.97	2.64
50	39.98	34.70	2.37	42.46	36.66	2.47	44.94	35.51	2.54	46.74	36.25	2.59	49.91	36.56	2.64	52.39	37.25	2.69
55	39.95	34.95	2.39	42.44	36.94	2.49	44.92	35.77	2.59	46.69	36.51	2.61	49.86	36.81	2.66	52.34	37.53	2.71
60	39.91	35.21	2.44	42.39	37.20	2.52	44.87	36.02	2.61	46.67	36.79	2.64	49.84	37.09	2.69	52.32	37.78	2.76
65	39.88	35.46	2.47	42.37	37.48	2.57	44.85	36.28	2.64	46.63	37.04	2.69	49.79	37.35	2.74	52.28	38.06	2.79
70	39.86	35.72	2.49	42.32	37.73	2.59	44.80	36.53	2.69	46.60	37.30	2.71	49.75	37.63	2.76	52.23	38.34	2.81
75	38.90	35.13	2.64	41.36	37.17	2.74	43.82	36.02	2.83	45.62	36.81	2.86	48.77	37.17	2.91	51.25	37.91	2.98
80	37.95	34.54	2.76	40.41	36.58	2.86	42.87	35.49	2.98	44.64	36.30	3.01	47.79	36.68	3.05	50.25	37.45	3.13
85	36.99	33.90	2.91	39.45	35.97	3.01	41.91	34.95	3.13	43.67	35.77	3.15	46.81	36.20	3.20	49.27	36.99	3.27
90	36.03	33.27	3.03	38.49	35.33	3.15	40.93	34.39	3.25	42.71	35.21	3.30	45.83	35.69	3.37	48.29	36.51	3.42
95	35.01	32.91	3.18	37.45	35.03	3.27	39.88	34.11	3.40	**41.00**	**34.44**	**3.445**	44.76	35.51	3.52	47.20	36.33	3.59
100	34.14	32.04	3.30	36.58	34.13	3.42	39.02	33.29	3.54	40.48	33.90	3.59	43.92	34.75	3.67	46.35	35.59	3.74
105	33.30	31.15	3.45	35.74	33.24	3.57	38.18	32.50	3.69	39.93	33.37	3.74	43.05	33.98	3.81	45.49	34.85	3.89
110	32.44	30.08	3.57	34.90	32.17	3.71	37.33	31.48	3.84	39.09	32.37	3.89	42.21	33.01	3.96	44.64	33.90	4.03
115	31.59	29.18	3.71	34.03	31.28	3.84	36.47	30.66	3.98	38.24	31.56	4.03	41.34	32.22	4.11	43.78	33.11	4.18
118	31.09	28.98	3.79	33.53	31.07	3.93	35.97	30.49	4.08	37.72	31.40	4.13	40.84	32.12	4.20	43.28	33.04	4.28
122	30.91	28.90	3.91	33.35	31.02	4.03	35.78	30.43	4.18	37.56	31.35	4.23	40.66	32.07	4.33	43.10	33.01	4.40

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

LGRED°

KSSMA48CA (LKMMA48C1 / KUSXA482A)

Table 22: KSSMA48CA (LKMMA42C1 / KUSXA482A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	44.74	35.87	2.29	47.52	37.87	2.37	50.28	36.67	2.48	52.30	37.44	2.51	55.84	37.76	2.54	58.62	38.47	2.59
-0.4	44.72	36.07	2.32	47.50	38.10	2.40	50.25	36.90	2.51	52.27	37.67	2.54	55.81	37.99	2.57	58.59	38.70	2.62
5	44.67	36.38	2.37	47.45	38.45	2.45	50.23	37.21	2.54	52.22	37.99	2.57	55.76	38.33	2.62	58.54	39.05	2.68
10	44.64	36.67	2.40	47.42	38.73	2.48	50.18	37.50	2.57	52.17	38.30	2.62	55.74	38.62	2.65	58.49	39.36	2.70
15	44.62	36.96	2.43	47.37	39.05	2.51	50.15	37.82	2.62	52.15	38.59	2.65	55.69	38.93	2.70	58.44	39.68	2.76
20	44.56	37.24	2.48	47.35	39.36	2.57	50.10	38.10	2.65	52.10	38.90	2.68	55.64	39.22	2.73	58.42	39.96	2.79
25	44.54	37.53	2.51	47.29	39.65	2.59	50.08	38.39	2.70	52.07	39.22	2.73	55.61	39.53	2.76	58.37	40.28	2.84
30	44.49	37.82	2.54	47.27	39.96	2.62	50.02	38.70	2.73	52.02	39.51	2.76	55.56	39.85	2.81	58.32	40.59	2.87
35	44.46	38.10	2.57	47.22	40.25	2.68	50.00	38.99	2.76	52.00	39.82	2.79	55.51	40.14	2.84	58.27	40.91	2.90
40	44.44	38.42	2.62	47.19	40.57	2.70	49.95	39.28	2.81	51.95	40.11	2.84	55.46	40.45	2.90	58.24	41.22	2.95
45	44.39	38.70	2.65	47.17	40.88	2.73	49.92	39.56	2.84	51.90	40.39	2.87	55.43	40.74	2.92	58.19	41.51	2.98
50	44.36	38.96	2.68	47.12	41.17	2.79	49.87	39.88	2.87	51.87	40.71	2.92	55.38	41.05	2.98	58.14	41.83	3.03
55	44.34	39.25	2.70	47.09	41.48	2.81	49.85	40.16	2.92	51.82	41.00	2.95	55.33	41.34	3.01	58.09	42.14	3.06
60	44.29	39.53	2.76	47.04	41.77	2.84	49.80	40.45	2.95	51.79	41.31	2.98	55.31	41.65	3.03	58.06	42.43	3.12
65	44.26	39.82	2.79	47.02	42.08	2.90	49.77	40.74	2.98	51.74	41.60	3.03	55.26	41.94	3.09	58.01	42.74	3.14
70	44.24	40.11	2.81	46.97	42.37	2.92	49.72	41.02	3.03	51.72	41.88	3.06	55.21	42.26	3.12	57.96	43.06	3.17
75	43.17	39.45	2.98	45.90	41.74	3.09	48.63	40.45	3.20	50.63	41.34	3.23	54.12	41.74	3.28	56.88	42.57	3.36
80	42.11	38.79	3.12	44.84	41.08	3.23	47.57	39.85	3.36	49.54	40.77	3.39	53.03	41.20	3.45	55.76	42.06	3.53
85	41.05	38.07	3.28	43.78	40.39	3.39	46.51	39.25	3.53	48.46	40.16	3.56	51.95	40.65	3.61	54.68	41.54	3.70
90	39.99	37.36	3.42	42.72	39.68	3.56	45.42	38.62	3.67	47.40	39.53	3.72	50.86	40.08	3.81	53.59	41.00	3.86
95	38.85	36.96	3.59	41.56	39.33	3.70	44.26	38.30	3.83	**45.50**	**38.68**	**3.889**	49.67	39.88	3.97	52.38	40.79	4.05
100	37.89	35.98	3.72	40.60	38.33	3.86	43.30	37.39	4.00	44.92	38.07	4.05	48.74	39.02	4.14	51.44	39.96	4.22
105	36.96	34.98	3.89	39.66	37.33	4.03	42.37	36.50	4.16	44.31	37.47	4.22	47.78	38.16	4.30	50.48	39.13	4.39
110	36.00	33.78	4.03	38.73	36.13	4.19	41.43	35.35	4.33	43.38	36.35	4.39	46.84	37.07	4.47	49.54	38.07	4.55
115	35.06	32.77	4.19	37.77	35.12	4.33	40.47	34.44	4.50	42.44	35.44	4.55	45.88	36.18	4.63	48.58	37.19	4.72
118	34.50	32.54	4.28	37.21	34.89	4.44	39.91	34.23	4.61	41.86	35.27	4.66	45.32	36.07	4.74	48.03	37.10	4.83
122	34.30	32.46	4.41	37.01	34.84	4.55	39.71	34.18	4.72	41.68	35.21	4.77	45.12	36.01	4.88	47.83	37.07	4.96

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

COOLING CAPACITY

KSSMA48DA (LKMMA48D1 / KUSXA482A)

Table 23: KSSMA48DA (LKMMA48D1 / KUSXA482A) Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	44.74	36.29	2.29	47.52	38.32	2.37	50.28	37.10	2.48	52.30	37.88	2.51	55.84	38.20	2.54	58.62	38.93	2.59
-0.4	44.72	36.49	2.32	47.50	38.55	2.40	50.25	37.33	2.51	52.27	38.12	2.54	55.81	38.43	2.57	58.59	39.16	2.62
5	44.67	36.81	2.37	47.45	38.90	2.45	50.23	37.65	2.54	52.22	38.43	2.57	55.76	38.78	2.62	58.54	39.51	2.68
10	44.64	37.10	2.40	47.42	39.19	2.48	50.18	37.94	2.57	52.17	38.75	2.62	55.74	39.07	2.65	58.49	39.83	2.70
15	44.62	37.39	2.43	47.37	39.51	2.51	50.15	38.26	2.62	52.15	39.04	2.65	55.69	39.39	2.70	58.44	40.14	2.76
20	44.56	37.68	2.48	47.35	39.83	2.57	50.10	38.55	2.65	52.10	39.36	2.68	55.64	39.68	2.73	58.42	40.43	2.79
25	44.54	37.97	2.51	47.29	40.12	2.59	50.08	38.84	2.70	52.07	39.68	2.73	55.61	40.00	2.76	58.37	40.75	2.84
30	44.49	38.26	2.54	47.27	40.43	2.62	50.02	39.16	2.73	52.02	39.97	2.76	55.56	40.32	2.81	58.32	41.07	2.87
35	44.46	38.55	2.57	47.22	40.72	2.68	50.00	39.45	2.76	52.00	40.29	2.79	55.51	40.61	2.84	58.27	41.39	2.90
40	44.44	38.87	2.62	47.19	41.04	2.70	49.95	39.74	2.81	51.95	40.58	2.84	55.46	40.93	2.90	58.24	41.71	2.95
45	44.39	39.16	2.65	47.17	41.36	2.73	49.92	40.03	2.84	51.90	40.87	2.87	55.43	41.22	2.92	58.19	42.00	2.98
50	44.36	39.42	2.68	47.12	41.65	2.79	49.87	40.35	2.87	51.87	41.19	2.92	55.38	41.54	2.98	58.14	42.32	3.03
55	44.34	39.71	2.70	47.09	41.97	2.81	49.85	40.64	2.92	51.82	41.48	2.95	55.33	41.83	3.01	58.09	42.64	3.06
60	44.29	40.00	2.76	47.04	42.26	2.84	49.80	40.93	2.95	51.79	41.80	2.98	55.31	42.14	3.03	58.06	42.93	3.12
65	44.26	40.29	2.79	47.02	42.58	2.90	49.77	41.22	2.98	51.74	42.09	3.03	55.26	42.43	3.09	58.01	43.25	3.14
70	44.24	40.58	2.81	46.97	42.87	2.92	49.72	41.51	3.03	51.72	42.38	3.06	55.21	42.75	3.12	57.96	43.56	3.17
75	43.17	39.91	2.98	45.90	42.23	3.09	48.63	40.93	3.20	50.63	41.83	3.23	54.12	42.23	3.28	56.88	43.07	3.36
80	42.11	39.25	3.12	44.84	41.56	3.23	47.57	40.32	3.36	49.54	41.25	3.39	53.03	41.68	3.45	55.76	42.55	3.53
85	41.05	38.52	3.28	43.78	40.87	3.39	46.51	39.71	3.53	48.46	40.64	3.56	51.95	41.13	3.61	54.68	42.03	3.70
90	39.99	37.80	3.42	42.72	40.14	3.56	45.42	39.07	3.67	47.40	40.00	3.72	50.86	40.55	3.81	53.59	41.48	3.86
95	38.85	37.39	3.59	41.56	39.80	3.70	44.26	38.75	3.83	**45.50**	**39.13**	**3.889**	49.67	40.35	3.97	52.38	41.27	4.05
100	37.89	36.41	3.72	40.60	38.78	3.86	43.30	37.83	4.00	44.92	38.52	4.05	48.74	39.48	4.14	51.44	40.43	4.22
105	36.96	35.39	3.89	39.66	37.77	4.03	42.37	36.93	4.16	44.31	37.91	4.22	47.78	38.61	4.30	50.48	39.59	4.39
110	36.00	34.17	4.03	38.73	36.55	4.19	41.43	35.77	4.33	43.38	36.78	4.39	46.84	37.51	4.47	49.54	38.52	4.55
115	35.06	33.16	4.19	37.77	35.54	4.33	40.47	34.84	4.50	42.44	35.85	4.55	45.88	36.61	4.63	48.58	37.62	4.72
118	34.50	32.93	4.28	37.21	35.30	4.44	39.91	34.64	4.61	41.86	35.68	4.66	45.32	36.49	4.74	48.03	37.54	4.83
122	34.30	32.84	4.41	37.01	35.25	4.55	39.71	34.58	4.72	41.68	35.62	4.77	45.12	36.43	4.88	47.83	37.51	4.96

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

LGRED°

KSSMA18AA (LKMMA18A1 / KUSXA181A)

Table 24: KSSMA18AA (LKMMA18A1 / KUSXA181A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	18.68	14.80	1.01	19.84	15.63	1.04	21.00	15.13	1.08	21.83	15.45	1.09	23.32	15.58	1.12	24.48	15.88	1.13
-0.4	18.67	14.88	1.01	19.83	15.72	1.06	20.99	15.22	1.09	21.83	15.55	1.10	23.31	15.68	1.13	24.47	15.97	1.15
5	18.66	15.01	1.03	19.81	15.86	1.07	20.97	15.35	1.11	21.80	15.68	1.12	23.29	15.81	1.15	24.45	16.12	1.17
10	18.64	15.13	1.05	19.80	15.99	1.09	20.95	15.48	1.13	21.79	15.80	1.14	23.27	15.94	1.16	24.42	16.25	1.19
15	18.62	15.25	1.06	19.78	16.12	1.10	20.94	15.60	1.15	21.77	15.93	1.16	23.25	16.06	1.18	24.41	16.36	1.20
20	18.61	15.37	1.08	19.77	16.24	1.12	20.92	15.72	1.16	21.76	16.05	1.18	23.24	16.19	1.19	24.39	16.49	1.22
25	18.59	15.49	1.09	19.75	16.36	1.13	20.91	15.85	1.18	21.74	16.18	1.19	23.21	16.32	1.21	24.37	16.62	1.23
30	18.59	15.61	1.11	19.74	16.49	1.15	20.89	15.97	1.19	21.73	16.30	1.20	23.20	16.44	1.23	24.36	16.75	1.25
35	18.57	15.73	1.13	19.72	16.61	1.16	20.88	16.09	1.21	21.70	16.43	1.22	23.18	16.57	1.25	24.33	16.88	1.27
40	18.56	15.85	1.14	19.70	16.74	1.18	20.86	16.21	1.22	21.69	16.55	1.24	23.17	16.69	1.26	24.32	17.01	1.29
45	18.54	15.97	1.16	19.69	16.87	1.20	20.85	16.33	1.24	21.67	16.68	1.26	23.14	16.82	1.28	24.29	17.14	1.31
50	18.53	16.08	1.17	19.67	16.99	1.21	20.83	16.45	1.26	21.66	16.80	1.27	23.13	16.94	1.29	24.28	17.26	1.32
55	18.51	16.20	1.19	19.66	17.12	1.23	20.81	16.58	1.28	21.64	16.92	1.29	23.11	17.06	1.31	24.26	17.39	1.34
60	18.49	16.32	1.20	19.64	17.24	1.25	20.79	16.70	1.29	21.63	17.04	1.31	23.09	17.18	1.33	24.24	17.51	1.35
65	18.49	16.44	1.22	19.63	17.37	1.26	20.78	16.82	1.31	21.60	17.16	1.32	23.08	17.31	1.35	24.23	17.64	1.37
70	18.47	16.56	1.23	19.61	17.49	1.28	20.76	16.93	1.32	21.59	17.29	1.34	23.06	17.43	1.37	24.20	17.76	1.39
75	18.03	16.28	1.30	19.17	17.22	1.35	20.31	16.70	1.40	21.14	17.05	1.41	22.60	17.22	1.44	23.74	17.56	1.47
80	17.58	16.01	1.37	18.72	16.95	1.41	19.87	16.45	1.47	20.69	16.82	1.49	22.15	17.01	1.51	23.29	17.36	1.54
85	17.14	15.71	1.43	18.28	16.67	1.49	19.41	16.19	1.54	20.24	16.58	1.56	21.70	16.78	1.59	22.83	17.14	1.62
90	16.70	15.42	1.50	17.84	16.37	1.55	18.97	15.93	1.61	19.79	16.32	1.63	21.24	16.54	1.66	22.38	16.92	1.69
95	16.22	15.25	1.56	17.35	16.23	1.62	18.48	15.81	1.68	**19.00**	**15.96**	**1.70**	20.74	16.46	1.73	21.87	16.84	1.77
100	15.83	14.85	1.63	16.95	15.81	1.69	18.09	15.44	1.75	18.75	15.71	1.77	20.35	16.10	1.81	21.47	16.49	1.84
105	15.43	14.43	1.70	16.56	15.41	1.76	17.69	15.06	1.83	18.51	15.46	1.84	19.95	15.75	1.88	21.08	16.15	1.91
110	15.04	13.95	1.77	16.17	14.91	1.83	17.30	14.59	1.90	18.11	15.00	1.91	19.56	15.30	1.95	20.69	15.70	1.99
115	14.64	13.52	1.83	15.77	14.49	1.90	16.90	14.20	1.97	17.72	14.62	1.99	19.16	14.93	2.03	20.29	15.35	2.07
118	14.40	13.43	1.87	15.54	14.41	1.94	16.66	14.13	2.01	17.48	14.55	2.03	18.92	14.88	2.07	20.06	15.31	2.11
122	14.33	13.40	1.92	15.45	14.37	1.99	16.59	14.11	2.06	17.40	14.54	2.09	18.85	14.87	2.13	19.97	15.30	2.17

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

MAXIMUM COOLING CAPACITY

KSSMA18BA (LKMMA18B1 / KUSXA181A)

Table 25: KSSMA18BA (LKMMA18B1 / KUSXA181A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	19.66	15.77	1.11	20.89	16.65	1.15	22.10	16.12	1.19	22.98	16.46	1.21	24.55	16.60	1.23	25.77	16.91	1.25
-0.4	19.65	15.85	1.12	20.87	16.75	1.17	22.10	16.22	1.21	22.98	16.56	1.22	24.53	16.70	1.25	25.76	17.01	1.27
5	19.64	15.99	1.14	20.85	16.89	1.19	22.07	16.35	1.23	22.95	16.71	1.24	24.52	16.84	1.27	25.73	17.17	1.29
10	19.62	16.12	1.16	20.84	17.03	1.20	22.06	16.49	1.25	22.94	16.83	1.26	24.49	16.98	1.29	25.71	17.30	1.31
15	19.60	16.25	1.17	20.82	17.17	1.22	22.04	16.62	1.27	22.92	16.97	1.28	24.48	17.11	1.30	25.69	17.43	1.32
20	19.59	16.37	1.19	20.81	17.29	1.24	22.02	16.75	1.28	22.90	17.10	1.30	24.46	17.24	1.32	25.68	17.57	1.34
25	19.57	16.50	1.21	20.79	17.43	1.25	22.01	16.88	1.30	22.89	17.24	1.31	24.44	17.38	1.34	25.65	17.71	1.36
30	19.56	16.63	1.23	20.77	17.57	1.27	21.99	17.01	1.32	22.87	17.36	1.33	24.42	17.51	1.36	25.64	17.84	1.38
35	19.55	16.76	1.25	20.76	17.70	1.29	21.98	17.14	1.34	22.85	17.50	1.35	24.40	17.65	1.38	25.61	17.98	1.40
40	19.53	16.88	1.26	20.74	17.83	1.30	21.96	17.26	1.35	22.83	17.63	1.37	24.39	17.77	1.40	25.60	18.12	1.42
45	19.52	17.01	1.28	20.73	17.97	1.32	21.94	17.39	1.37	22.81	17.76	1.39	24.36	17.91	1.41	25.57	18.25	1.44
50	19.50	17.13	1.29	20.71	18.10	1.34	21.93	17.52	1.39	22.80	17.89	1.40	24.35	18.05	1.43	25.56	18.38	1.46
55	19.48	17.25	1.31	20.69	18.23	1.36	21.90	17.66	1.41	22.78	18.02	1.42	24.33	18.18	1.45	25.54	18.52	1.48
60	19.47	17.38	1.32	20.68	18.36	1.38	21.89	17.78	1.42	22.77	18.16	1.44	24.31	18.30	1.47	25.52	18.65	1.50
65	19.46	17.51	1.34	20.66	18.50	1.39	21.87	17.91	1.44	22.74	18.28	1.46	24.29	18.44	1.49	25.50	18.79	1.52
70	19.44	17.64	1.36	20.65	18.63	1.41	21.85	18.04	1.46	22.73	18.42	1.48	24.27	18.57	1.51	25.48	18.92	1.54
75	18.98	17.34	1.44	20.18	18.34	1.49	21.38	17.78	1.54	22.25	18.17	1.56	23.79	18.34	1.59	24.99	18.70	1.62
80	18.51	17.05	1.51	19.71	18.06	1.56	20.91	17.52	1.62	21.77	17.92	1.64	23.31	18.12	1.67	24.52	18.49	1.70
85	18.04	16.74	1.58	19.24	17.75	1.64	20.44	17.24	1.70	21.31	17.66	1.72	22.84	17.87	1.75	24.03	18.25	1.79
90	17.58	16.42	1.65	18.77	17.44	1.71	19.97	16.97	1.78	20.83	17.38	1.80	22.36	17.62	1.83	23.56	18.02	1.87
95	17.07	16.25	1.73	18.27	17.28	1.79	19.45	16.84	1.86	**20.00**	**17.00**	**1.88**	21.83	17.53	1.91	23.02	17.94	1.95
100	16.66	15.82	1.80	17.85	16.84	1.87	19.04	16.44	1.94	19.74	16.74	1.96	21.42	17.15	2.00	22.60	17.57	2.04
105	16.24	15.37	1.88	17.44	16.41	1.94	18.62	16.04	2.02	19.48	16.47	2.04	21.00	16.77	2.08	22.19	17.21	2.12
110	15.83	14.86	1.95	17.02	15.88	2.02	18.21	15.54	2.10	19.06	15.98	2.12	20.59	16.29	2.16	21.77	16.73	2.20
115	15.41	14.40	2.02	16.60	15.43	2.10	17.79	15.13	2.17	18.65	15.57	2.19	20.17	15.90	2.24	21.36	16.35	2.29
118	15.16	14.31	2.07	16.35	15.35	2.14	17.54	15.05	2.22	18.40	15.50	2.25	19.92	15.85	2.29	21.11	16.30	2.33
122	15.08	14.27	2.12	16.27	15.31	2.20	17.46	15.03	2.28	18.31	15.48	2.31	19.84	15.83	2.35	21.02	16.29	2.40

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

LGRED°

KSSMA24BA (LKMMA24B1 / KUSXA241A)

Table 26: KSSMA24BA (LKMMA24B1 / KUSXA241A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	23.59	18.92	1.41	25.06	19.98	1.46	26.53	19.34	1.51	27.58	19.75	1.53	29.46	19.92	1.56	30.92	20.29	1.58
-0.4	23.58	19.03	1.42	25.05	20.09	1.48	26.52	19.46	1.53	27.57	19.87	1.54	29.44	20.04	1.58	30.91	20.41	1.61
5	23.56	19.19	1.44	25.03	20.27	1.50	26.49	19.62	1.55	27.54	20.05	1.57	29.42	20.21	1.60	30.88	20.60	1.63
10	23.55	19.34	1.47	25.01	20.44	1.52	26.47	19.79	1.58	27.52	20.20	1.59	29.39	20.38	1.63	30.85	20.76	1.66
15	23.53	19.50	1.48	24.99	20.60	1.54	26.45	19.94	1.60	27.50	20.36	1.62	29.37	20.53	1.64	30.83	20.92	1.68
20	23.51	19.65	1.51	24.97	20.75	1.57	26.43	20.09	1.62	27.48	20.52	1.64	29.35	20.69	1.67	30.81	21.08	1.70
25	23.49	19.80	1.53	24.95	20.92	1.58	26.41	20.26	1.64	27.46	20.68	1.66	29.32	20.86	1.69	30.78	21.25	1.73
30	23.48	19.95	1.55	24.93	21.08	1.61	26.39	20.41	1.67	27.45	20.83	1.68	29.30	21.01	1.72	30.76	21.41	1.75
35	23.46	20.11	1.58	24.91	21.23	1.63	26.37	20.56	1.69	27.42	21.00	1.71	29.28	21.18	1.74	30.74	21.58	1.78
40	23.44	20.26	1.59	24.89	21.40	1.65	26.35	20.72	1.71	27.40	21.15	1.73	29.26	21.33	1.77	30.72	21.74	1.80
45	23.42	20.41	1.62	24.87	21.56	1.68	26.33	20.87	1.73	27.38	21.32	1.76	29.24	21.49	1.78	30.69	21.90	1.83
50	23.40	20.55	1.63	24.85	21.72	1.69	26.31	21.02	1.76	27.36	21.47	1.78	29.22	21.66	1.81	30.67	22.06	1.85
55	23.38	20.71	1.66	24.83	21.88	1.72	26.28	21.19	1.78	27.34	21.62	1.80	29.20	21.81	1.83	30.65	22.22	1.88
60	23.36	20.86	1.68	24.81	22.03	1.74	26.26	21.34	1.80	27.32	21.79	1.83	29.17	21.96	1.86	30.62	22.39	1.89
65	23.35	21.01	1.70	24.79	22.20	1.76	26.25	21.49	1.83	27.29	21.94	1.85	29.15	22.13	1.88	30.60	22.55	1.92
70	23.33	21.16	1.73	24.77	22.35	1.78	26.23	21.65	1.85	27.27	22.10	1.87	29.13	22.28	1.91	30.57	22.70	1.94
75	22.77	20.81	1.82	24.21	22.01	1.88	25.65	21.34	1.95	26.70	21.80	1.98	28.55	22.01	2.01	29.99	22.44	2.05
80	22.21	20.46	1.91	23.65	21.67	1.98	25.09	21.02	2.05	26.13	21.50	2.08	27.98	21.74	2.11	29.42	22.19	2.15
85	21.65	20.08	2.00	23.09	21.30	2.08	24.52	20.69	2.15	25.57	21.19	2.18	27.41	21.45	2.22	28.84	21.90	2.26
90	21.10	19.71	2.09	22.53	20.93	2.17	23.96	20.36	2.25	25.00	20.86	2.28	26.84	21.14	2.32	28.27	21.62	2.37
95	20.49	19.50	2.18	21.92	20.74	2.27	23.34	20.21	2.35	**24.00**	**20.40**	**2.38**	26.20	21.03	2.42	27.63	21.53	2.47
100	19.99	18.98	2.28	21.42	20.21	2.36	22.85	19.73	2.45	23.69	20.08	2.48	25.70	20.58	2.53	27.13	21.08	2.58
105	19.49	18.45	2.38	20.92	19.69	2.46	22.35	19.25	2.55	23.38	19.77	2.58	25.20	20.13	2.63	26.63	20.65	2.68
110	19.00	17.83	2.47	20.42	19.06	2.55	21.85	18.65	2.65	22.88	19.18	2.68	24.71	19.55	2.73	26.13	20.07	2.78
115	18.49	17.29	2.56	19.93	18.52	2.65	21.35	18.16	2.75	22.38	18.68	2.78	24.20	19.08	2.83	25.64	19.62	2.89
118	18.19	17.17	2.62	19.63	18.41	2.71	21.05	18.06	2.81	22.08	18.60	2.84	23.90	19.03	2.89	25.34	19.57	2.95
122	18.10	17.12	2.68	19.52	18.37	2.78	20.95	18.04	2.88	21.98	18.58	2.92	23.81	19.00	2.98	25.23	19.55	3.03

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

MAXIMUM COOLING CAPACITY

KSSMA25BA (LKMMA24B1 / KUSXA301A)

Table 27: KSSMA25BA (LKMMA24B1 / KUSXA301A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	23.59	18.70	1.41	25.06	19.74	1.46	26.53	19.11	1.51	27.58	19.52	1.53	29.46	19.68	1.56	30.92	20.06	1.59
-0.4	23.58	18.80	1.42	25.05	19.86	1.48	26.52	19.23	1.53	27.57	19.64	1.54	29.44	19.80	1.58	30.91	20.17	1.61
5	23.56	18.96	1.44	25.03	20.03	1.50	26.49	19.39	1.55	27.54	19.81	1.57	29.42	19.97	1.60	30.88	20.36	1.64
10	23.55	19.11	1.47	25.01	20.19	1.52	26.47	19.56	1.58	27.52	19.96	1.59	29.39	20.14	1.63	30.85	20.52	1.66
15	23.53	19.27	1.49	24.99	20.36	1.54	26.45	19.71	1.60	27.50	20.13	1.62	29.37	20.29	1.64	30.83	20.67	1.68
20	23.51	19.42	1.51	24.97	20.51	1.57	26.43	19.86	1.62	27.48	20.28	1.64	29.35	20.45	1.67	30.81	20.83	1.70
25	23.49	19.57	1.53	24.95	20.67	1.59	26.41	20.02	1.64	27.46	20.44	1.66	29.32	20.61	1.69	30.78	21.00	1.73
30	23.48	19.72	1.55	24.93	20.83	1.61	26.39	20.17	1.67	27.45	20.59	1.69	29.30	20.76	1.72	30.76	21.16	1.75
35	23.46	19.87	1.58	24.91	20.98	1.63	26.37	20.32	1.69	27.42	20.75	1.71	29.28	20.93	1.74	30.74	21.32	1.78
40	23.44	20.02	1.59	24.89	21.15	1.65	26.35	20.47	1.71	27.40	20.90	1.74	29.26	21.08	1.77	30.72	21.48	1.80
45	23.42	20.17	1.62	24.87	21.31	1.68	26.33	20.62	1.74	27.38	21.07	1.76	29.24	21.24	1.79	30.69	21.65	1.83
50	23.40	20.31	1.64	24.85	21.46	1.69	26.31	20.78	1.76	27.36	21.22	1.78	29.22	21.40	1.81	30.67	21.80	1.85
55	23.38	20.46	1.66	24.83	21.62	1.72	26.28	20.94	1.79	27.34	21.37	1.80	29.20	21.55	1.84	30.65	21.96	1.88
60	23.36	20.61	1.68	24.81	21.77	1.74	26.26	21.09	1.80	27.32	21.53	1.83	29.17	21.70	1.86	30.62	22.12	1.89
65	23.35	20.76	1.70	24.79	21.94	1.76	26.25	21.24	1.83	27.29	21.68	1.85	29.15	21.87	1.89	30.60	22.29	1.92
70	23.33	20.91	1.73	24.77	22.09	1.79	26.23	21.39	1.85	27.27	21.84	1.87	29.13	22.02	1.91	30.57	22.44	1.94
75	22.77	20.57	1.82	24.21	21.75	1.89	25.65	21.09	1.95	26.70	21.54	1.98	28.55	21.75	2.01	29.99	22.18	2.05
80	22.21	20.22	1.91	23.65	21.41	1.98	25.09	20.78	2.05	26.13	21.25	2.08	27.98	21.48	2.11	29.42	21.93	2.15
85	21.65	19.85	2.00	23.09	21.05	2.08	24.52	20.45	2.15	25.57	20.94	2.18	27.41	21.19	2.22	28.84	21.65	2.26
90	21.10	19.47	2.09	22.53	20.68	2.17	23.96	20.13	2.25	25.00	20.61	2.28	26.84	20.89	2.32	28.27	21.37	2.37
95	20.49	19.27	2.19	21.92	20.50	2.27	23.34	19.97	2.35	**24.00**	**20.16**	**2.38**	26.20	20.79	2.42	27.63	21.27	2.47
100	19.99	18.75	2.28	21.42	19.97	2.36	22.85	19.50	2.45	23.69	19.85	2.48	25.70	20.33	2.53	27.13	20.83	2.58
105	19.49	18.23	2.38	20.92	19.46	2.46	22.35	19.02	2.55	23.38	19.53	2.58	25.20	19.89	2.63	26.63	20.40	2.68
110	19.00	17.62	2.47	20.42	18.84	2.55	21.85	18.43	2.65	22.88	18.95	2.68	24.71	19.32	2.73	26.13	19.83	2.79
115	18.49	17.08	2.56	19.93	18.30	2.65	21.35	17.94	2.75	22.38	18.46	2.78	24.20	18.86	2.84	25.64	19.39	2.90
118	18.19	16.97	2.62	19.63	18.20	2.71	21.05	17.85	2.81	22.08	18.38	2.85	23.90	18.80	2.90	25.34	19.34	2.95
122	18.10	16.92	2.69	19.52	18.15	2.79	20.95	17.83	2.89	21.98	18.36	2.92	23.81	18.78	2.98	25.23	19.32	3.04

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

LGRED°

KSSMA30BA (LKMMA30B1 / KUSXA301A)

Table 28: KSSMA30BA (LKMMA30B1 / KUSXA301A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	30.48	24.73	1.81	32.38	26.11	1.87	34.26	25.28	1.94	35.63	25.82	1.96	38.05	26.03	2.00	39.94	26.52	2.03
-0.4	30.46	24.86	1.82	32.35	26.26	1.89	34.25	25.43	1.96	35.61	25.97	1.98	38.03	26.18	2.02	39.93	26.68	2.07
5	30.44	25.08	1.85	32.33	26.49	1.93	34.21	25.65	1.99	35.58	26.20	2.01	38.00	26.41	2.06	39.89	26.92	2.10
10	30.41	25.28	1.88	32.30	26.71	1.95	34.19	25.86	2.02	35.55	26.40	2.04	37.96	26.63	2.09	39.85	27.14	2.13
15	30.39	25.48	1.91	32.28	26.92	1.98	34.16	26.06	2.06	35.53	26.61	2.08	37.94	26.83	2.11	39.83	27.34	2.15
20	30.36	25.68	1.94	32.25	27.12	2.01	34.14	26.26	2.08	35.50	26.81	2.11	37.91	27.04	2.14	39.80	27.55	2.18
25	30.34	25.88	1.96	32.23	27.34	2.03	34.11	26.48	2.11	35.48	27.03	2.13	37.88	27.26	2.17	39.76	27.77	2.22
30	30.33	26.08	1.99	32.20	27.55	2.07	34.09	26.68	2.14	35.45	27.23	2.16	37.85	27.46	2.21	39.74	27.98	2.25
35	30.30	26.28	2.02	32.18	27.75	2.09	34.06	26.88	2.17	35.41	27.44	2.19	37.83	27.67	2.24	39.70	28.20	2.28
40	30.28	26.48	2.04	32.15	27.97	2.12	34.04	27.07	2.19	35.39	27.64	2.23	37.80	27.87	2.27	39.68	28.41	2.31
45	30.25	26.68	2.08	32.13	28.18	2.15	34.01	27.27	2.23	35.36	27.86	2.26	37.76	28.09	2.29	39.64	28.63	2.34
50	30.23	26.86	2.10	32.10	28.38	2.17	33.99	27.47	2.26	35.34	28.06	2.28	37.74	28.30	2.32	39.61	28.83	2.38
55	30.20	27.06	2.13	32.08	28.60	2.21	33.95	27.69	2.29	35.31	28.26	2.31	37.71	28.50	2.36	39.59	29.04	2.41
60	30.18	27.26	2.15	32.05	28.79	2.24	33.93	27.89	2.31	35.29	28.47	2.34	37.68	28.70	2.39	39.55	29.26	2.43
65	30.16	27.46	2.18	32.03	29.01	2.26	33.90	28.09	2.34	35.25	28.67	2.38	37.65	28.92	2.42	39.53	29.47	2.46
70	30.14	27.66	2.22	32.00	29.21	2.29	33.88	28.29	2.38	35.23	28.89	2.40	37.63	29.12	2.45	39.49	29.67	2.49
75	29.41	27.20	2.33	31.28	28.76	2.42	33.14	27.89	2.50	34.49	28.49	2.54	36.88	28.76	2.58	38.74	29.33	2.63
80	28.69	26.74	2.45	30.55	28.32	2.54	32.41	27.47	2.63	33.75	28.10	2.67	36.14	28.41	2.71	38.00	28.99	2.76
85	27.96	26.25	2.57	29.83	27.84	2.67	31.68	27.04	2.76	33.03	27.69	2.79	35.40	28.03	2.85	37.25	28.63	2.90
90	27.25	25.75	2.69	29.10	27.35	2.78	30.95	26.61	2.89	32.29	27.26	2.92	34.66	27.63	2.98	36.51	28.26	3.04
95	26.46	25.48	2.80	28.31	27.11	2.91	30.15	26.41	3.02	**31.00**	**26.66**	**3.05**	33.84	27.49	3.10	35.69	28.13	3.17
100	25.83	24.80	2.92	27.66	26.41	3.03	29.51	25.78	3.15	30.60	26.25	3.18	33.20	26.89	3.24	35.04	27.55	3.31
105	25.18	24.11	3.05	27.03	25.74	3.16	28.86	25.16	3.28	30.20	25.83	3.31	32.55	26.31	3.37	34.40	26.98	3.44
110	24.54	23.30	3.17	26.38	24.91	3.28	28.23	24.37	3.40	29.55	25.06	3.44	31.91	25.55	3.50	33.75	26.23	3.58
115	23.89	22.59	3.29	25.74	24.20	3.40	27.58	23.73	3.53	28.91	24.42	3.56	31.26	24.94	3.64	33.11	25.65	3.71
118	23.50	22.44	3.36	25.35	24.06	3.48	27.19	23.60	3.61	28.53	24.31	3.65	30.88	24.86	3.71	32.73	25.57	3.79
122	23.38	22.38	3.45	25.21	24.00	3.58	27.06	23.57	3.70	28.39	24.28	3.75	30.75	24.83	3.82	32.59	25.55	3.90

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

MAXIMUM COOLING CAPACITY

KSSMA36BA (LKMMA36B1 / KUSXA361A)

Table 29: KSSMA36BA (LKMMA36B1 / KUSXA361A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	35.39	28.38	1.94	37.60	29.97	2.01	39.79	29.01	2.07	41.37	29.63	2.10	44.19	29.88	2.14	46.38	30.44	2.18
-0.4	35.38	28.54	1.95	37.57	30.14	2.03	39.77	29.19	2.10	41.36	29.81	2.12	44.16	30.05	2.17	46.36	30.62	2.21
5	35.35	28.78	1.98	37.54	30.41	2.06	39.73	29.44	2.13	41.31	30.07	2.15	44.13	30.32	2.20	46.32	30.90	2.25
10	35.32	29.01	2.02	37.51	30.65	2.09	39.70	29.68	2.17	41.28	30.30	2.19	44.09	30.56	2.24	46.28	31.15	2.28
15	35.29	29.24	2.04	37.48	30.90	2.12	39.67	29.91	2.20	41.25	30.55	2.22	44.06	30.79	2.26	46.25	31.38	2.30
20	35.26	29.47	2.07	37.45	31.13	2.15	39.64	30.14	2.22	41.23	30.78	2.26	44.03	31.04	2.29	46.22	31.62	2.34
25	35.23	29.70	2.10	37.42	31.38	2.18	39.61	30.39	2.26	41.20	31.02	2.28	43.98	31.29	2.33	46.18	31.87	2.37
30	35.22	29.93	2.13	37.39	31.62	2.21	39.59	30.62	2.29	41.17	31.25	2.32	43.95	31.52	2.36	46.15	32.12	2.41
35	35.19	30.16	2.17	37.36	31.85	2.24	39.56	30.85	2.33	41.12	31.50	2.35	43.93	31.76	2.40	46.10	32.36	2.44
40	35.16	30.39	2.19	37.34	32.10	2.27	39.53	31.08	2.35	41.10	31.73	2.38	43.90	31.99	2.43	46.07	32.61	2.48
45	35.13	30.62	2.22	37.31	32.35	2.30	39.50	31.31	2.38	41.07	31.97	2.42	43.85	32.24	2.45	46.03	32.86	2.51
50	35.10	30.83	2.25	37.28	32.57	2.33	39.47	31.53	2.42	41.04	32.20	2.44	43.82	32.49	2.49	46.00	33.09	2.54
55	35.07	31.06	2.28	37.25	32.82	2.36	39.43	31.78	2.45	41.01	32.43	2.48	43.80	32.72	2.52	45.97	33.33	2.58
60	35.04	31.29	2.30	37.22	33.05	2.40	39.40	32.01	2.48	40.98	32.68	2.51	43.75	32.94	2.56	45.93	33.58	2.60
65	35.03	31.52	2.34	37.19	33.30	2.42	39.37	32.24	2.51	40.94	32.91	2.54	43.72	33.19	2.59	45.90	33.83	2.64
70	35.00	31.75	2.37	37.16	33.53	2.45	39.34	32.47	2.54	40.91	33.16	2.57	43.69	33.42	2.62	45.86	34.05	2.67
75	34.16	31.22	2.50	36.32	33.01	2.59	38.48	32.01	2.68	40.05	32.70	2.72	42.82	33.01	2.76	44.99	33.67	2.82
80	33.31	30.69	2.62	35.48	32.50	2.72	37.64	31.53	2.82	39.19	32.26	2.85	41.97	32.61	2.90	44.13	33.28	2.96
85	32.47	30.12	2.75	34.64	31.96	2.85	36.78	31.04	2.96	38.35	31.78	2.99	41.11	32.17	3.05	43.26	32.86	3.11
90	31.65	29.56	2.88	33.79	31.39	2.98	35.94	30.55	3.09	37.50	31.29	3.13	40.25	31.71	3.19	42.40	32.43	3.26
95	30.73	29.24	3.00	32.88	31.11	3.12	35.01	30.32	3.23	**36.00**	**30.60**	**3.27**	39.30	31.55	3.32	41.44	32.29	3.39
100	29.99	28.47	3.13	32.12	30.32	3.24	34.27	29.60	3.37	35.54	30.12	3.40	38.55	30.86	3.47	40.69	31.62	3.54
105	29.24	27.67	3.27	31.38	29.54	3.38	33.52	28.87	3.51	35.07	29.65	3.54	37.80	30.19	3.61	39.95	30.97	3.68
110	28.50	26.74	3.39	30.63	28.59	3.51	32.78	27.97	3.65	34.32	28.77	3.68	37.06	29.33	3.75	39.19	30.11	3.83
115	27.74	25.93	3.52	29.89	27.78	3.65	32.02	27.23	3.78	33.58	28.03	3.82	36.30	28.63	3.90	38.45	29.44	3.98
118	27.29	25.75	3.60	29.44	27.62	3.73	31.57	27.09	3.86	33.13	27.90	3.91	35.85	28.54	3.98	38.00	29.35	4.06
122	27.15	25.68	3.69	29.28	27.55	3.83	31.43	27.06	3.97	32.97	27.87	4.01	35.71	28.50	4.09	37.84	29.33	4.17

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

LGRED°

KSSMA36CA (LKMMA36C1 / KUSXA361A)

Table 30: KSSMA36CA (LKMMA36C1 / KUSXA361A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	36.37	29.51	2.06	38.64	31.16	2.13	40.89	30.17	2.20	42.52	30.81	2.23	45.41	31.07	2.28	47.67	31.66	2.31
-0.4	36.36	29.68	2.07	38.61	31.34	2.15	40.88	30.35	2.23	42.51	31.00	2.25	45.38	31.25	2.30	47.65	31.84	2.35
5	36.33	29.93	2.11	38.58	31.62	2.19	40.83	30.61	2.26	42.46	31.27	2.29	45.35	31.53	2.34	47.61	32.13	2.39
10	36.30	30.17	2.14	38.55	31.87	2.22	40.80	30.87	2.30	42.43	31.51	2.33	45.31	31.78	2.37	47.56	32.39	2.42
15	36.27	30.41	2.17	38.52	32.13	2.25	40.77	31.11	2.34	42.40	31.77	2.36	45.28	32.02	2.40	47.53	32.63	2.45
20	36.24	30.65	2.20	38.49	32.37	2.29	40.74	31.34	2.36	42.37	32.00	2.40	45.25	32.28	2.43	47.50	32.88	2.48
25	36.21	30.89	2.23	38.46	32.63	2.31	40.71	31.60	2.40	42.34	32.26	2.42	45.21	32.53	2.47	47.46	33.14	2.52
30	36.19	31.12	2.26	38.43	32.88	2.35	40.69	31.84	2.43	42.31	32.50	2.46	45.18	32.77	2.51	47.43	33.40	2.56
35	36.16	31.36	2.30	38.40	33.12	2.37	40.66	32.08	2.47	42.27	32.75	2.50	45.15	33.03	2.54	47.38	33.65	2.59
40	36.13	31.60	2.33	38.37	33.38	2.41	40.63	32.31	2.50	42.24	32.99	2.53	45.12	33.27	2.58	47.35	33.91	2.63
45	36.10	31.84	2.36	38.34	33.63	2.45	40.60	32.55	2.53	42.21	33.25	2.57	45.07	33.52	2.61	47.31	34.17	2.67
50	36.08	32.06	2.39	38.31	33.87	2.47	40.57	32.79	2.57	42.18	33.49	2.59	45.04	33.78	2.64	47.28	34.40	2.70
55	36.05	32.30	2.42	38.28	34.13	2.51	40.52	33.05	2.61	42.15	33.73	2.63	45.01	34.02	2.68	47.25	34.66	2.74
60	36.02	32.53	2.45	38.25	34.37	2.54	40.49	33.29	2.63	42.12	33.98	2.67	44.97	34.26	2.71	47.20	34.92	2.76
65	36.00	32.77	2.48	38.22	34.62	2.57	40.46	33.52	2.67	42.07	34.22	2.70	44.94	34.51	2.75	47.18	35.17	2.80
70	35.97	33.01	2.52	38.19	34.86	2.61	40.43	33.76	2.70	42.04	34.48	2.73	44.91	34.75	2.79	47.13	35.41	2.84
75	35.11	32.46	2.65	37.33	34.33	2.75	39.55	33.29	2.85	41.16	34.00	2.89	44.01	34.33	2.93	46.24	35.01	2.99
80	34.24	31.91	2.79	36.46	33.80	2.89	38.69	32.79	2.99	40.28	33.54	3.03	43.13	33.91	3.08	45.35	34.61	3.14
85	33.37	31.33	2.92	35.60	33.23	3.03	37.81	32.28	3.14	39.42	33.05	3.18	42.25	33.45	3.24	44.46	34.17	3.30
90	32.52	30.74	3.06	34.73	32.64	3.17	36.94	31.77	3.29	38.54	32.53	3.32	41.37	32.97	3.38	43.58	33.73	3.46
95	31.58	30.41	3.19	33.79	32.35	3.31	35.99	31.53	3.43	**37.00**	**31.82**	**3.47**	40.39	32.81	3.53	42.59	33.58	3.60
100	30.82	29.60	3.32	33.02	31.53	3.45	35.22	30.78	3.58	36.52	31.33	3.62	39.63	32.09	3.69	41.82	32.88	3.76
105	30.05	28.78	3.47	32.26	30.72	3.59	34.45	30.02	3.73	36.05	30.83	3.76	38.85	31.40	3.83	41.06	32.20	3.91
110	29.29	27.81	3.60	31.48	29.73	3.73	33.69	29.09	3.87	35.27	29.91	3.91	38.09	30.50	3.98	40.28	31.31	4.07
115	28.51	26.96	3.74	30.72	28.89	3.87	32.91	28.32	4.02	34.51	29.14	4.05	37.31	29.77	4.14	39.52	30.61	4.22
118	28.05	26.78	3.82	30.26	28.72	3.96	32.45	28.17	4.10	34.05	29.02	4.15	36.85	29.68	4.22	39.06	30.52	4.31
122	27.90	26.71	3.92	30.09	28.65	4.07	32.30	28.14	4.21	33.88	28.98	4.26	36.70	29.64	4.35	38.89	30.50	4.43

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

MAXIMUM COOLING CAPACITY

KSSMA42CA (LKMMA42C1 / KUSXA422A)

Table 31: KSSMA42CA (LKMMA42C1 / KUSXA422A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	43.25	34.28	2.27	45.95	36.19	2.35	48.63	35.04	2.43	50.56	35.79	2.46	54.01	36.09	2.51	56.69	36.77	2.55
-0.4	43.24	34.47	2.28	45.92	36.41	2.38	48.61	35.26	2.46	50.55	36.00	2.48	53.97	36.30	2.54	56.67	36.98	2.59
5	43.20	34.77	2.32	45.88	36.73	2.42	48.56	35.55	2.50	50.49	36.32	2.52	53.94	36.62	2.58	56.61	37.32	2.63
10	43.17	35.04	2.36	45.85	37.02	2.44	48.52	35.85	2.54	50.46	36.60	2.56	53.88	36.92	2.62	56.56	37.62	2.67
15	43.13	35.32	2.39	45.81	37.32	2.48	48.49	36.13	2.58	50.42	36.90	2.60	53.85	37.19	2.64	56.53	37.90	2.70
20	43.10	35.60	2.43	45.77	37.60	2.52	48.45	36.41	2.60	50.39	37.17	2.64	53.81	37.49	2.68	56.49	38.19	2.74
25	43.06	35.87	2.46	45.74	37.90	2.55	48.42	36.70	2.64	50.35	37.47	2.67	53.76	37.79	2.72	56.44	38.49	2.78
30	43.04	36.15	2.50	45.70	38.19	2.59	48.38	36.98	2.68	50.32	37.75	2.71	53.72	38.07	2.76	56.40	38.79	2.82
35	43.01	36.43	2.54	45.67	38.47	2.62	48.35	37.26	2.72	50.26	38.05	2.75	53.69	38.37	2.80	56.35	39.09	2.86
40	42.97	36.70	2.56	45.63	38.77	2.66	48.31	37.53	2.75	50.23	38.32	2.79	53.65	38.64	2.84	56.31	39.39	2.90
45	42.94	36.98	2.60	45.60	39.07	2.70	48.28	37.81	2.79	50.19	38.62	2.83	53.60	38.94	2.87	56.26	39.69	2.94
50	42.90	37.24	2.63	45.56	39.34	2.72	48.24	38.09	2.83	50.16	38.90	2.86	53.56	39.24	2.91	56.22	39.96	2.98
55	42.86	37.51	2.67	45.53	39.64	2.76	48.19	38.39	2.87	50.12	39.17	2.90	53.53	39.51	2.95	56.19	40.26	3.02
60	42.83	37.79	2.70	45.49	39.92	2.80	48.15	38.66	2.90	50.09	39.47	2.94	53.47	39.79	2.99	56.14	40.56	3.05
65	42.81	38.07	2.74	45.45	40.22	2.83	48.12	38.94	2.94	50.03	39.75	2.98	53.44	40.09	3.03	56.10	40.86	3.09
70	42.78	38.34	2.78	45.42	40.49	2.87	48.08	39.22	2.98	50.00	40.05	3.01	53.40	40.37	3.07	56.05	41.13	3.13
75	41.75	37.71	2.93	44.39	39.88	3.03	47.03	38.66	3.14	48.95	39.49	3.18	52.34	39.88	3.23	54.98	40.66	3.30
80	40.72	37.07	3.07	43.36	39.26	3.18	46.00	38.09	3.30	47.90	38.96	3.34	51.29	39.39	3.39	53.94	40.20	3.46
85	39.69	36.39	3.22	42.33	38.60	3.34	44.96	37.49	3.46	46.87	38.39	3.50	50.25	38.85	3.57	52.87	39.69	3.64
90	38.68	35.70	3.37	41.30	37.92	3.49	43.93	36.90	3.62	45.83	37.79	3.66	49.20	38.30	3.73	51.82	39.17	3.81
95	37.56	35.32	3.52	40.19	37.58	3.65	42.79	36.62	3.78	**44.00**	**36.96**	**3.82**	48.03	38.11	3.89	50.65	39.00	3.97
100	36.65	34.38	3.66	39.26	36.62	3.80	41.89	35.75	3.95	43.43	36.39	3.99	47.12	37.28	4.07	49.73	38.19	4.15
105	35.73	33.43	3.82	38.36	35.68	3.96	40.97	34.87	4.11	42.86	35.81	4.15	46.20	36.47	4.23	48.83	37.41	4.31
110	34.83	32.30	3.97	37.44	34.53	4.11	40.06	33.79	4.27	41.94	34.75	4.31	45.30	35.43	4.39	47.90	36.36	4.48
115	33.90	31.32	4.12	36.53	33.55	4.27	39.14	32.89	4.43	41.04	33.85	4.47	44.37	34.58	4.56	47.00	35.55	4.66
118	33.35	31.11	4.21	35.98	33.36	4.36	38.59	32.72	4.52	40.49	33.70	4.58	43.82	34.47	4.66	46.45	35.45	4.75
122	33.18	31.02	4.32	35.79	33.28	4.48	38.41	32.68	4.64	40.29	33.66	4.70	43.65	34.43	4.79	46.25	35.43	4.88

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

LGRED°

KSSMA48CA (LKMMA48C1 / KUSXA482A)

Table 32: KSSMA48CA (LKMMA48C1 / KUSXA482A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	47.19	37.84	2.51	50.13	39.95	2.60	53.05	38.68	2.69	55.16	39.51	2.72	58.92	39.84	2.78	61.84	40.59	2.82
-0.4	47.17	38.05	2.52	50.09	40.19	2.63	53.03	38.92	2.72	55.14	39.74	2.75	58.88	40.07	2.81	61.82	40.82	2.87
5	47.13	38.38	2.57	50.05	40.54	2.67	52.97	39.25	2.76	55.08	40.09	2.79	58.84	40.42	2.85	61.76	41.20	2.91
10	47.09	38.68	2.61	50.01	40.87	2.70	52.94	39.58	2.81	55.05	40.40	2.84	58.78	40.75	2.90	61.70	41.53	2.95
15	47.05	38.99	2.64	49.97	41.20	2.75	52.90	39.88	2.85	55.01	40.73	2.88	58.74	41.06	2.93	61.66	41.83	2.98
20	47.01	39.30	2.69	49.94	41.51	2.79	52.86	40.19	2.88	54.97	41.04	2.93	58.70	41.39	2.97	61.63	42.16	3.03
25	46.97	39.60	2.72	49.90	41.83	2.82	52.82	40.52	2.93	54.93	41.36	2.95	58.65	41.72	3.01	61.57	42.49	3.07
30	46.95	39.91	2.76	49.86	42.16	2.87	52.78	40.82	2.97	54.89	41.67	3.00	58.61	42.02	3.06	61.53	42.82	3.12
35	46.92	40.21	2.81	49.82	42.47	2.90	52.74	41.13	3.01	54.83	42.00	3.04	58.57	42.35	3.10	61.47	43.15	3.16
40	46.88	40.52	2.84	49.78	42.80	2.94	52.70	41.43	3.04	54.79	42.30	3.09	58.53	42.66	3.15	61.43	43.48	3.21
45	46.84	40.82	2.88	49.74	43.13	2.98	52.66	41.74	3.09	54.75	42.63	3.13	58.47	42.99	3.18	61.37	43.81	3.25
50	46.80	41.11	2.91	49.70	43.43	3.01	52.63	42.05	3.13	54.72	42.94	3.16	58.43	43.31	3.22	61.34	44.11	3.30
55	46.76	41.41	2.95	49.66	43.76	3.06	52.57	42.37	3.18	54.68	43.24	3.21	58.39	43.62	3.27	61.30	44.44	3.34
60	46.72	41.72	2.98	49.63	44.07	3.10	52.53	42.68	3.21	54.64	43.57	3.25	58.34	43.93	3.31	61.24	44.77	3.37
65	46.70	42.02	3.03	49.59	44.40	3.13	52.49	42.99	3.25	54.58	43.88	3.30	58.30	44.25	3.36	61.20	45.10	3.42
70	46.66	42.33	3.07	49.55	44.70	3.18	52.45	43.29	3.30	54.54	44.21	3.33	58.26	44.56	3.40	61.14	45.41	3.46
75	45.54	41.62	3.24	48.43	44.02	3.36	51.31	42.68	3.47	53.40	43.60	3.52	57.10	44.02	3.58	59.98	44.89	3.65
80	44.42	40.92	3.40	47.30	43.34	3.52	50.19	42.05	3.65	52.26	43.01	3.70	55.95	43.48	3.76	58.84	44.37	3.83
85	43.30	40.17	3.56	46.18	42.61	3.70	49.05	41.39	3.83	51.14	42.37	3.88	54.81	42.89	3.95	57.68	43.81	4.02
90	42.19	39.41	3.73	45.06	41.86	3.86	47.92	40.73	4.01	49.99	41.72	4.05	53.67	42.28	4.13	56.54	43.24	4.22
95	40.97	38.99	3.89	43.84	41.48	4.04	46.68	40.42	4.19	**48.00**	**40.80**	**4.23**	52.39	42.07	4.31	55.26	43.06	4.40
100	39.99	37.96	4.05	42.83	40.42	4.20	45.70	39.46	4.37	47.38	40.17	4.41	51.41	41.15	4.50	54.25	42.16	4.59
105	38.98	36.90	4.23	41.85	39.39	4.38	44.69	38.50	4.54	46.76	39.53	4.59	50.40	40.26	4.68	53.26	41.29	4.77
110	37.99	35.65	4.40	40.84	38.12	4.54	43.70	37.30	4.72	45.75	38.36	4.77	49.41	39.11	4.86	52.26	40.14	4.96
115	36.99	34.57	4.56	39.85	37.04	4.72	42.70	36.31	4.90	44.77	37.37	4.94	48.41	38.17	5.05	51.27	39.25	5.15
118	36.39	34.34	4.66	39.25	36.83	4.83	42.10	36.12	5.00	44.17	37.20	5.06	47.81	38.05	5.15	50.67	39.13	5.26
122	36.19	34.24	4.78	39.04	36.73	4.96	41.90	36.08	5.14	43.95	37.16	5.20	47.61	38.00	5.30	50.46	39.11	5.41

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

MAXIMUM COOLING CAPACITY

KSSMA48DA (LKMMA48D1 / KUSXA482A)

Table 33: KSSMA48DA (LKMMA48D1 / KUSXA482A) Maximum Cooling Capacities.

Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / °F WB)																	
	68 / 57			72 / 61			77 / 64			80 / 67			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
-4	48.17	39.08	2.61	51.17	41.27	2.70	54.16	39.96	2.79	56.31	40.80	2.82	60.14	41.14	2.88	63.13	41.92	2.93
-0.4	48.15	39.30	2.62	51.13	41.51	2.73	54.14	40.20	2.82	56.29	41.05	2.85	60.10	41.39	2.91	63.11	42.16	2.98
5	48.11	39.64	2.67	51.09	41.87	2.78	54.08	40.54	2.87	56.23	41.41	2.90	60.06	41.75	2.96	63.05	42.55	3.02
10	48.07	39.96	2.71	51.05	42.21	2.81	54.04	40.88	2.91	56.19	41.73	2.95	60.01	42.09	3.01	62.99	42.89	3.07
15	48.03	40.27	2.74	51.02	42.55	2.85	54.00	41.19	2.96	56.15	42.07	2.99	59.97	42.41	3.04	62.95	43.21	3.10
20	47.99	40.59	2.79	50.98	42.87	2.90	53.96	41.51	2.99	56.11	42.38	3.04	59.93	42.75	3.08	62.91	43.55	3.15
25	47.95	40.90	2.82	50.94	43.21	2.93	53.92	41.85	3.04	56.07	42.72	3.07	59.87	43.09	3.13	62.85	43.89	3.19
30	47.93	41.22	2.87	50.90	43.55	2.98	53.88	42.16	3.08	56.03	43.04	3.11	59.83	43.40	3.18	62.81	44.23	3.24
35	47.89	41.53	2.91	50.86	43.86	3.01	53.84	42.48	3.13	55.97	43.38	3.16	59.79	43.74	3.22	62.75	44.57	3.28
40	47.85	41.85	2.95	50.82	44.20	3.05	53.80	42.80	3.16	55.94	43.69	3.21	59.75	44.06	3.27	62.71	44.91	3.33
45	47.81	42.16	2.99	50.78	44.54	3.10	53.76	43.11	3.21	55.90	44.03	3.25	59.69	44.40	3.30	62.65	45.25	3.38
50	47.78	42.46	3.02	50.74	44.86	3.13	53.72	43.43	3.25	55.86	44.35	3.28	59.65	44.74	3.35	62.61	45.56	3.42
55	47.74	42.77	3.07	50.70	45.20	3.18	53.66	43.77	3.30	55.82	44.66	3.33	59.61	45.05	3.39	62.57	45.90	3.47
60	47.70	43.09	3.10	50.66	45.51	3.22	53.62	44.08	3.33	55.78	45.00	3.38	59.55	45.37	3.44	62.51	46.24	3.50
65	47.68	43.40	3.15	50.62	45.85	3.25	53.58	44.40	3.38	55.72	45.32	3.42	59.51	45.71	3.48	62.48	46.58	3.55
70	47.64	43.72	3.19	50.58	46.17	3.30	53.54	44.71	3.42	55.68	45.66	3.45	59.47	46.02	3.53	62.42	46.90	3.59
75	46.49	42.99	3.36	49.43	45.47	3.48	52.38	44.08	3.61	54.51	45.03	3.65	58.29	45.47	3.72	61.23	46.36	3.79
80	45.34	42.26	3.53	48.29	44.76	3.65	51.23	43.43	3.79	53.35	44.42	3.84	57.12	44.91	3.90	60.06	45.83	3.98
85	44.20	41.48	3.70	47.14	44.01	3.84	50.07	42.75	3.98	52.20	43.77	4.02	55.95	44.30	4.10	58.88	45.25	4.18
90	43.07	40.71	3.87	46.00	43.23	4.01	48.92	42.07	4.16	51.04	43.09	4.21	54.79	43.67	4.29	57.71	44.66	4.38
95	41.83	40.27	4.04	44.75	42.84	4.19	47.66	41.75	4.35	**49.00**	**42.14**	**4.39**	53.49	43.45	4.47	56.41	44.47	4.56
100	40.82	39.20	4.21	43.72	41.75	4.36	46.65	40.76	4.53	48.37	41.48	4.58	52.48	42.50	4.67	55.38	43.55	4.76
105	39.79	38.11	4.39	42.72	40.68	4.55	45.62	39.76	4.72	47.74	40.83	4.76	51.45	41.58	4.86	54.37	42.65	4.95
110	38.79	36.82	4.56	41.69	39.37	4.72	44.61	38.52	4.90	46.71	39.62	4.95	50.44	40.39	5.04	53.35	41.46	5.15
115	37.76	35.71	4.73	40.68	38.26	4.90	43.59	37.50	5.09	45.70	38.60	5.13	49.41	39.42	5.24	52.34	40.54	5.35
118	37.15	35.46	4.84	40.07	38.04	5.01	42.97	37.31	5.20	45.09	38.43	5.26	48.80	39.30	5.35	51.73	40.42	5.46
122	36.95	35.37	4.96	39.85	37.94	5.15	42.78	37.26	5.34	44.87	38.38	5.40	48.60	39.25	5.50	51.51	40.39	5.61

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

SHC: Sensible Capacity (kBtu/h) PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Cooling range can be extended from 5°F down to -4°F using the Low Ambient Wind Baffle Kit (sold separately).

3. Grey shading indicates reference data. Operation outside of the verified temperature range is subject to decreased performance and / or safety interruption. .

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Cooling capacity rating obtained with air entering the indoor component at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

HEATING CAPACITY

KSSMA18AA (LKMMA18A1 / KUSXA181A)

Table 34: KSSMA18AA (LKMMA18A1 / KUSXA181A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	7.26	1.23	6.51	1.27	6.61	1.31	6.56	1.33	6.52	1.34	6.20	1.38
-4	-4.4	9.74	1.32	9.09	1.36	9.00	1.39	8.88	1.43	8.79	1.44	8.41	1.48
0	-0.4	10.89	1.36	10.27	1.39	10.09	1.44	9.95	1.47	9.82	1.48	9.41	1.52
5	4.5	12.25	1.40	11.69	1.45	11.40	1.49	11.21	1.52	11.07	1.53	10.62	1.58
10	9	13.16	1.45	12.63	1.49	12.28	1.54	12.07	1.57	11.90	1.59	11.43	1.63
17	15	14.16	1.51	13.68	1.55	13.24	1.61	13.00	1.63	12.81	1.65	12.32	1.69
20	19	14.89	1.53	14.40	1.57	13.95	1.62	13.70	1.65	13.50	1.67	12.99	1.71
25	23	16.09	1.55	15.61	1.60	15.13	1.65	14.87	1.68	14.66	1.70	14.10	1.74
30	28	17.30	1.58	16.82	1.62	16.31	1.68	16.03	1.70	15.81	1.72	15.22	1.77
35	32	18.51	1.60	18.03	1.65	17.49	1.71	17.20	1.73	16.96	1.75	16.34	1.81
40	36	19.72	1.63	19.24	1.67	18.68	1.73	18.37	1.76	18.12	1.78	17.46	1.84
45	41	20.93	1.65	20.45	1.70	19.86	1.76	19.53	1.79	19.27	1.81	18.57	1.87
47	43	21.41	1.66	20.93	1.71	20.33	1.77	**20.00**	**1.80**	19.73	1.82	19.02	1.88
50	46	21.47	1.65	21.04	1.70	20.52	1.75	20.22	1.77	19.98	1.80	19.31	1.84
55	51	21.58	1.63	21.22	1.67	20.83	1.71	20.59	1.73	20.40	1.75	19.79	1.78
60	56	21.68	1.61	21.40	1.65	21.14	1.68	20.95	1.69	20.81	1.70	20.28	1.72
63	59	21.74	1.60	21.51	1.63	21.32	1.65	21.18	1.66	21.06	1.67	20.57	1.69
68	64	21.81	1.59	21.62	1.61	21.51	1.63	21.40	1.64	21.31	1.64	20.86	1.65

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

HEATING CAPACITY

KSSMA18BA (LKMMA18B1 / KUSXA181A)

Table 35: KSSMA18BA (LKMMA18B1 / KUSXA181A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	7.26	1.23	6.51	1.27	6.61	1.31	6.56	1.33	6.52	1.34	6.20	1.38
-4	-4.4	9.74	1.32	9.09	1.36	9.00	1.39	8.88	1.43	8.79	1.44	8.41	1.48
0	-0.4	10.89	1.36	10.27	1.39	10.09	1.44	9.95	1.47	9.82	1.48	9.41	1.52
5	4.5	12.25	1.40	11.69	1.45	11.40	1.49	11.21	1.52	11.07	1.53	10.62	1.58
10	9	13.16	1.45	12.63	1.49	12.28	1.54	12.07	1.57	11.90	1.59	11.43	1.63
17	15	14.16	1.51	13.68	1.55	13.24	1.61	13.00	1.63	12.81	1.65	12.32	1.69
20	19	14.89	1.53	14.40	1.57	13.95	1.62	13.70	1.65	13.50	1.67	12.99	1.71
25	23	16.09	1.55	15.61	1.60	15.13	1.65	14.87	1.68	14.66	1.70	14.10	1.74
30	28	17.30	1.58	16.82	1.62	16.31	1.68	16.03	1.70	15.81	1.72	15.22	1.77
35	32	18.51	1.60	18.03	1.65	17.49	1.71	17.20	1.73	16.96	1.75	16.34	1.81
40	36	19.72	1.63	19.24	1.67	18.68	1.73	18.37	1.76	18.12	1.78	17.46	1.84
45	41	20.93	1.65	20.45	1.70	19.86	1.76	19.53	1.79	19.27	1.81	18.57	1.87
47	43	21.41	1.66	20.93	1.71	20.33	1.77	**20.00**	**1.80**	19.73	1.82	19.02	1.88
50	46	21.47	1.65	21.04	1.70	20.52	1.75	20.22	1.77	19.98	1.80	19.31	1.84
55	51	21.58	1.63	21.22	1.67	20.83	1.71	20.59	1.73	20.40	1.75	19.79	1.78
60	56	21.68	1.61	21.40	1.65	21.14	1.68	20.95	1.69	20.81	1.70	20.28	1.72
63	59	21.74	1.60	21.51	1.63	21.32	1.65	21.18	1.66	21.06	1.67	20.57	1.69
68	64	21.81	1.59	21.62	1.61	21.51	1.63	21.40	1.64	21.31	1.64	20.86	1.65

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

HEATING CAPACITY

KSSMA24BA (LKMMA24B1 / KUSXA241A)

LGRED°

Table 36: KSSMA24BA (LKMMA24B1 / KUSXA241A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	8.93	1.60	8.02	1.64	8.13	1.69	8.08	1.72	8.03	1.74	7.63	1.79
-4	-4.4	11.99	1.71	11.19	1.76	11.07	1.80	10.93	1.85	10.81	1.86	10.35	1.92
0	-0.4	13.40	1.76	12.64	1.80	12.42	1.86	12.24	1.90	12.09	1.92	11.59	1.97
5	4.5	15.08	1.82	14.38	1.87	14.03	1.93	13.80	1.97	13.62	1.99	13.07	2.04
10	9	16.20	1.87	15.54	1.93	15.11	2.00	14.85	2.03	14.64	2.05	14.07	2.11
17	15	17.43	1.96	16.83	2.01	16.29	2.08	16.00	2.11	15.77	2.14	15.16	2.19
20	19	18.25	1.96	17.66	2.02	17.10	2.09	16.80	2.12	16.56	2.15	15.92	2.20
25	23	19.63	1.98	19.04	2.03	18.45	2.10	18.13	2.13	17.88	2.16	17.20	2.22
30	28	21.01	1.99	20.42	2.05	19.80	2.12	19.47	2.15	19.19	2.18	18.48	2.24
35	32	22.39	2.00	21.80	2.06	21.15	2.13	20.80	2.16	20.51	2.19	19.76	2.26
40	36	23.76	2.01	23.18	2.07	22.51	2.14	22.13	2.18	21.83	2.20	21.04	2.27
45	41	25.14	2.02	24.56	2.08	23.86	2.16	23.47	2.19	23.15	2.22	22.31	2.29
47	43	25.69	2.03	25.12	2.09	24.40	2.16	**24.00**	**2.20**	23.68	2.22	22.82	2.30
50	46	25.76	2.02	25.25	2.08	24.62	2.14	24.26	2.16	23.98	2.20	23.17	2.25
55	51	25.90	1.99	25.46	2.04	25.00	2.09	24.71	2.11	24.48	2.14	23.75	2.18
60	56	26.02	1.97	25.68	2.02	25.37	2.05	25.14	2.07	24.97	2.08	24.34	2.10
63	59	26.09	1.96	25.81	1.99	25.58	2.02	25.42	2.03	25.27	2.04	24.68	2.07
68	64	26.17	1.94	25.94	1.97	25.81	1.99	25.68	2.00	25.57	2.00	25.03	2.02

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

LG

HEATING CAPACITY

KSSMA25BA (LKMMA24B1 / KUSXA301A)

Table 37: KSSMA25BA (LKMMA24B1 / KUSXA301A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	8.93	1.60	8.02	1.64	8.13	1.69	8.08	1.72	8.03	1.74	7.63	1.79
-4	-4.4	11.99	1.71	11.19	1.76	11.07	1.80	10.93	1.85	10.81	1.86	10.35	1.92
0	-0.4	13.40	1.76	12.64	1.80	12.42	1.86	12.24	1.90	12.09	1.92	11.59	1.97
5	4.5	15.08	1.82	14.38	1.87	14.03	1.93	13.80	1.97	13.62	1.99	13.07	2.04
10	9	16.20	1.87	15.54	1.93	15.11	2.00	14.85	2.03	14.64	2.05	14.07	2.11
17	15	17.43	1.96	16.83	2.01	16.29	2.08	16.00	2.11	15.77	2.14	15.16	2.19
20	19	18.47	1.96	17.87	2.02	17.31	2.09	17.00	2.12	16.75	2.15	16.11	2.20
25	23	20.20	1.98	19.60	2.03	19.00	2.10	18.67	2.13	18.40	2.16	17.71	2.22
30	28	21.94	1.99	21.33	2.05	20.69	2.12	20.33	2.15	20.05	2.18	19.30	2.24
35	32	23.67	2.00	23.06	2.06	22.37	2.13	22.00	2.16	21.70	2.19	20.90	2.26
40	36	25.41	2.01	24.79	2.07	24.06	2.14	23.67	2.18	23.34	2.20	22.49	2.27
45	41	27.14	2.02	26.52	2.08	25.75	2.16	25.33	2.19	24.99	2.22	24.09	2.29
47	43	27.83	2.03	27.21	2.09	26.43	2.16	**26.00**	**2.20**	25.65	2.22	24.73	2.30
50	46	27.91	2.02	27.35	2.08	26.68	2.14	26.29	2.16	25.97	2.20	25.10	2.25
55	51	28.05	1.99	27.59	2.04	27.08	2.09	26.77	2.11	26.52	2.14	25.73	2.18
60	56	28.18	1.97	27.82	2.02	27.48	2.05	27.24	2.07	27.05	2.08	26.36	2.10
63	59	28.26	1.96	27.96	1.99	27.72	2.02	27.53	2.03	27.38	2.04	26.74	2.07
68	64	28.35	1.94	28.11	1.97	27.96	1.99	27.82	2.00	27.70	2.00	27.12	2.02

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

HEATING CAPACITY

LGRED°

KSSMA30BA (LKMMA30B1 / KUSXA301A)

Table 38: KSSMA30BA (LKMMA30B1 / KUSXA301A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	12.28	2.12	11.02	2.17	11.19	2.25	11.10	2.28	11.04	2.30	10.49	2.38
-4	-4.4	16.48	2.27	15.39	2.34	15.22	2.39	15.03	2.45	14.87	2.47	14.23	2.54
0	-0.4	18.43	2.34	17.38	2.39	17.08	2.47	16.83	2.52	16.62	2.54	15.93	2.62
5	4.5	20.73	2.41	19.78	2.49	19.30	2.56	18.97	2.62	18.73	2.63	17.98	2.71
10	9	22.27	2.49	21.37	2.56	20.78	2.65	20.42	2.69	20.13	2.73	19.34	2.80
17	15	23.96	2.60	23.14	2.67	22.40	2.76	22.00	2.80	21.68	2.84	20.84	2.91
20	19	24.99	2.61	24.18	2.68	23.41	2.77	23.00	2.81	22.67	2.85	21.80	2.93
25	23	26.71	2.63	25.90	2.70	25.10	2.79	24.67	2.83	24.32	2.87	23.40	2.95
30	28	28.42	2.64	27.63	2.72	26.79	2.81	26.33	2.86	25.96	2.89	25.00	2.98
35	32	30.14	2.66	29.35	2.74	28.48	2.83	28.00	2.88	27.61	2.91	26.60	3.00
40	36	31.85	2.68	31.07	2.76	30.17	2.85	29.67	2.90	29.26	2.93	28.19	3.03
45	41	33.57	2.70	32.80	2.78	31.85	2.87	31.33	2.92	30.91	2.95	29.79	3.05
47	43	34.26	2.70	33.49	2.78	32.53	2.88	**32.00**	**2.93**	31.57	2.96	30.43	3.06
50	46	34.35	2.69	33.66	2.77	32.83	2.85	32.35	2.88	31.97	2.93	30.90	3.00
55	51	34.53	2.65	33.95	2.72	33.33	2.78	32.94	2.82	32.64	2.85	31.66	2.90
60	56	34.69	2.62	34.24	2.69	33.82	2.73	33.52	2.75	33.30	2.77	32.45	2.80
63	59	34.78	2.60	34.42	2.65	34.11	2.69	33.89	2.70	33.70	2.72	32.91	2.75
68	64	34.90	2.59	34.59	2.62	34.42	2.65	34.24	2.67	34.10	2.67	33.38	2.69

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

LG

HEATING CAPACITY

KSSMA36BA (LKMMA36B1 / KUSXA361A)

Table 39: KSSMA36BA (LKMMA36B1 / KUSXA361A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	13.40	2.42	12.03	2.48	12.20	2.57	12.11	2.61	12.04	2.63	11.45	2.72
-4	-4.4	17.98	2.59	16.78	2.67	16.61	2.74	16.40	2.80	16.22	2.82	15.52	2.91
0	-0.4	20.10	2.67	18.96	2.74	18.63	2.82	18.36	2.88	18.14	2.91	17.38	2.99
5	4.5	22.61	2.76	21.58	2.84	21.05	2.93	20.70	2.99	20.44	3.01	19.61	3.09
10	9	24.30	2.84	23.32	2.93	22.67	3.03	22.28	3.07	21.96	3.12	21.10	3.20
17	15	26.14	2.97	25.25	3.05	24.44	3.16	24.00	3.20	23.65	3.24	22.74	3.33
20	19	27.49	2.97	26.59	3.05	25.76	3.16	25.30	3.20	24.93	3.24	23.98	3.33
25	23	29.73	2.97	28.84	3.05	27.95	3.16	27.47	3.20	27.08	3.24	26.06	3.33
30	28	31.98	2.96	31.09	3.05	30.15	3.16	29.63	3.20	29.22	3.24	28.13	3.34
35	32	34.22	2.96	33.33	3.05	32.34	3.16	31.80	3.21	31.36	3.24	30.21	3.34
40	36	36.47	2.96	35.58	3.05	34.54	3.16	33.97	3.21	33.50	3.24	32.28	3.35
45	41	38.71	2.96	37.82	3.05	36.73	3.16	36.13	3.21	35.64	3.25	34.36	3.35
47	43	39.61	2.96	38.72	3.05	37.61	3.16	**37.00**	**3.21**	36.50	3.25	35.19	3.35
50	46	39.72	2.94	38.92	3.03	37.96	3.12	37.41	3.16	36.96	3.21	35.72	3.28
55	51	39.92	2.91	39.26	2.98	38.54	3.05	38.09	3.09	37.74	3.12	36.61	3.17
60	56	40.11	2.87	39.59	2.94	39.11	3.00	38.76	3.01	38.50	3.03	37.52	3.07
63	59	40.22	2.85	39.79	2.91	39.44	2.94	39.18	2.96	38.96	2.98	38.05	3.01
68	64	40.35	2.84	40.00	2.87	39.79	2.91	39.59	2.92	39.42	2.92	38.59	2.94

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

HEATING CAPACITY

KSSMA36CA (LKMMA36C1 / KUSXA361A)

Table 40: KSSMA36CA (LKMMA36C1 / KUSXA361A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	13.40	2.42	12.03	2.48	12.20	2.57	12.11	2.61	12.04	2.63	11.45	2.72
-4	-4.4	17.98	2.59	16.78	2.67	16.61	2.74	16.40	2.80	16.22	2.82	15.52	2.91
0	-0.4	20.10	2.67	18.96	2.74	18.63	2.82	18.36	2.88	18.14	2.91	17.38	2.99
5	4.5	22.61	2.76	21.58	2.84	21.05	2.93	20.70	2.99	20.44	3.01	19.61	3.09
10	9	24.30	2.84	23.32	2.93	22.67	3.03	22.28	3.07	21.96	3.12	21.10	3.20
17	15	26.14	2.97	25.25	3.05	24.44	3.16	24.00	3.20	23.65	3.24	22.74	3.33
20	19	27.49	2.97	26.59	3.05	25.76	3.16	25.30	3.20	24.93	3.24	23.98	3.33
25	23	29.73	2.97	28.84	3.05	27.95	3.16	27.47	3.20	27.08	3.24	26.06	3.33
30	28	31.98	2.96	31.09	3.05	30.15	3.16	29.63	3.20	29.22	3.24	28.13	3.34
35	32	34.22	2.96	33.33	3.05	32.34	3.16	31.80	3.21	31.36	3.24	30.21	3.34
40	36	36.47	2.96	35.58	3.05	34.54	3.16	33.97	3.21	33.50	3.24	32.28	3.35
45	41	38.71	2.96	37.82	3.05	36.73	3.16	36.13	3.21	35.64	3.25	34.36	3.35
47	43	39.61	2.96	38.72	3.05	37.61	3.16	**37.00**	**3.21**	36.50	3.25	35.19	3.35
50	46	39.72	2.94	38.92	3.03	37.96	3.12	37.41	3.16	36.96	3.21	35.72	3.28
55	51	39.92	2.91	39.26	2.98	38.54	3.05	38.09	3.09	37.74	3.12	36.61	3.17
60	56	40.11	2.87	39.59	2.94	39.11	3.00	38.76	3.01	38.50	3.03	37.52	3.07
63	59	40.22	2.85	39.79	2.91	39.44	2.94	39.18	2.96	38.96	2.98	38.05	3.01
68	64	40.35	2.84	40.00	2.87	39.79	2.91	39.59	2.92	39.42	2.92	38.59	2.94

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

HEATING CAPACITY

KSSMA42CA (LKMMA42C1 / KUSXA422A)

Table 41: KSSMA42CA (LKMMA42C1 / KUSXA422A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	16.19	2.80	14.53	2.87	14.74	2.97	14.64	3.02	14.55	3.04	13.83	3.14
-4	-4.4	21.72	2.99	20.28	3.09	20.07	3.16	19.81	3.24	19.60	3.26	18.75	3.36
0	-0.4	24.29	3.09	22.91	3.16	22.51	3.26	22.19	3.33	21.91	3.36	21.00	3.46
5	4.5	27.32	3.19	26.07	3.29	25.44	3.38	25.01	3.46	24.69	3.48	23.70	3.58
10	9	29.36	3.29	28.17	3.38	27.39	3.51	26.92	3.55	26.54	3.60	25.50	3.70
17	15	31.59	3.43	30.51	3.53	29.53	3.65	29.00	3.70	28.58	3.75	27.47	3.85
20	19	33.25	3.44	32.16	3.54	31.15	3.66	30.60	3.71	30.16	3.76	29.00	3.86
25	23	36.01	3.45	34.93	3.55	33.85	3.68	33.27	3.73	32.79	3.78	31.56	3.88
30	28	38.77	3.47	37.69	3.57	36.56	3.69	35.93	3.75	35.43	3.79	34.11	3.90
35	32	41.54	3.48	40.46	3.58	39.26	3.71	38.60	3.77	38.07	3.81	36.67	3.93
40	36	44.30	3.49	43.22	3.60	41.96	3.72	41.27	3.78	40.70	3.83	39.22	3.95
45	41	47.07	3.51	45.99	3.61	44.66	3.74	43.93	3.80	43.34	3.85	41.77	3.97
47	43	48.17	3.51	47.09	3.62	45.74	3.75	**45.00**	**3.81**	44.39	3.85	42.80	3.98
50	46	48.31	3.49	47.34	3.60	46.17	3.70	45.50	3.75	44.96	3.81	43.45	3.89
55	51	48.56	3.45	47.75	3.53	46.87	3.62	46.33	3.66	45.90	3.70	44.53	3.77
60	56	48.78	3.41	48.15	3.49	47.57	3.56	47.14	3.58	46.82	3.60	45.63	3.64
63	59	48.92	3.39	48.40	3.45	47.97	3.49	47.66	3.51	47.39	3.53	46.28	3.58
68	64	49.07	3.37	48.65	3.41	48.40	3.45	48.15	3.47	47.95	3.47	46.94	3.49

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

HEATING CAPACITY

KSSMA48CA (LKMMA48C1 / KUSXA482A)

Table 42: KSSMA48CA (LKMMA48C1 / KUSXA482A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	18.20	3.09	16.34	3.17	16.57	3.27	16.46	3.33	16.36	3.36	15.55	3.46
-4	-4.4	24.42	3.30	22.80	3.41	22.56	3.49	22.27	3.57	22.04	3.60	21.08	3.70
0	-0.4	27.31	3.41	25.76	3.49	25.30	3.60	24.94	3.68	24.63	3.70	23.61	3.81
5	4.5	30.72	3.52	29.31	3.62	28.59	3.73	28.12	3.81	27.76	3.84	26.64	3.95
10	9	33.01	3.62	31.67	3.73	30.79	3.87	30.26	3.92	29.83	3.97	28.67	4.08
17	15	35.51	3.78	34.29	3.89	33.20	4.03	32.60	4.08	32.12	4.13	30.88	4.24
20	19	37.31	3.79	36.10	3.90	34.96	4.04	34.34	4.09	33.84	4.15	32.55	4.26
25	23	40.31	3.81	39.10	3.92	37.90	4.06	37.24	4.11	36.71	4.17	35.33	4.28
30	28	43.32	3.83	42.11	3.94	40.84	4.08	40.14	4.14	39.58	4.19	38.11	4.31
35	32	46.32	3.84	45.11	3.96	43.77	4.09	43.04	4.16	42.44	4.21	40.88	4.33
40	36	49.32	3.86	48.12	3.97	46.71	4.11	45.94	4.18	45.31	4.23	43.66	4.36
45	41	52.32	3.88	51.12	3.99	49.65	4.13	48.84	4.20	48.18	4.25	46.44	4.39
47	43	53.53	3.88	52.33	4.00	50.83	4.14	**50.00**	**4.21**	49.33	4.26	47.55	4.40
50	46	53.68	3.86	52.60	3.98	51.30	4.09	50.55	4.14	49.95	4.21	48.28	4.30
55	51	53.95	3.81	53.05	3.91	52.08	4.00	51.48	4.05	51.00	4.09	49.48	4.16
60	56	54.20	3.77	53.50	3.86	52.85	3.93	52.38	3.95	52.03	3.98	50.70	4.02
63	59	54.35	3.74	53.78	3.81	53.30	3.86	52.95	3.88	52.65	3.91	51.43	3.95
68	64	54.53	3.72	54.05	3.77	53.78	3.81	53.50	3.84	53.28	3.84	52.15	3.86

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

HEATING CAPACITY

KSSMA48DA (LKMMA48D1 / KUSXA482A)

Table 43: KSSMA48DA (LKMMA48D1 / KUSXA482A) Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	18.20	3.09	16.34	3.17	16.57	3.27	16.46	3.33	16.36	3.36	15.55	3.46
-4	-4.4	24.42	3.30	22.80	3.41	22.56	3.49	22.27	3.57	22.04	3.60	21.08	3.70
0	-0.4	27.31	3.41	25.76	3.49	25.30	3.60	24.94	3.68	24.63	3.70	23.61	3.81
5	4.5	30.72	3.52	29.31	3.62	28.59	3.73	28.12	3.81	27.76	3.84	26.64	3.95
10	9	33.01	3.62	31.67	3.73	30.79	3.87	30.26	3.92	29.83	3.97	28.67	4.08
17	15	35.51	3.78	34.29	3.89	33.20	4.03	32.60	4.08	32.12	4.13	30.88	4.24
20	19	37.31	3.79	36.10	3.90	34.96	4.04	34.34	4.09	33.84	4.15	32.55	4.26
25	23	40.31	3.81	39.10	3.92	37.90	4.06	37.24	4.11	36.71	4.17	35.33	4.28
30	28	43.32	3.83	42.11	3.94	40.84	4.08	40.14	4.14	39.58	4.19	38.11	4.31
35	32	46.32	3.84	45.11	3.96	43.77	4.09	43.04	4.16	42.44	4.21	40.88	4.33
40	36	49.32	3.86	48.12	3.97	46.71	4.11	45.94	4.18	45.31	4.23	43.66	4.36
45	41	52.32	3.88	51.12	3.99	49.65	4.13	48.84	4.20	48.18	4.25	46.44	4.39
47	43	53.53	3.88	52.33	4.00	50.83	4.14	**50.00**	**4.21**	49.33	4.26	47.55	4.40
50	46	53.68	3.86	52.60	3.98	51.30	4.09	50.55	4.14	49.95	4.21	48.28	4.30
55	51	53.95	3.81	53.05	3.91	52.08	4.00	51.48	4.05	51.00	4.09	49.48	4.16
60	56	54.20	3.77	53.50	3.86	52.85	3.93	52.38	3.95	52.03	3.98	50.70	4.02
63	59	54.35	3.74	53.78	3.81	53.30	3.86	52.95	3.88	52.65	3.91	51.43	3.95
68	64	54.53	3.72	54.05	3.77	53.78	3.81	53.50	3.84	53.28	3.84	52.15	3.86

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

MAXIMUM HEATING CAPACITY

LGRED°

KSSMA18AA (LKMMA18A1 / KUSXA181A)

Table 44: KSSMA18AA (LKMMA18A1 / KUSXA181A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	14.99	2.40	14.66	2.48	14.24	2.56	14.00	2.60	13.82	2.64	13.32	2.72
-4	-4.4	17.13	2.54	16.75	2.63	16.27	2.71	16.00	2.76	15.79	2.80	15.21	2.88
0	-0.4	17.66	2.58	17.26	2.66	16.77	2.75	16.50	2.80	16.28	2.83	15.69	2.92
5	4.5	19.27	2.71	18.84	2.79	18.30	2.88	18.00	2.93	17.76	2.97	17.11	3.06
10	9	20.07	2.58	19.62	2.66	19.06	2.74	18.75	2.79	18.50	2.83	17.82	2.92
17	15	21.19	2.40	20.72	2.48	20.13	2.55	19.80	2.60	19.54	2.64	18.82	2.72
20	19	21.43	2.35	20.95	2.43	20.35	2.50	20.02	2.55	19.75	2.58	19.03	2.66
25	23	21.82	2.27	21.34	2.34	20.72	2.42	20.39	2.46	20.12	2.50	19.38	2.57
30	28	22.21	2.19	21.72	2.26	21.09	2.33	20.75	2.37	20.48	2.41	19.73	2.47
35	32	22.61	2.11	22.10	2.18	21.47	2.24	21.12	2.28	20.84	2.32	20.08	2.38
40	36	23.00	2.03	22.49	2.09	21.84	2.16	21.49	2.19	21.20	2.23	20.43	2.29
45	41	23.39	1.94	22.87	2.01	22.21	2.07	21.85	2.11	21.57	2.14	20.77	2.19
47	43	23.55	1.91	23.02	1.97	22.36	2.04	**22.00**	**2.07**	21.71	2.10	20.91	2.16
50	46	23.62	1.89	23.14	1.95	22.57	2.01	22.24	2.04	21.98	2.06	21.24	2.12
55	51	23.74	1.88	23.34	1.93	22.91	1.97	22.65	1.99	22.44	2.01	21.77	2.05
60	56	23.85	1.86	23.54	1.89	23.25	1.93	23.05	1.94	22.89	1.95	22.31	1.98
63	59	23.92	1.85	23.66	1.87	23.46	1.90	23.29	1.91	23.16	1.92	22.62	1.94
68	64	23.99	1.83	23.77	1.86	23.66	1.88	23.54	1.88	23.44	1.89	22.95	1.90

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

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MAXIMUM HEATING CAPACITY

KSSMA18BA (LKMMA18B1 / KUSXA181A)

Table 45: KSSMA18BA (LKMMA18B1 / KUSXA181A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	14.99	2.40	14.66	2.48	14.24	2.56	14.00	2.60	13.82	2.64	13.32	2.72
-4	-4.4	17.13	2.54	16.75	2.63	16.27	2.71	16.00	2.76	15.79	2.80	15.21	2.88
0	-0.4	17.66	2.58	17.26	2.66	16.77	2.75	16.50	2.80	16.28	2.83	15.69	2.92
5	4.5	19.27	2.71	18.84	2.79	18.30	2.88	18.00	2.93	17.76	2.97	17.11	3.06
10	9	20.07	2.58	19.62	2.66	19.06	2.74	18.75	2.79	18.50	2.83	17.82	2.92
17	15	21.19	2.40	20.72	2.48	20.13	2.55	19.80	2.60	19.54	2.64	18.82	2.72
20	19	21.43	2.35	20.95	2.43	20.35	2.50	20.02	2.55	19.75	2.58	19.03	2.66
25	23	21.82	2.27	21.34	2.34	20.72	2.42	20.39	2.46	20.12	2.50	19.38	2.57
30	28	22.21	2.19	21.72	2.26	21.09	2.33	20.75	2.37	20.48	2.41	19.73	2.47
35	32	22.61	2.11	22.10	2.18	21.47	2.24	21.12	2.28	20.84	2.32	20.08	2.38
40	36	23.00	2.03	22.49	2.09	21.84	2.16	21.49	2.19	21.20	2.23	20.43	2.29
45	41	23.39	1.94	22.87	2.01	22.21	2.07	21.85	2.11	21.57	2.14	20.77	2.19
47	43	23.55	1.91	23.02	1.97	22.36	2.04	**22.00**	**2.07**	21.71	2.10	20.91	2.16
50	46	23.62	1.89	23.14	1.95	22.57	2.01	22.24	2.04	21.98	2.06	21.24	2.12
55	51	23.74	1.88	23.34	1.93	22.91	1.97	22.65	1.99	22.44	2.01	21.77	2.05
60	56	23.85	1.86	23.54	1.89	23.25	1.93	23.05	1.94	22.89	1.95	22.31	1.98
63	59	23.92	1.85	23.66	1.87	23.46	1.90	23.29	1.91	23.16	1.92	22.62	1.94
68	64	23.99	1.83	23.77	1.86	23.66	1.88	23.54	1.88	23.44	1.89	22.95	1.90

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

MAXIMUM HEATING CAPACITY

LGRED°

KSSMA24BA (LKMMA24B1 / KUSXA241A)

Table 46: KSSMA24BA (LKMMA24B1 / KUSXA241A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	17.67	2.95	17.27	3.05	16.78	3.15	16.50	3.20	16.28	3.24	15.70	3.34
-4	-4.4	20.35	3.04	19.89	3.15	19.32	3.24	19.00	3.30	18.76	3.35	18.07	3.44
0	-0.4	20.87	3.10	20.40	3.20	19.82	3.31	19.50	3.37	19.24	3.41	18.54	3.52
5	4.5	23.55	3.31	23.03	3.41	22.36	3.52	22.00	3.58	21.71	3.63	20.91	3.74
10	9	24.53	3.20	23.99	3.30	23.29	3.40	22.92	3.46	22.61	3.51	21.78	3.62
17	15	25.90	3.05	25.33	3.14	24.60	3.24	24.20	3.30	23.88	3.35	23.01	3.45
20	19	26.09	2.98	25.52	3.07	24.78	3.17	24.38	3.22	24.06	3.27	23.18	3.37
25	23	26.41	2.86	25.83	2.95	25.09	3.04	24.68	3.09	24.35	3.14	23.46	3.23
30	28	26.74	2.74	26.14	2.83	25.39	2.92	24.98	2.97	24.65	3.01	23.75	3.10
35	32	27.06	2.62	26.46	2.71	25.70	2.79	25.28	2.84	24.95	2.88	24.03	2.96
40	36	27.38	2.50	26.77	2.58	26.00	2.67	25.58	2.71	25.24	2.75	24.32	2.83
45	41	27.70	2.38	27.08	2.46	26.31	2.54	25.88	2.58	25.54	2.62	24.60	2.69
47	43	27.83	2.34	27.21	2.41	26.43	2.49	**26.00**	**2.53**	25.66	2.57	24.72	2.64
50	46	27.91	2.32	27.35	2.38	26.67	2.45	26.29	2.49	25.98	2.52	25.10	2.59
55	51	28.05	2.30	27.58	2.35	27.08	2.40	26.77	2.43	26.52	2.45	25.73	2.51
60	56	28.18	2.27	27.82	2.32	27.48	2.35	27.24	2.37	27.05	2.38	26.36	2.42
63	59	28.27	2.26	27.96	2.29	27.72	2.33	27.52	2.34	27.37	2.35	26.74	2.37
68	64	28.35	2.24	28.10	2.27	27.96	2.30	27.82	2.30	27.70	2.31	27.12	2.33

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

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MAXIMUM HEATING CAPACITY

KSSMA25BA (LKMMA24B1 / KUSXA301A)

Table 47: KSSMA25BA (LKMMA24B1 / KUSXA301A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	19.27	2.95	18.84	3.05	18.30	3.15	18.00	3.20	17.76	3.24	17.12	3.34
-4	-4.4	21.63	3.10	21.15	3.20	20.54	3.30	20.20	3.36	19.94	3.41	19.21	3.51
0	-0.4	22.04	3.13	21.55	3.23	20.94	3.34	20.60	3.40	20.33	3.44	19.58	3.55
5	4.5	25.69	3.61	25.12	3.72	24.40	3.84	24.00	3.91	23.69	3.96	22.81	4.09
10	9	26.13	3.38	25.56	3.48	24.82	3.59	24.42	3.66	24.09	3.71	23.21	3.82
17	15	26.76	3.05	26.17	3.14	25.41	3.24	25.00	3.30	24.67	3.35	23.77	3.45
20	19	27.08	2.98	26.48	3.07	25.72	3.17	25.30	3.22	24.96	3.27	24.05	3.37
25	23	27.61	2.86	27.00	2.95	26.22	3.04	25.80	3.09	25.46	3.14	24.53	3.23
30	28	28.15	2.74	27.52	2.83	26.73	2.92	26.30	2.97	25.95	3.01	25.00	3.10
35	32	28.69	2.62	28.05	2.71	27.24	2.79	26.80	2.84	26.45	2.88	25.48	2.96
40	36	29.22	2.50	28.57	2.58	27.75	2.67	27.30	2.71	26.94	2.75	25.95	2.83
45	41	29.76	2.38	29.09	2.46	28.26	2.54	27.80	2.58	27.44	2.62	26.43	2.69
47	43	29.97	2.34	29.30	2.41	28.46	2.49	**28.00**	**2.53**	27.63	2.57	26.62	2.64
50	46	30.06	2.32	29.45	2.38	28.72	2.45	28.31	2.49	27.98	2.52	27.03	2.59
55	51	30.21	2.30	29.70	2.35	29.16	2.40	28.83	2.43	28.56	2.45	27.70	2.51
60	56	30.35	2.27	29.96	2.32	29.59	2.35	29.34	2.37	29.13	2.38	28.39	2.42
63	59	30.45	2.26	30.11	2.29	29.85	2.33	29.64	2.34	29.48	2.35	28.79	2.37
68	64	30.53	2.24	30.26	2.27	30.11	2.30	29.96	2.30	29.83	2.31	29.21	2.33

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

MAXIMUM HEATING CAPACITY

LGRED°

KSSMA30BA (LKMMA30B1 / KUSXA301A)

Table 48: KSSMA30BA (LKMMA30B1 / KUSXA301A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	24.63	4.24	24.08	4.38	23.39	4.52	23.00	4.60	22.70	4.66	21.88	4.80
-4	-4.4	28.91	4.35	28.27	4.50	27.45	4.64	27.00	4.72	26.65	4.79	25.67	4.93
0	-0.4	29.96	4.42	29.29	4.56	28.46	4.72	28.00	4.80	27.63	4.86	26.62	5.01
5	4.5	32.76	4.60	32.03	4.74	31.10	4.89	30.60	4.98	30.20	5.05	29.09	5.21
10	9	34.14	4.49	33.38	4.63	32.42	4.78	31.89	4.86	31.47	4.93	30.32	5.08
17	15	36.07	4.34	35.27	4.48	34.25	4.62	33.70	4.70	33.25	4.77	32.04	4.91
20	19	36.21	4.21	35.41	4.35	34.39	4.48	33.83	4.56	33.38	4.63	32.16	4.77
25	23	36.44	4.00	35.63	4.13	34.61	4.26	34.05	4.34	33.60	4.40	32.37	4.53
30	28	36.67	3.80	35.86	3.92	34.83	4.04	34.26	4.11	33.81	4.17	32.57	4.29
35	32	36.91	3.59	36.08	3.70	35.05	3.82	34.48	3.88	34.03	3.94	32.78	4.05
40	36	37.14	3.38	36.31	3.49	35.27	3.60	34.70	3.66	34.24	3.71	32.98	3.81
45	41	37.37	3.17	36.53	3.27	35.49	3.38	34.91	3.43	34.46	3.48	33.19	3.58
47	43	37.47	3.08	36.62	3.19	35.58	3.29	**35.00**	**3.34**	34.54	3.39	33.27	3.48
50	46	37.57	3.06	36.82	3.15	35.90	3.24	35.38	3.29	34.97	3.33	33.79	3.42
55	51	37.76	3.03	37.13	3.11	36.45	3.17	36.03	3.21	35.69	3.24	34.63	3.31
60	56	37.94	2.99	37.45	3.06	36.99	3.11	36.67	3.13	36.42	3.15	35.49	3.20
63	59	38.06	2.98	37.64	3.02	37.32	3.07	37.05	3.08	36.85	3.10	35.99	3.13
68	64	38.16	2.95	37.82	2.99	37.64	3.03	37.45	3.03	37.29	3.04	36.51	3.07

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70°F dry bulb (DB) and 60°F wet bulb (WB), and outdoor ambient conditions of 47°F dry bulb (DB) and 43°F wet bulb (WB).

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MAXIMUM HEATING CAPACITY

KSSMA36BA (LKMMA36B1 / KUSXA361A)

Table 49: KSSMA36BA (LKMMA36B1 / KUSXA361A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	27.84	4.70	27.22	4.86	26.44	5.02	26.00	5.10	25.66	5.17	24.73	5.33
-4	-4.4	32.13	4.79	31.41	4.96	30.50	5.11	30.00	5.20	29.61	5.28	28.53	5.43
0	-0.4	33.17	4.88	32.43	5.04	31.51	5.21	31.00	5.30	30.59	5.36	29.47	5.53
5	4.5	35.33	4.96	34.54	5.11	33.54	5.28	33.00	5.37	32.57	5.44	31.37	5.61
10	9	37.11	4.82	36.28	4.96	35.24	5.12	34.67	5.22	34.21	5.29	32.95	5.45
17	15	39.60	4.62	38.73	4.76	37.61	4.91	37.00	5.00	36.51	5.07	35.17	5.22
20	19	39.71	4.49	38.83	4.63	37.71	4.78	37.10	4.86	36.61	4.93	35.27	5.08
25	23	39.89	4.28	39.00	4.42	37.88	4.55	37.27	4.63	36.77	4.70	35.43	4.84
30	28	40.07	4.07	39.18	4.20	38.05	4.33	37.43	4.41	36.94	4.47	35.59	4.60
35	32	40.25	3.86	39.35	3.98	38.22	4.11	37.60	4.18	37.10	4.24	35.74	4.36
40	36	40.43	3.64	39.52	3.76	38.39	3.88	37.77	3.95	37.27	4.01	35.90	4.12
45	41	40.61	3.43	39.69	3.55	38.56	3.66	37.93	3.72	37.44	3.78	36.06	3.88
47	43	40.68	3.35	39.76	3.46	38.63	3.57	**38.00**	**3.63**	37.50	3.68	36.12	3.78
50	46	40.79	3.32	39.97	3.42	38.98	3.52	38.42	3.57	37.97	3.61	36.69	3.71
55	51	41.00	3.29	40.31	3.38	39.57	3.45	39.12	3.49	38.75	3.52	37.60	3.60
60	56	41.19	3.25	40.66	3.32	40.16	3.38	39.81	3.40	39.54	3.42	38.53	3.47
63	59	41.32	3.24	40.87	3.28	40.52	3.33	40.23	3.35	40.00	3.36	39.07	3.40
68	64	41.43	3.21	41.06	3.25	40.87	3.29	40.66	3.29	40.49	3.31	39.64	3.33

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

MAXIMUM HEATING CAPACITY

LGRED°

KSSMA36CA (LKMMA36C1 / KUSXA361A)

Table 50: KSSMA36CA (LKMMA36C1 / KUSXA361A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	28.91	4.80	28.27	4.96	27.46	5.11	27.00	5.20	26.65	5.27	25.68	5.43
-4	-4.4	33.20	4.88	32.45	5.05	31.52	5.21	31.00	5.30	30.60	5.38	29.48	5.53
0	-0.4	34.24	4.97	33.48	5.13	32.53	5.30	32.00	5.40	31.58	5.46	30.42	5.64
5	4.5	35.33	4.96	34.54	5.11	33.54	5.28	33.00	5.37	32.57	5.44	31.37	5.61
10	9	37.11	4.85	36.28	5.00	35.24	5.17	34.67	5.26	34.21	5.33	32.95	5.49
17	15	39.60	4.71	38.73	4.86	37.61	5.01	37.00	5.10	36.51	5.18	35.17	5.33
20	19	39.71	4.57	38.83	4.72	37.71	4.87	37.10	4.95	36.61	5.03	35.27	5.17
25	23	39.89	4.35	39.00	4.49	37.88	4.63	37.27	4.71	36.77	4.78	35.43	4.91
30	28	40.07	4.12	39.18	4.25	38.05	4.39	37.43	4.46	36.94	4.53	35.59	4.66
35	32	40.25	3.89	39.35	4.02	38.22	4.15	37.60	4.22	37.10	4.28	35.74	4.40
40	36	40.43	3.67	39.52	3.79	38.39	3.91	37.77	3.97	37.27	4.03	35.90	4.14
45	41	40.61	3.44	39.69	3.55	38.56	3.67	37.93	3.73	37.44	3.78	36.06	3.88
47	43	40.68	3.35	39.76	3.46	38.63	3.57	**38.00**	**3.63**	37.50	3.68	36.12	3.78
50	46	40.79	3.32	39.97	3.42	38.98	3.52	38.42	3.57	37.97	3.61	36.69	3.71
55	51	41.00	3.29	40.31	3.38	39.57	3.45	39.12	3.49	38.75	3.52	37.60	3.60
60	56	41.19	3.25	40.66	3.32	40.16	3.38	39.81	3.40	39.54	3.42	38.53	3.47
63	59	41.32	3.24	40.87	3.28	40.52	3.33	40.23	3.35	40.00	3.36	39.07	3.40
68	64	41.43	3.21	41.06	3.25	40.87	3.29	40.66	3.29	40.49	3.31	39.64	3.33

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

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MAXIMUM HEATING CAPACITY

KSSMA42CA (LKMMA42C1 / KUSXA422A)

Table 51: KSSMA42CA (LKMMA42C1 / KUSXA422A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	35.33	5.35	34.55	5.53	33.56	5.70	33.00	5.80	32.57	5.88	31.39	6.06
-4	-4.4	40.48	5.34	39.57	5.53	38.43	5.70	37.80	5.80	37.31	5.88	35.94	6.05
0	-0.4	41.73	5.43	40.80	5.61	39.64	5.80	39.00	5.90	38.48	5.97	37.08	6.16
5	4.5	43.89	5.84	42.91	6.01	41.68	6.21	41.00	6.32	40.46	6.41	38.97	6.61
10	9	44.78	5.64	43.78	5.81	42.52	6.00	41.83	6.10	41.28	6.19	39.77	6.38
17	15	46.02	5.36	45.01	5.53	43.71	5.70	43.00	5.80	42.43	5.89	40.88	6.06
20	19	46.45	5.22	45.42	5.38	44.11	5.55	43.40	5.65	42.82	5.73	41.26	5.90
25	23	47.16	4.99	46.12	5.15	44.79	5.31	44.07	5.40	43.48	5.48	41.89	5.64
30	28	47.88	4.76	46.82	4.91	45.47	5.07	44.73	5.15	44.14	5.23	42.53	5.38
35	32	48.59	4.53	47.51	4.67	46.15	4.82	45.40	4.90	44.80	4.98	43.16	5.12
40	36	49.31	4.30	48.21	4.44	46.82	4.58	46.07	4.65	45.46	4.72	43.79	4.85
45	41	50.03	4.07	48.90	4.20	47.50	4.34	46.73	4.40	46.12	4.47	44.43	4.59
47	43	50.31	3.97	49.18	4.11	47.77	4.24	**47.00**	**4.31**	46.39	4.37	44.68	4.49
50	46	50.45	3.94	49.44	4.06	48.21	4.17	47.52	4.24	46.96	4.29	45.37	4.40
55	51	50.71	3.91	49.86	4.01	48.94	4.09	48.39	4.14	47.93	4.17	46.50	4.27
60	56	50.95	3.86	50.29	3.94	49.68	4.01	49.24	4.04	48.90	4.06	47.65	4.12
63	59	51.11	3.84	50.55	3.89	50.11	3.96	49.76	3.97	49.48	3.99	48.33	4.04
68	64	51.24	3.81	50.79	3.86	50.55	3.91	50.29	3.91	50.07	3.92	49.02	3.96

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

MAXIMUM HEATING CAPACITY

LGRED°

KSSMA48CA (LKMMA48C1 / KUSXA482A)

Table 52: KSSMA48CA (LKMMA48C1 / KUSXA482A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	36.40	5.44	35.59	5.62	34.57	5.80	34.00	5.90	33.55	5.98	32.34	6.16
-4	-4.4	41.76	5.53	40.83	5.72	39.65	5.90	39.00	6.00	38.50	6.09	37.08	6.26
0	-0.4	43.87	5.57	42.89	5.75	41.67	5.94	41.00	6.05	40.46	6.12	38.98	6.32
5	4.5	46.03	6.12	45.00	6.31	43.71	6.51	43.00	6.63	42.44	6.72	40.87	6.93
10	9	46.92	5.92	45.88	6.10	44.55	6.30	43.83	6.41	43.26	6.50	41.67	6.70
17	15	48.16	5.63	47.10	5.81	45.74	5.99	45.00	6.10	44.40	6.19	42.78	6.37
20	19	48.91	5.51	47.83	5.68	46.45	5.86	45.70	5.97	45.09	6.05	43.45	6.23
25	23	50.16	5.30	49.05	5.47	47.64	5.64	46.87	5.74	46.25	5.83	44.55	5.99
30	28	51.41	5.09	50.27	5.26	48.82	5.43	48.03	5.52	47.40	5.60	45.66	5.76
35	32	52.66	4.89	51.49	5.05	50.01	5.21	49.20	5.29	48.55	5.37	46.77	5.52
40	36	53.91	4.68	52.71	4.84	51.20	4.99	50.37	5.07	49.71	5.15	47.88	5.29
45	41	55.16	4.47	53.93	4.62	52.38	4.77	51.53	4.85	50.86	4.92	48.99	5.05
47	43	55.66	4.39	54.41	4.54	52.86	4.68	**52.00**	**4.76**	51.32	4.83	49.43	4.96
50	46	55.82	4.35	54.70	4.48	53.34	4.61	52.57	4.68	51.96	4.74	50.20	4.87
55	51	56.10	4.32	55.16	4.43	54.15	4.52	53.54	4.57	53.03	4.61	51.45	4.72
60	56	56.37	4.26	55.64	4.35	54.96	4.43	54.48	4.46	54.11	4.48	52.72	4.56
63	59	56.54	4.24	55.93	4.30	55.44	4.37	55.05	4.39	54.74	4.41	53.47	4.46
68	64	56.70	4.21	56.19	4.26	55.93	4.32	55.64	4.32	55.40	4.34	54.24	4.37

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

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MAXIMUM HEATING CAPACITY

KSSMA48DA (LKMMA48D1 / KUSXA482A)

Table 53: KSSMA48DA (LKMMA48D1 / KUSXA482A) Maximum Heating Capacities.

Outdoor Air Temp.		Indoor Air Temperature (°F DB)											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-13	-13.4	37.47	5.49	36.64	5.67	35.59	5.85	35.00	5.95	34.54	6.03	33.29	6.21
-4	-4.4	42.83	5.53	41.88	5.72	40.67	5.90	40.00	6.00	39.49	6.09	38.04	6.26
0	-0.4	44.51	5.66	43.52	5.84	42.28	6.04	41.60	6.15	41.05	6.22	39.55	6.42
5	4.5	46.03	6.12	45.00	6.31	43.71	6.51	43.00	6.63	42.44	6.72	40.87	6.93
10	9	47.36	5.92	46.31	6.10	44.98	6.30	44.25	6.41	43.67	6.50	42.06	6.70
17	15	49.23	5.63	48.15	5.81	46.76	5.99	46.00	6.10	45.39	6.19	43.73	6.37
20	19	49.87	5.51	48.77	5.68	47.37	5.86	46.60	5.97	45.98	6.05	44.30	6.23
25	23	50.95	5.30	49.82	5.47	48.38	5.64	47.60	5.74	46.97	5.83	45.25	5.99
30	28	52.02	5.09	50.86	5.26	49.40	5.43	48.60	5.52	47.96	5.60	46.20	5.76
35	32	53.09	4.89	51.91	5.05	50.42	5.21	49.60	5.29	48.95	5.37	47.15	5.52
40	36	54.16	4.68	52.95	4.84	51.43	4.99	50.60	5.07	49.94	5.15	48.10	5.29
45	41	55.24	4.47	54.00	4.62	52.45	4.77	51.60	4.85	50.92	4.92	49.05	5.05
47	43	55.66	4.39	54.41	4.54	52.86	4.68	**52.00**	**4.76**	51.32	4.83	49.43	4.96
50	46	55.82	4.35	54.70	4.48	53.34	4.61	52.57	4.68	51.96	4.74	50.20	4.87
55	51	56.10	4.32	55.16	4.43	54.15	4.52	53.54	4.57	53.03	4.61	51.45	4.72
60	56	56.37	4.26	55.64	4.35	54.96	4.43	54.48	4.46	54.11	4.48	52.72	4.56
63	59	56.54	4.24	55.93	4.30	55.44	4.37	55.05	4.39	54.74	4.41	53.47	4.46
68	64	56.70	4.21	56.19	4.26	55.93	4.32	55.64	4.32	55.40	4.34	54.24	4.37

DB: Dry Bulb Temperature (°F) WB: Wet Bulb Temperature (°F) TC: Total Capacity (kBtu/h)

PI: Power Input (kW) (includes compressor and outdoor fan motor)

1. All capacities are net, evaporator fan motor heat is deducted.
2. Direct interpolation is permissible. ⃠ Do not extrapolate.

Capacity as rated: 0 ft. above sea level with 24.6 ft. of refrigerant piping. 0 ft. level difference between outdoor unit and indoor component.

Heating capacity rating obtained with air entering the indoor component at 70ºF dry bulb (DB) and 60ºF wet bulb (WB), and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Cooling / Heating Correction Factors

For single zone systems, calculate the equivalent length of the liquid line from the outdoor unit to the A-Coil unit. Also, determine the elevation difference of the A-Coil unit above or below the outdoor unit. Find corresponding cooling or heating capacity correction factors as shown below. Multiply the correction factors by the cooling or heating capacity obtained from the capacity table using design conditions. The resultant is the NET cooling or heating capacity.

Refrigerant Line Length Derates

For air-cooled systems, a capacity correction factor will have to be applied to account for the length of the system's refrigerant pipe. Rate of change in capacity due to increased piping lengths is shown below.

Table 54: R32 Single-Zone Systems - A-Coil with LGRED Cooling and Heating Capacity Coefficient Factors.

Piping Length (ft.)		24.6	32.8	49.2	65.6	98.4	131.2	164	196.9	229.7	246
Cooling Capacity Coefficient Factor											
Rate of Capacity Change (%)	KSSMA18AA (18,000 Btu/h)	100	100	99	98.1	96.1	94.3	92.1	-	-	-
	KSSMA18BA (18,000 Btu/h)	100	100	99	98.1	96.1	94.3	92.1	-	-	-
	KSSMA24BA (24,000 Btu/h)	100	100	99	98.1	96.1	94.3	92.1	-	-	-
	KSSMA25BA (24,000 Btu/h)	100	100	99	98.1	96.1	94.3	92.1	94	92.5	91.8
	KSSMA30BA (30,000 Btu/h)	100	100	99	98.1	96.1	94.3	92.1	94	92.5	91.8
	KSSMA36BA (36,000 Btu/h)	100	100	100	100	98.5	97	95.5	94	92.5	91.8
	KSSMA36CA (36,000 Btu/h)	100	100	100	100	98.5	97	95.5	94	92.5	91.8
	KSSMA42CA (42,000 Btu/h)	100	100	100	100	98.5	97	95.5	94	92.5	91.8
	KSSMA48CA (48,000 Btu/h)	100	100	100	100	98.5	97	95.5	94	92.5	91.8
	KSSMA48DA (48,000 Btu/h)	100	100	100	100	98.5	97	95.5	94	92.5	91.8
Heating Capacity Coefficient Factor											
Rate of Capacity Change (%)"	KSSMA18AA (18,000 Btu/h)	100	99.8	99.4	99	98.3	97.2	96.2	-	-	-
	KSSMA18BA (18,000 Btu/h)	100	99.8	99.4	99	98.3	97.2	96.2	-	-	-
	KSSMA24BA (24,000 Btu/h)	100	99.8	99.4	99	98.3	97.2	96.2	-	-	-
	KSSMA25BA (24,000 Btu/h)	100	99.8	99.4	99	98.3	97.2	96.2	94	92.5	91.8
	KSSMA30BA (30,000 Btu/h)	100	99.8	99.4	99	98.3	97.2	96.2	94	92.5	91.8
	KSSMA36BA (36,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93
	KSSMA36CA (36,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93
	KSSMA42CA (42,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93
	KSSMA48CA (48,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93
	KSSMA48DA (48,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93

Equivalent Piping Length for Piping Components

Table 55: Equivalent Piping Length for Elbows.

Component	Size (Inches)													
Elbow (ft.)	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-5/8	1-3/4	2-1/8
	0.5	0.6	0.7	0.8	1.2	1.3	1.5	1.6	1.8	2.0	2.1	2.3	2.5	2.8

Altitude Correction Factor

The impact of air density must be considered on systems installed at a significant altitude above sea level, therefore, locally accepted altitude correction factors must be applied.

CORRECTION FACTORS / CHECK SELECTION

Defrost Correction Factor for Heating Operation

The outdoor unit heating capacity will need to be adjusted for frost accumulation on air-cooled systems. If design day conditions are below the dewpoint of the surrounding air, frost will not be a problem and no correction factor is needed. In certain weather conditions, however, frost will form and accumulate on the air-cooled outdoor unit coil and impact the coils ability to transfer heat. If significant frost accumulates on the outdoor unit coil, a defrost algorithm will start automatically. The timing between defrost periods is determined by the system's ability to achieve a target head pressure value.

Capacity and AHRI ratings tables do not factor in capacity reduction when frost has accumulated on the condenser coil, nor during defrost operation.

Integrated heating capacity values can be obtained using the formula:

A = B x C

Where:

A = Integrated Heating Capacity.
B = Value found in the Capacity Table.
C = Correction Factor for Frost Accumulation Factor (from table at right).

Table 56: Outdoor Unit Frost Accumulation Factor (Heating)1.

Entering DB (ºF)	19.4	23.0	26.6	32.0	37.4	41.0	44.6
Derate Factor	0.98	0.95	0.93	0.86	0.93	0.96	1.0

[1]At 85% outdoor air relative humidity.

The frost accumulation factor does not account for effects of snow accumulation restricting airflow through the outdoor unit coil.

NOTICE

There will be a temporary reduction in capacity when frost / ice accumulates on the outside surface of the outdoor unit heat exchanger. The level of capacity reduction depends on a number of factors, for example, outdoor temperature (°F DB), relative humidity (RH), and the amount of frost present.

Check the A-Coil Unit and Outdoor Unit Selection(s)

Compare the corrected cooling and heating capacities to the load calculations. Is each capacity sufficient for the zone it serves?

For each A-Coil unit, the corrected capacity must be at least equal to the total of the cooling design load (plus ventilation load, if applicable) for the space(s) served by the A-Coil unit. For each A-Coil unit, the corrected capacity also must be at least equal to the total of the heating design load (plus ventilation load, if applicable) for the space(s) and / or thermal zones served by the A-Coil unit.

The outdoor unit selected must be large enough to offset the total cooling load for all spaces it serves (account for ventilation air cooling load if the ventilation air has not been pretreated to room neutral conditions). The outdoor unit must also be large enough to offset the total heating load for all spaces it serves.

If the corrected heating capacity ratio exceeds 100%, reselect the equipment, or change the system design by moving some of the load to another system.

System Sizing Check Formulas

1. Outdoor Unit Rated Capacity.
$Q_{odu(rated)}$ (From capacity tables).

2. Outdoor Unit Capacity at Ti, To Temperature.
$Q_{odu(Ti,\ To)}$ (From capacity tables).

3. Outdoor Unit Capacity Coefficient Factor.
$F_{(Ti,\ To)} = Q_{odu(Ti,\ To)} / Q_{odu(rated)}$

4. Piping Correction Factor (From Capacity Coefficient Factor Tables).
$F_{(length)}$ for each piping length

5. Individual A-Coil Unit Combination Capacity.
$Q_{acu\ (combi)} = Q_{odu(rated)} \times Q_{acu(rated)} / Q_{acu\ (rated\text{-}total)}$

6. Individual A-Coil Unit Actual Capacity.
$Q_{acu\ (actual)} = Q_{odu(combi)} \times F_{(Ti,\ To)} \times F_{(length,\ altitude)}$

Conclusions and Recommendations

- Understand the design safety factors.
- Reference load calculations for actual cooling and heating capacities (applies in 99% of applications – consider total load when latent load is greater than 30%).
- Verify that the sensible load of the zone is satisfied.
- Use caution when sizing to meet listed capacity specifications for the scheduled manufacturer's equipment.

If further system design assistance is needed, or you have a unique application you would like to discuss, contact an LG sales rep.

APPLICATION GUIDELINES

PLACEMENT / CLEARANCE CONSIDERATIONS

A-Coil Units

Selecting the Best Location for the A-Coil and Other Indoor Components

NOTICE

Follow recommended best practices when choosing an indoor location for the single zone indoor components.

Dos

Select a location for installing the indoor components that will meet the following conditions:

- *Place the unit where air circulation will not be blocked.*
- *Locate the indoor components in a location that is level, with enough strength to bear the weight of the indoor components, and where the components can be easily connected to the outdoor unit.*
- *Place the unit where drainage can be obtained easily. Condensation drain must be conveniently routed away from the unit.*
- *Include enough space around the indoor components so that they are accessible for maintenance and service purposes.*
- *Where electrical noise / electromagnetic waves will not affect indoor component operation. Maintain proper distances between the indoor components and electric wires, audio and visual appliances, breaker / circuit panels, etc. If the frequency signal of the appliance is unstable, then install the indoor components a minimum of ten (10) feet away, and run the power and transmission cables through a conduit.*
- *Place the unit where operating sound will not disturb occupants.*
- *Follow manufacturers' instructions for third-party furnaces and controllers.*

⃠ Do Nots

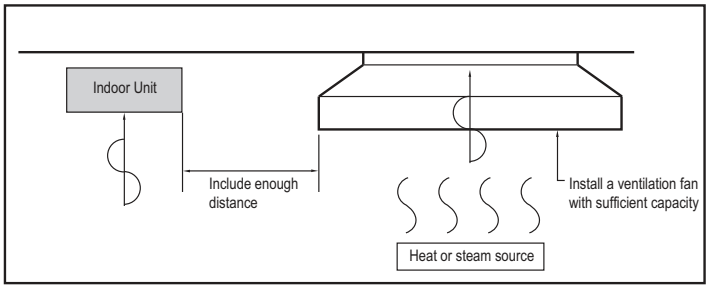
- *Do not install the unit near a heat or steam source, or where considerable amounts of oil, iron powder, or flour are used. (These materials may generate condensate, cause a reduction in heat exchanger efficiency, or the drain to malfunction. If this is a potential problem, install a ventilation fan large enough to vent out these materials.)*
- *Ensure there are no obstacles to air circulation around the unit; keep proper distances from ceilings, doorways, floor, walls, etc.*
- *Avoid installing the indoor components near high-frequency generators or near any equipment that generates an electromagnetic field (minimum 3-1/3 feet away).*

⚠ WARNING

The unit must not be installed where sulfuric acid and flammable or corrosive gases are generated, vented into, or stored. There is risk of fire, explosion, and physical injury or death.

The unit may be damaged, may malfunction, and / or will not operate as designed if installed in any of the conditions listed.

Figure 18: Installing Near a Heat or Steam Source.



NOTICE

- ⃠ *Indoor components must not be placed in an environment where they may be exposed to harmful volatile organic compounds (VOCs) or in environments where there is improper air make up or supply or inadequate ventilation. If there are concerns about VOCs in the environment where the indoor components are installed, proper air make up or supply and/ or adequate ventilation must be provided. Additionally, in buildings where the indoor components will be exposed to VOCs consider a factory-applied epoxy coating to the fan coils for each component.*
- *If the indoor components are installed near a body of water, the installation parts are at risk of corroding. Appropriate anti-corrosion methods must be taken for the components and all installation parts.*

Installing in an Area with High Humidity Levels

If the environment is prone to humidity levels of 80% or more (near the ocean, lakes, etc.) or where steam could collect in the plenum:

- Install additional insulation to the A-coil unit (glass wool insulation >13/32 inches thick).
- Install additional insulation to the refrigerant piping (insulation >13/16 inches thick).
- Seal all gaps between the A-Coil unit and the ceiling tiles (make the area air tight) so that humidity does not transfer from the plenum to the conditioned space. Also, add a ceiling grille for ventilation.

A-Coil Installation Options

LG A-Coils are designed for upflow, downflow, horizontal right, and horizontal left applications. For horizontal installations, a blowoff guard is necessary to prevent furnace air from blowing condensate out of the A-Coil. The condensate blowoff guard is included with the A-Coil.

Figure 19: Example of an Upflow (Vertical) Installation.

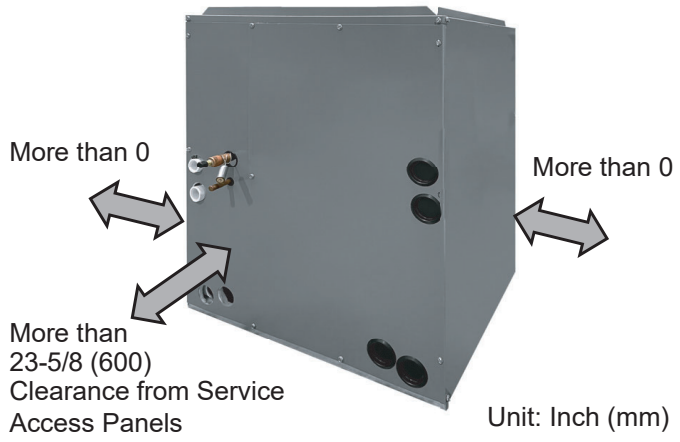
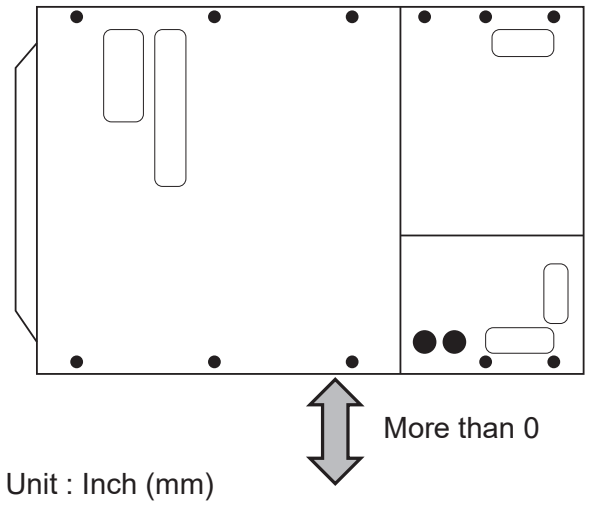


Figure 20: Example of a Horizontal Installation.



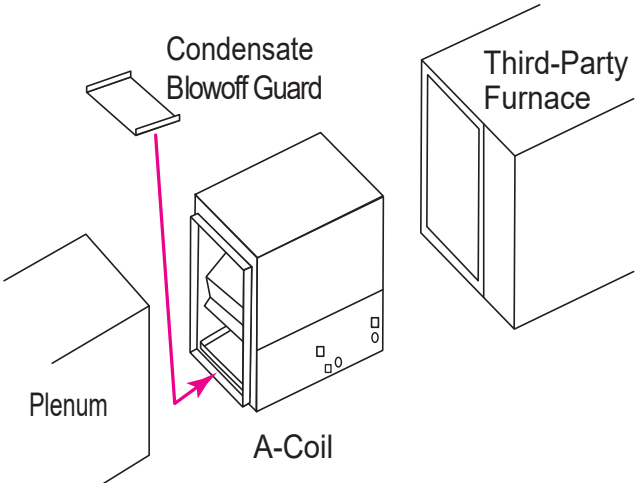
NOTICE

Ensure the ductwork and its material follows local, state, and federal codes for supplying / circulating air.
There is risk of product failure and / or damage.

NOTICE

Installation depends on furnace and A-Coil sizes. For more detailed information, see the installation manual on www.lghvac.com.

Figure 21: Horizontal Installation with Condensate Blowoff Guard.



PLACEMENT / CLEARANCE CONSIDERATIONS

LGRED°

Outdoor Units

Selecting the Best Location for the Outdoor Unit

⚠DANGER

- ⃠ *Do not install the unit in an area where combustible gas will generate, flow, stagnate, or leak. These conditions can cause a fire, resulting in bodily injury or death.*
- ⃠ *Do not install the unit in a location where acidic solution and spray (sulfur) are often used as it can cause bodily injury or death.*
- ⃠ *Do not use the unit in environments where oil, steam, or sulfuric gas are present as it can cause bodily injury or death.*

⚠WARNING

When deciding on a location to place the outdoor unit, be sure to choose an area where run-off from defrost will not accumulate and freeze on sidewalks or driveways, which will create unsafe conditions. Properly install and insulate any drain hoses to prevent the hose from freezing, cracking, leaking, and causing unsafe conditions from frozen condensate.

Install a fence to prevent pests from crawling into the unit or unauthorized individuals from accessing it. Pests and unauthorized individuals can damage internal components which can cause a fire, electric shock, physical injury or death. Follow the placement guidelines set forth in "Clearance Requirements".

Select a location for installing the outdoor unit that will meet the following conditions:

Dos

- *Where there is enough strength to bear the weight of the unit.*
- *A location that allows for optimum air flow and is easily accessible for inspection, maintenance, and service.*
- *Where piping between the outdoor unit and indoor unit is within allowable limits.*
- *Include space for drainage to ensure condensate flows properly out of the unit when it is in heating mode.* ⃠ *Avoid placing the outdoor unit in a low-lying area where water could accumulate.*
- *If the outdoor unit is installed in a highly humid environment (near an ocean, lake, etc.), ensure that the site is well-ventilated and has a lot of natural light (Example: Install on a rooftop).*

⃠ **Do Nots**

- *Where it will be subjected to direct thermal radiation from other heat sources, or an area that would expose the outdoor unit to heat or steam like discharge from boiler stacks, chimneys, steam relief ports, other air conditioning units, kitchen vents, plumbing vents, and other sources of extreme temperatures.*
- *Where high-frequency electrical noise / electromagnetic waves will affect operation.*
- *Where operating sound from the unit will disturb inhabitants of surrounding buildings.*
- *Where the unit will be exposed to direct, strong winds.*
- *Where the discharge of one outdoor unit will blow into the inlet side of an adjacent unit (when installing multiple outdoor units).*

NOTICE

The indoor unit may take longer to provide heat, or heating performance will be reduced in winter if the outdoor unit is installed:

1. *In a narrow, shady location.*
2. *Near a location that has a lot of ground moisture.*
3. *In a highly humid environment.*
4. *In an area in which condensate does not drain properly.*

Outdoor Unit Condensate Drain Piping

Outdoor unit requires condensate drain piping. Condensate drain pipe is constructed with materials approved by local code. See pages 82 to 86 for information in reference to outdoor unit placement.

LG

Planning for Snow and Ice

To ensure the outdoor unit operates properly, certain measures are required in locations where there is a possibility of heavy snowfall or severe windchill or cold:

1. Prepare for severe winter wind chills and heavy snowfall, even in areas of the country where these are unusual phenomena.
2. Position the outdoor unit so that its airflow fans are not buried by direct, heavy snowfall. If snow piles up and blocks the airflow, the system will malfunction.
3. Remove any snow that has accumulated four (4) inches or more on the top of the outdoor unit.
4. In climates that will experience significant snow buildup, mount the outdoor unit on a raised, field-provided platform or stand. The raised support platform must be high enough to allow the unit to remain above possible snow drifts, and must be higher than the maximum anticipated snowfall for the location.
5. Design the mounting base to prevent snow accumulation on the platform in front or back of the unit frame.
6. Provide a field fabricated snow protection hood to keep snow and ice and/or drifting snow from accumulating on the coil surfaces.
7. To prevent snow and heavy rain from entering the outdoor unit, install the condenser air inlets and outlets facing away from direct winds.
8. Consider tie-down requirements in case of high winds or where required by local codes.

⚠CAUTION

When deciding on a location to place the outdoor unit, be sure to choose an area where run-off from defrost will not accumulate and freeze on sidewalks or driveways, which will create unsafe conditions.

NOTICE

Choose an area where run-off from defrost mode will not accumulate and freeze on sidewalks or driveways. Properly install and insulate any drain hoses to prevent the hose from freezing, cracking, leaking, and damaging the outdoor unit.

Tie-Downs, Lightning Protection, and Wind Protection

Tie-Downs

- The strength of the roof must be checked before installing the outdoor units.
- The strength of the outdoor unit frames is adequate to be used with field-provided wind restraint tie-downs.
- If the installation site is prone to high winds or earthquakes, when installing on the wall or roof, securely anchor the mounting base using a field-provided tie-down configuration approved by a local professional engineer.
- The overall tie-down configuration must be approved by a local professional engineer.

NOTICE

Always refer to local code when using a wind restraint system.

Lightning Protection

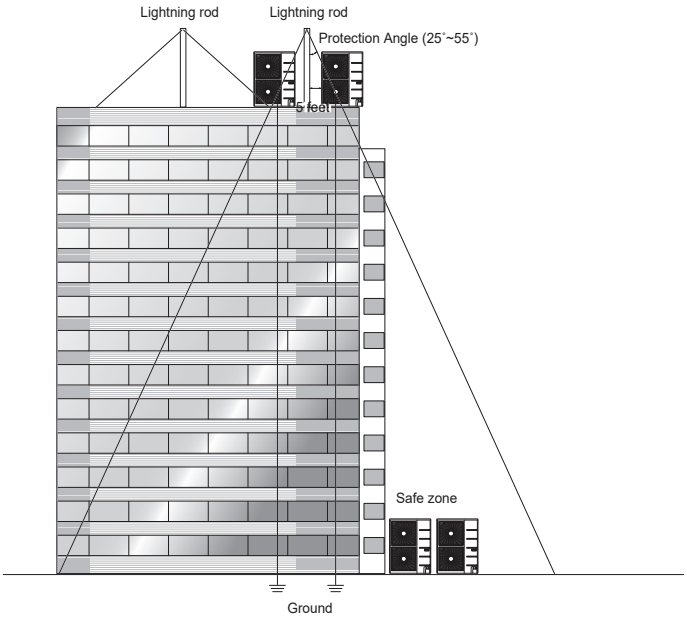
- To protect the outdoor unit from lightning, it must be placed within the specified lightning safety zone.

Table 57: Safety Zone Specifications.

Building Height (feet)	66	98	148	197
Protection Angle (˚)	55	45	35	25

- Power cable and communication cable must be installed five (5) feet away from lightning rod.
- A high-resistance ground system must be included to protect against induced lightning or indirect strike.

Figure 22: Lightning Protection Diagram (Outdoor Unit Appearances Differ According to Model).



NOTICE

If the building does not include lightning protection, the outdoor unit will be damaged from a lightning strike. Inform the customer of this possibility in advance.

Application Guidelines

PLACEMENT / CLEARANCE CONSIDERATIONS

Outdoor Units

Oceanside Applications

Wind Protection

If the outdoor unit is placed on a roof, position it with the compressor end (no coil surface) in the direction of the prevailing wind as shown in the figure at right. In cooler climates, it may be beneficial to position the unit in direct sunlight to assist with defrost operations.

If the outdoor unit is not placed on a roof, place it on the leeward side of the building or in a location where the unit will not be exposed to constant wind.

If placement exposes the unit to constant wind activity, construct a wind break in front of the unit. Follow the placement guidelines set forth in “Clearance Requirements”.

Figure 23: Prevailing Wind Direction.

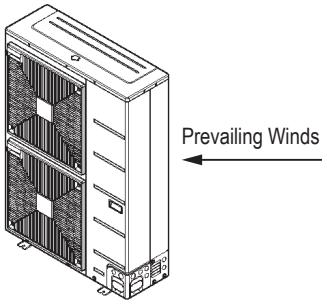
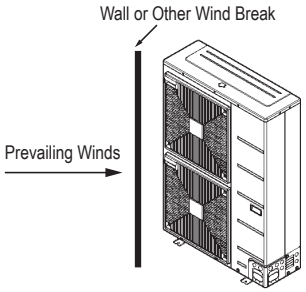


Figure 24: Leeward Side of the Building.

Figure 25: Wind Break.



Oceanside Application Precautions

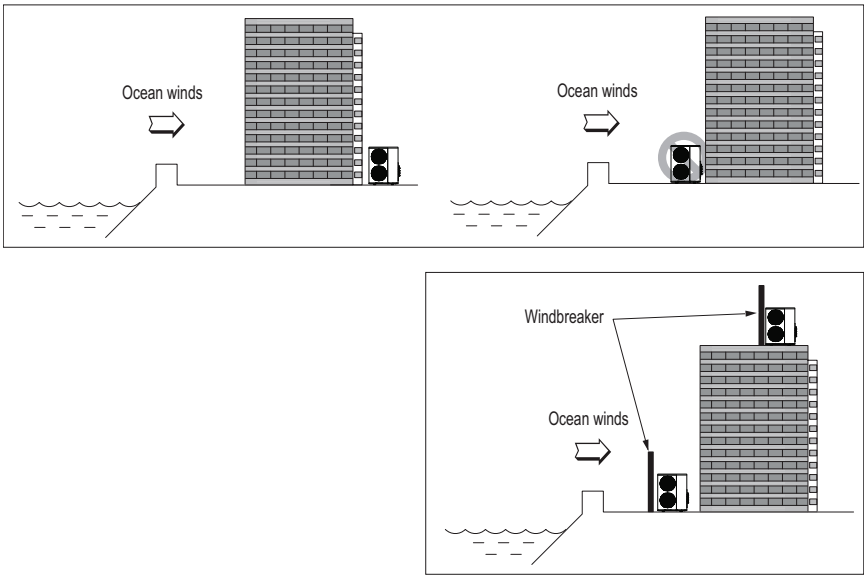
NOTICE

Ocean winds will cause corrosion, particularly on the condenser and evaporator fins, which, in turn could cause product malfunction or inefficient performance.

- ⃠ Avoid installing the outdoor unit where it would be directly exposed to ocean winds.
- Install the outdoor unit on the side of the building opposite from direct ocean winds.
- Select a location with good drainage.
- Periodically clean dust or salt particles off of the heat exchanger with water.

If the outdoor unit must be placed in a location where it would be subjected to direct ocean winds, install a concrete windbreak strong enough to block any winds. Windbreaker height and width must be more than 150% of the outdoor unit, and be installed at least 14 to 28 inches away from the outdoor unit to allow for airflow (depending on the location and outdoor unit size).

Figure 26: Oceanside Placement Using a Building as Shield, and Placement Using a Windbreak.



NOTICE

Additional anti-corrosion treatment may need to be applied to the outdoor unit at oceanside locations.

Minimum Allowable Clearance and Service Access Requirements

Proper clearance for the outdoor unit coil is critical for proper unit operation. When installing the outdoor unit, consider service, inlet and outlet and minimum allowable space requirements as illustrated in the diagrams on the following pages.

- Include enough space for airflow and for service access. If installing multiple outdoor units, ⃠ avoid placing the units where the discharge of one unit will blow into the inlet side of an adjacent unit.
- If an awning is built over the unit to prevent direct sunlight or rain exposure, make sure that the discharge air of the outdoor unit isn't restricted.
- ⃠ No obstacles to air circulation around the unit; keep proper distances from ceilings, fences, floor, walls, etc. (Install a fence to prevent pests from damaging the unit or unauthorized individuals from accessing it.)

Minimum Clearance Requirements for Single Fan Outdoor Units

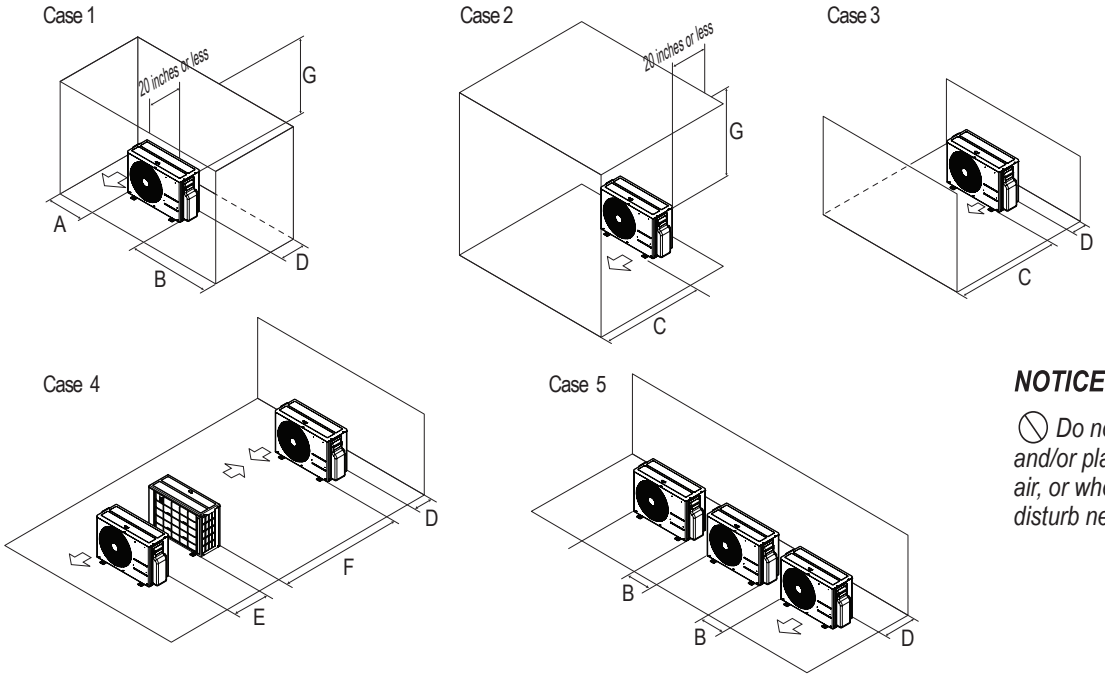
Specific clearance requirements in the diagram below are for single fan outdoor units. The figure below shows the overall minimum clearances that must be observed for safe operation and adequate airflow around the outdoor unit.

When placing the outdoor unit under an overhang, awning, sunroof or other "roof-like structure", observe the clearance requirements (as shown in Cases 1 and 2) for height in relation to the unit. To have successful service access to the outdoor unit, see the figure below for minimum spacing. When installing multiple outdoor units, see Cases 4 and 5 for correct spacing requirements.

NOTICE

If the outdoor unit is installed between standard and minimum clearances, capacity decreases approximately 10%.

Figure 27: Single Fan Outdoor Unit Service Access and Allowable Clearances Diagram.



NOTICE

⃠ *Do not place the unit where animals and/or plants will be in the path of the warm air, or where the warm air and/or noise will disturb neighbors.*

Table 58: Single Fan Outdoor Unit Service Access and Allowable Clearances Diagram Legend.

Unit: Inch		A	B	C	D	E	F	G
Case 1	Standard	12	24	-	12	-	-	-
	Minimum	4	10	-	4	-	-	40
Case 2	Standard	-	-	20	-	-	-	-
	Minimum	-	-	14	-	-	-	40
Case 3	Standard	-	-	20	12	-	-	-
	Minimum	-	-	14	4	-	-	-
Case 4	Standard	-	-	-	12	24	-	-
	Minimum	-	-	-	4	8	79	-
Case 5	Standard	-	24	-	12	-	-	-
	Minimum	-	10	-	4	-	-	-

PLACEMENT / CLEARANCE CONSIDERATIONS

Outdoor Units

Minimum Clearance Requirements for Dual Fan Outdoor Units

Figures below and on the next page illustrate clearance requirements for various installation scenarios for dual fan outdoor units. Use the hot isle / cold isle approach when placing multiple units in close proximity to each other. Outdoor unit fans draw air from the back of the unit and discharges out the front. Place units back to back and face to face.

NOTICE

- *Installation clearances must comply with local building codes.*
- *All figures not to scale.*
- ⃠ *Never place multiple units facing back to front or front to back as shown immediately below here or high and low system pressure problems will occur.*

Figure 28: Improper Outdoor Unit Placement.

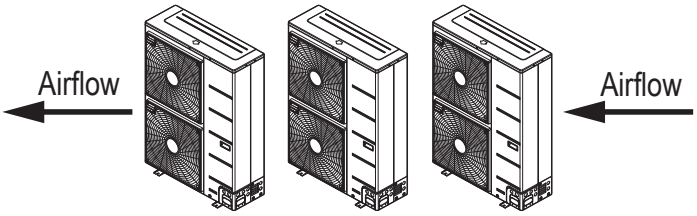
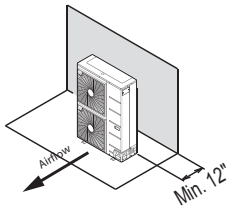
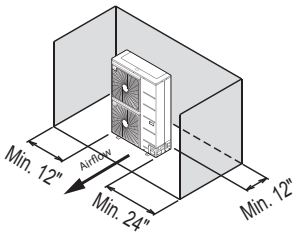


Figure 29: Proper Outdoor Unit Placement and Clearances When There Are Obstacles on the Suction Side.

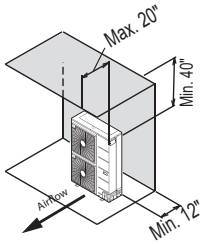
Single Unit—High Rear Wall



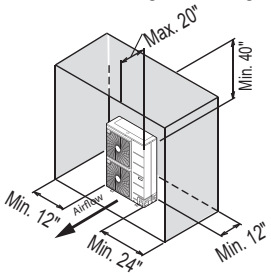
Single Unit—High Rear Wall with High Side Walls



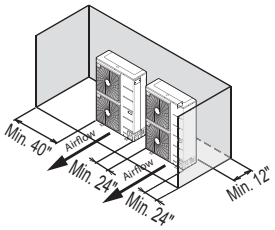
Single Unit—High Rear Wall with Building Overhang



Single Unit—High Rear and Side Walls with Building Overhang



Side by Side—High Rear and Side Walls



Side by Side—High Rear and Side Walls with Building Overhang

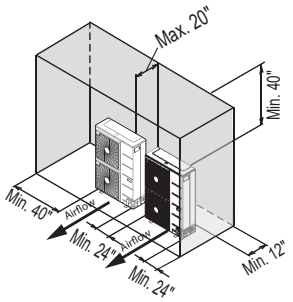
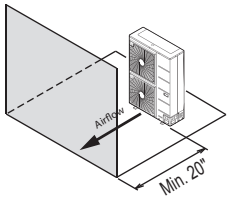
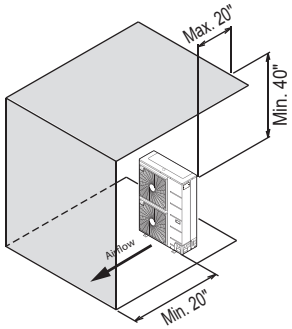


Figure 30: Proper Outdoor Unit Placement and Clearances When There Are Obstacles on the Discharge Side.

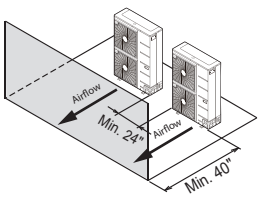
Single Unit—High Front Wall with No Side Walls



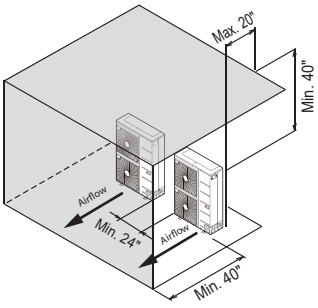
Single Unit—High Front Wall with Building Overhang and No Side Walls



Side by Side—High Front Wall with No Side Walls



Side by Side—High Front Wall with Building Overhang and No Side or Rear Walls



PLACEMENT / CLEARANCE CONSIDERATIONS

Outdoor Units

Minimum Clearance Requirements for Dual Fan Outdoor Units, Continued.

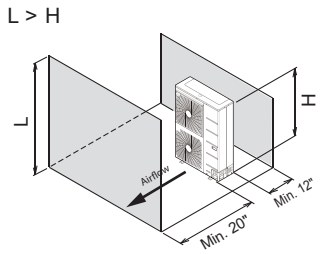
NOTICE

- *Installation clearances must comply with local building codes.*
- *All figures not to scale.*

Figure 31: Proper Outdoor Unit Placement and Clearances When There Are Obstacles on the Suction and the Discharge Sides.

When Obstacle Height of the Discharge Side is Higher than the Outdoor Unit.

Single Unit—High Rear and Front Walls with No Side Walls



Single Unit—High Rear and Front Walls with Building Overhang

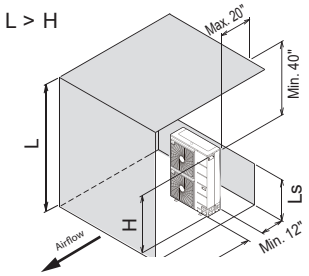


Table 59: H, A, and L Ratio.

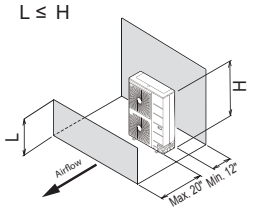
	Ls	A (Inches)
L ≤ H	0 < Ls ≤ 1/2 H	30
	1/2 H < Ls	40
H < L	Set Stand as: L ≤ H	

NOTICE

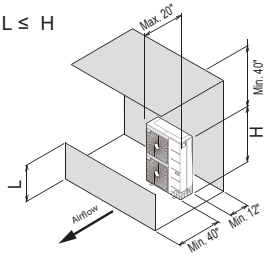
"L" must be lower than "H". If a stand is necessary, it must be made of solid material (not an open frame) to prevent the discharge air from short cycling.

Obstacle Height of Discharge Side Is Lower than the Outdoor Unit.

Single Unit—High Rear Wall and Low Front Wall with No Side Walls

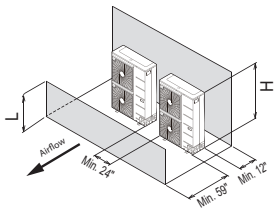


Single Unit—High Rear Wall and Low Front Wall with Building Overhang and No Side Walls



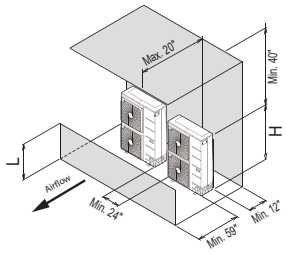
Side by Side—High Rear Wall and Low Front Wall with No Side Walls

L < H/2



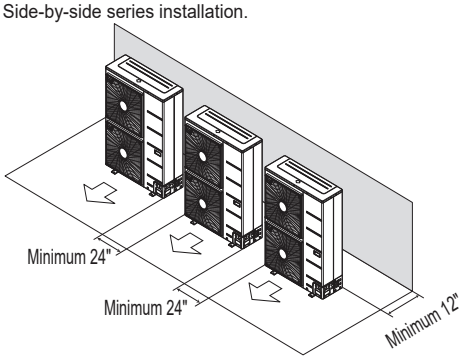
Side by Side—High Rear Wall and Low Front Wall with Building Overhang and No Side Walls

L < H/2

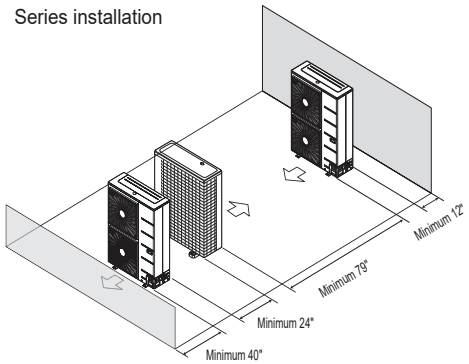


Series Installation

Side-by-side series installation.



Series installation



Installing Outdoor Units Indoors

Single Zone outdoor units are engineered to be mounted outdoors and include technology designed to minimize the negative effects of winter weather's freezing rain, sleet, and snow. Some building projects, however, necessitate placing the HVAC outdoor units indoors:

- Lack of ground space.
- Lack of an appropriate outdoor location that meets system design requirements.
- When mounting on the roof is not an option due to a lack of roof space.
- Roof warranty will be voided if mechanical equipment is placed on the membrane.
- On retrofit projects, a former chiller / boiler / air handler equipment room, mechanical area, or penthouse already exists.
- To curtail the potential need for redundant zone heating devices such as wall-fin radiators or duct heaters.
- In extremely cold environments where there is a significant amount of run-time at temperatures well below freezing outside the outdoor unit ambient air temperature range published in this engineering manual.

Benefits of Installing Outdoor Units Indoors

- Shelters the outdoor unit from direct exposure to prevailing winds that decrease the heating capability of the outdoor unit.
- Protects equipment from freezing precipitation and / or potential ice build-up that could hinder unit operation.
- Maintains coil heat transfer efficiency by reducing the number of and shortening the cycle time for defrost operation.
- Easier maintenance and servicing during inclement weather.
- When mounted in a fully enclosed space, limiting the ambient air temperature will allow the Single Zone system designer to eliminate over-sizing.
- The outdoor unit to compensate for loss of capacity at low ambient temperatures.
- Will also curtail the need to provide inefficient redundant zone heating devices such as wall-fin radiators and second-stage ancillary heating devices.

Design Considerations Include:

- Enclosure types and elements such as louvers (see next page), rain hoods, dampers and controls, heating methods and sizing of heating devices.
- Heating strategies.
- Duct design.
- Condensate handling.

General Guidelines

- Follow ASHRAE 62.1 design guidelines.
- Depending on the project / application, a roof over the outdoor units in combination with a wind break will be all that is necessary.
- Consider the potential for snow accumulation near louvers / roof openings. Outside air intakes and discharge ducts / louvers must be engineered to clear anticipated snow accumulation levels by at least one (1) foot.
- In situations where operation is anticipated at temperatures lower than the product's minimum operating temperature, ancillary heat must be provided to heat the outdoor unit coils to ensure continuous compressor operation and heating.

It may be necessary to use a field-fabricated air guide to prevent discharge air from short-cycling back to the coil inlet.

- Consider the direction of prevailing winds and opening placement. If possible, locate inlet openings upwind of discharge openings and other exhaust outlets.
- When inlet and outlet openings are placed on the same wall, minimum distance between the two openings must be approximately three (3) feet (minimum distance varies significantly with variations in outlet opening face velocity).
- If roof-mounted ventilation openings are used, strategically locate the inlet ventilation opening(s) upwind of the outlet opening(s).
- Discharge and supply ductwork must be designed to avoid weather related long periods of water entrainment.

INSTALLING OUTDOOR UNITS INDOORS

Provide a means to drain the condensate generated during heating mode and defrost cycle in addition to rainwater that infiltrates the inlet louver enclosed area.

- Install a field-provided drain pan under the outdoor units and provide a path to a nearby floor drain.
- If the ambient air temperature is expected to drop below 32°F in the enclosure, heat the bottom surface of the pan, drain line, and floor drain so that the condensate does not freeze before reaching the drain.

⚠CAUTION

When deciding on a location to place the outdoor unit, be sure to choose an area where run-off from defrost will not accumulate and freeze on walk-ways, which will create unsafe conditions.

Allow for ventilation intake and exhaust air based on maximum outdoor unit fan capacity.

- Select the size, type and orientation of architectural louvers with adequate "net free area" face velocity to ensure the total external static pressure from the outdoor unit fan does not exceed design limitations (see specification data tables).
- ⃠ No obstructions must be placed in front of the louver that could hamper the free flow (throw) of air.
- Roof top openings and / or discharge and supply louvers must be equipped with screens to prevent bird and insect infiltration.

NOTICE

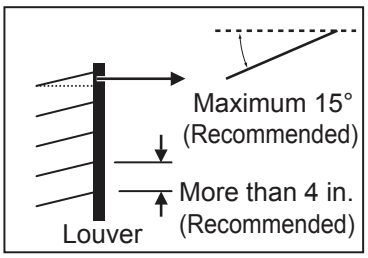
For louver recommendations, see below and on the next page.

As always, the best solution for each project balances acceptable heating performance (considering local weather conditions), capital costs, life cycle energy consumption, and limitations set forth by local building codes.

Louver Recommendations for Outdoor Unit Enclosure

1. Outdoor Unit Enclosure: Manual Door Open Type.
2. Louver Angle: No More Than 15° Horizontally.
3. Space Between Louvers: More than four (4) inches (Recommend).
4. Louver Shape: Wing or Plane Type.

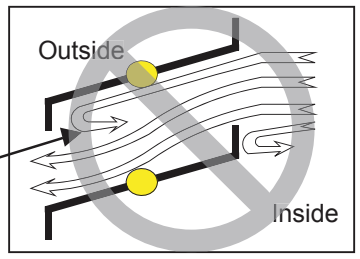
Figure 32: Louver Recommendations.



NOTICE

- Open Rate and Inlet must be taken into consideration when designing the louvered outdoor unit enclosure.
- ⃠ Do not use "S" type louvers.

Table 60: Using "S" Type Louvers.



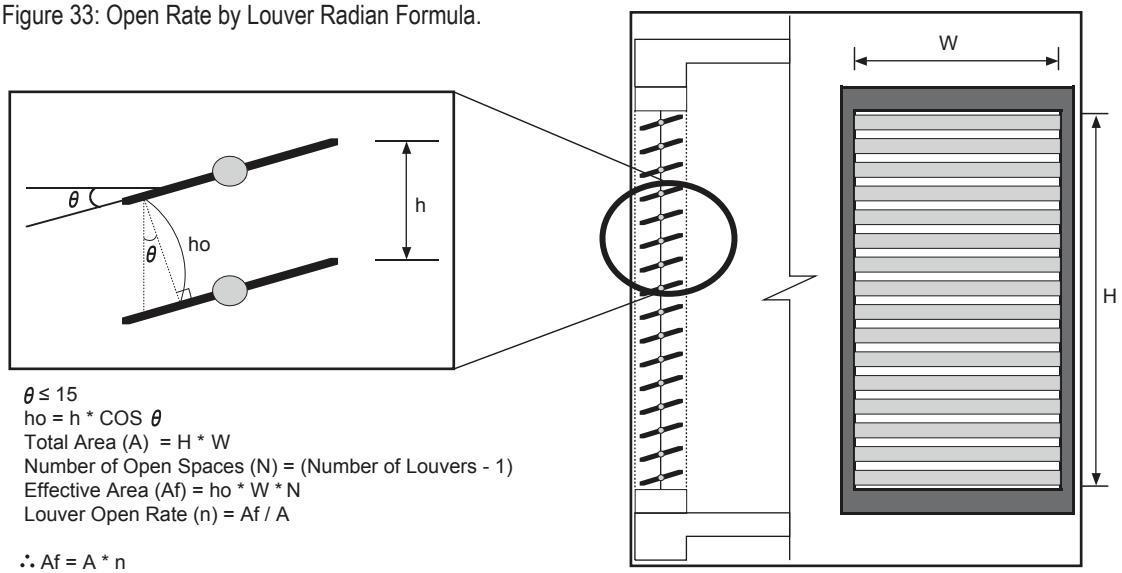
NOTICE

If the Louver Open Rate is Too Small

1. Noise can occur because of the increased air velocity passing through the louver blade.
2. Noise can occur from louver blade vibrations.
3. A drop in outdoor unit fan performance (excess static pressure can cause a drop in outdoor unit performance and heat exchanger efficiency).
4. If the louver open rate is too small or there is insufficient air flow exchange, the air conditioner might stop operating.

Open Rate by Louver Radian

Figure 33: Open Rate by Louver Radian Formula.



$\theta \leq 15$
$ho = h * COS\ \theta$
Total Area (A) = H * W
Number of Open Spaces (N) = (Number of Louvers - 1)
Effective Area (Af) = ho * W * N
Louver Open Rate (n) = Af / A

$\therefore Af = A * n$

Effective Cross Section Area

Side View Front View

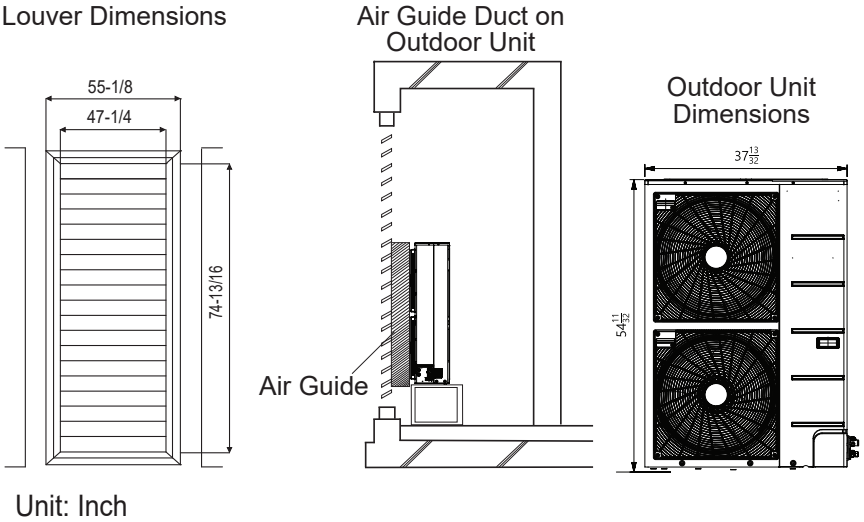
Confirming Air Flow Rate / Total Opening Rate

- Example: KUSXA482A (For illustrative purposes only).
- Discharge Airflow Rate: 3,884 ft.^{3}/min.
- Velocity of Outlet Air: 13.8 ft./s
- Velocity of Inlet Air: 7.1 ft./s
- Open Rate = 80% or More

  $\text{Open Rate} = \frac{\text{Effective Face Area (Af)}}{\text{Total Face Area (A)}}$

- Inlet airflow must match or exceed discharge airflow.
- Separate inlet airflow from discharge airflow to prevent recirculation.

Figure 34: Example of Installing Outdoor Unit Indoors.



Unit: Inch

Formula

- Total Louver Dimension (Excluding Frame) (A) = 3.9 feet x 6.2 feet = 24.2 ft.^{2}
- Area Blocked by Outdoor Unit (Discharge) (B) = 3.1 feet x 4.5 feet = 13.95 ft.^{2}
- Inlet Louver Dimension (A - B) = 10.25 ft.^{2}
- Equivalent Inlet Dimension (Open Rate 80%) = 10.25 ft.^{2} x 0.8 = 8.2 ft.^{2}
- Equivalent Inlet Airflow = 8.2 ft.^{2} x 7.1 ft./s x 60 sec./min. = 3,493 ft.^{3}/min.
- Equivalent Inlet Airflow / Discharge Airflow = 3,493 ft.^{3}/min. / 3,884 ft.^{3}/min. = 89.9% (Within Allowable Limits)

LG

REFRIGERANT PIPING DESIGN

REFRIGERANT FLOW DIAGRAMS

KUSXA181A, KUSXA241A, KUSXA301A, KUSXA361A Outdoor Units

NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Figure 35: KUSXA181A, KUSXA241A, KUSXA301A, KUSXA361A Outdoor Unit Refrigerant Flow Diagram.

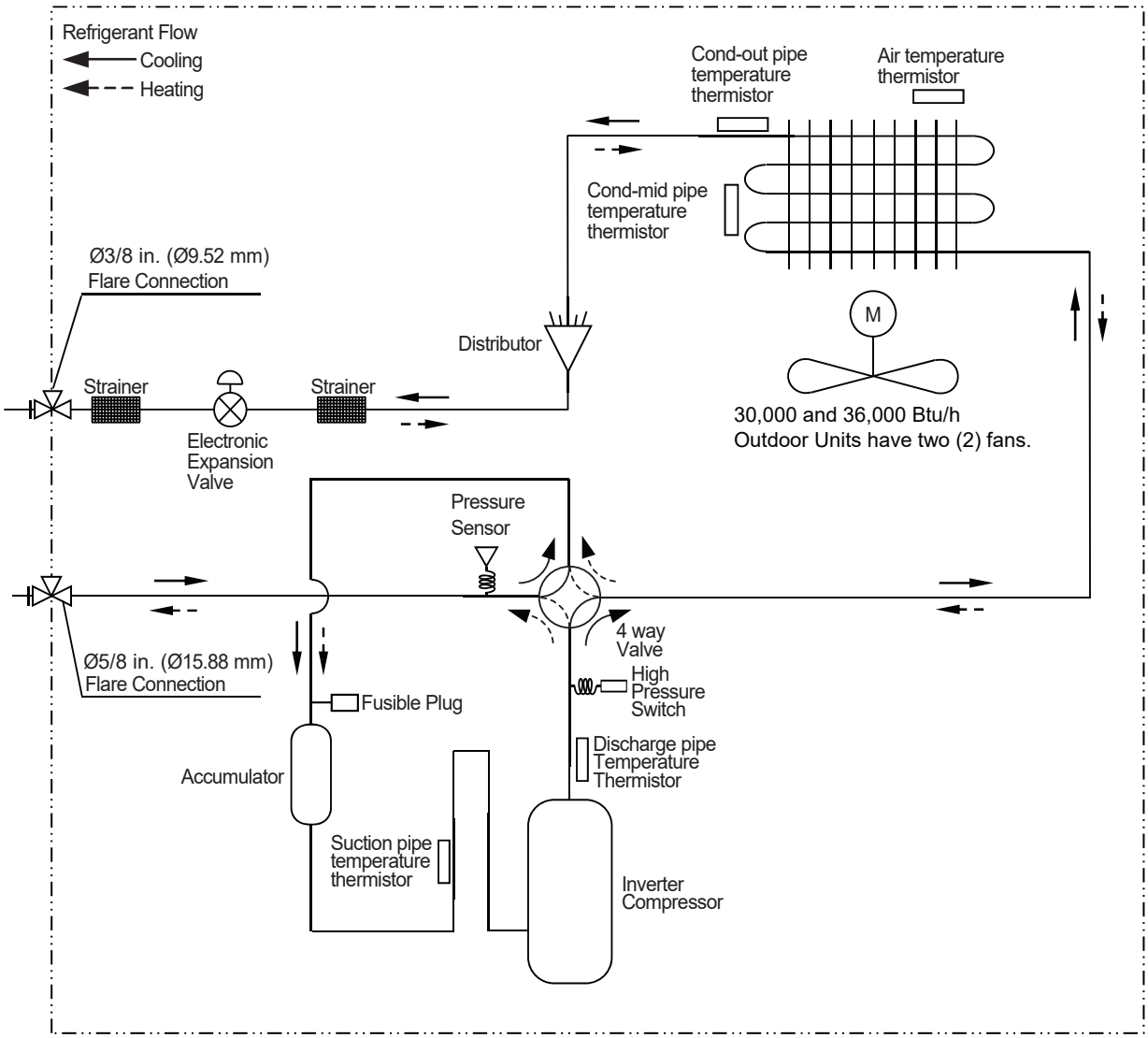


Table 61: KUSXA181A, KUSXA241A, KUSXA301A, KUSXA361A R32 Outdoor Unit Thermistor Details.

Description	PCB Connector
Discharge Pipe Temperature Thermistor	CN6_BK
Suction Pipe Temperature Thermistor	CN5_GN
Condenser Outlet Pipe Temperature Thermistor	CN7_VI
Air Temperature Thermistor	CN8_YL
Condenser Middle Pipe Temperature Thermistor	CN4_BR
Pressure Sensor	CN9_RD
High Pressure Switch	CN_PRESS_SW_WH

REFRIGERANT FLOW DIAGRAMS

LGRED°

KUSXA422A, KUSXA482A Outdoor Units

NOTICE

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Figure 36: KUSXA422A, KUSXA482A Outdoor Unit Refrigerant Flow Diagram.

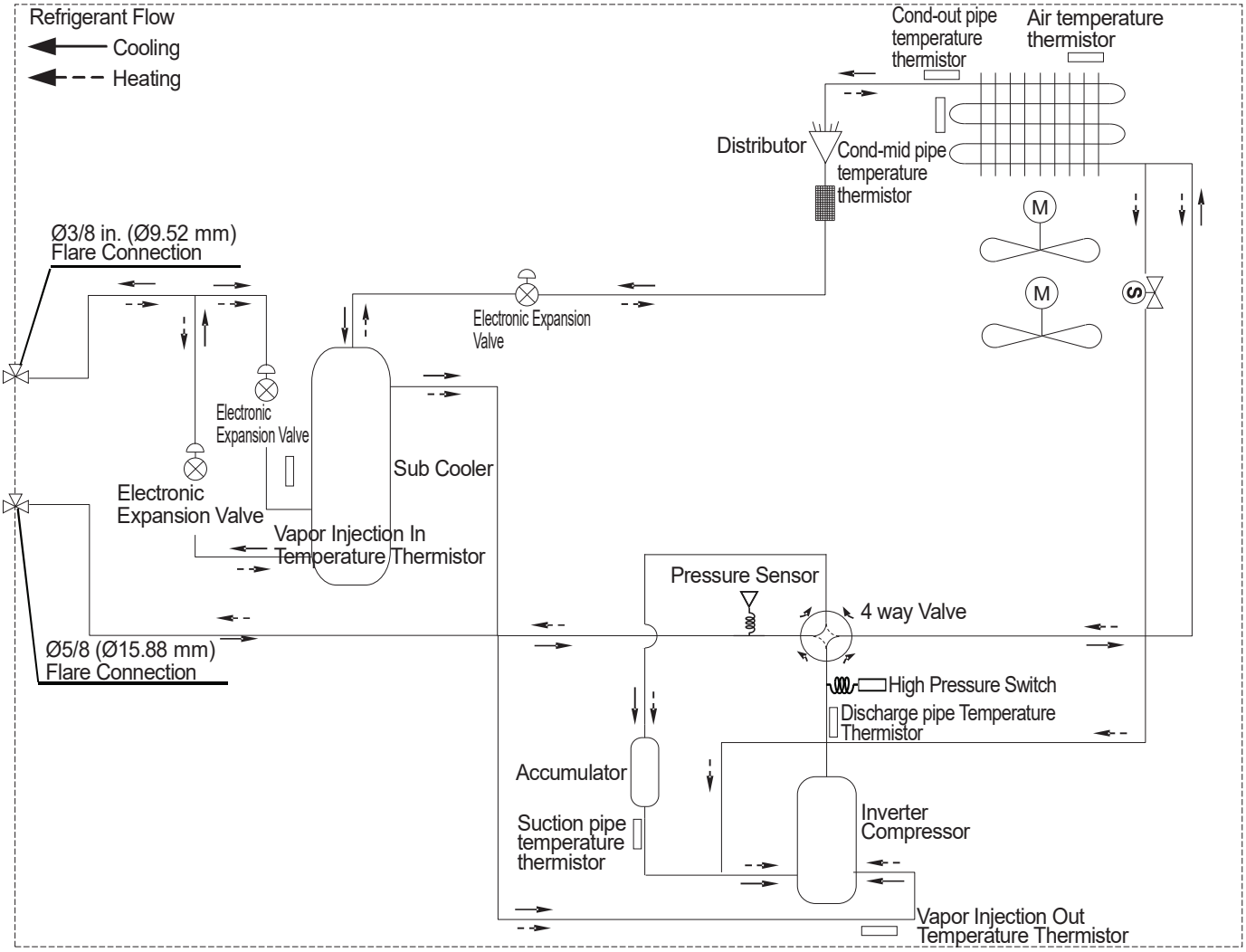

Table 62: KUSXA422A, KUSXA482A Outdoor Unit Thermistor Details.

Description	PCB Connector
Discharge Pipe Temperature Thermistor	CN6_BK
Suction Pipe Temperature Thermistor	CN5_GN
Condenser Outlet Pipe Temperature Thermistor	CN7_VI
Air Temperature Thermistor	CN8_YL
Condenser Middle Pipe Temperature Thermistor	CN4_BR
Vapor Injection Inlet Temperature Thermistor	CN11_WH
Vapor Injection Outlet Temperature Thermistor	CN12_BL
Pressure Sensor	CN9_RD
High Pressure Switch	CN_PRESS_WH

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NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Figure 37: A-Coil Unit Refrigerant Flow Diagram.

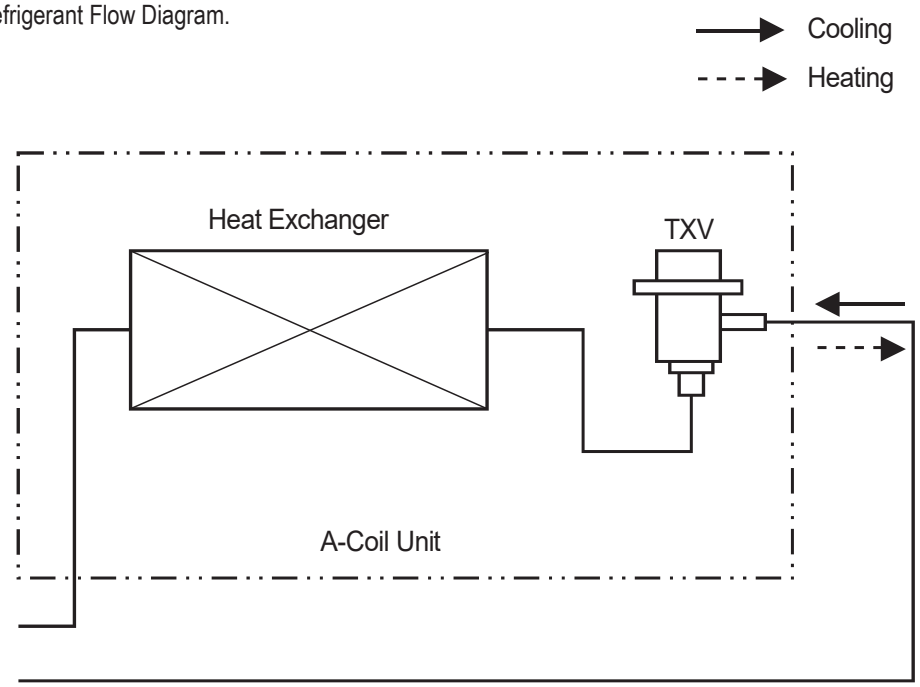


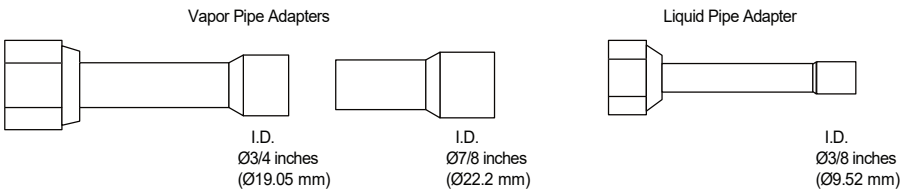
Table 63: A-Coil Unit Piping Connections.

A-Coil Model Nos.	Field Piping	
	Vapor (in. [mm])	Liquid (in. [mm])
14.5 inch		
LKMMA18A1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
17.5 inch		
LKMMA18B1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
LKMMA24B1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
LKMMA30B1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
LKMMA36B1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
21 inch		
LKMMA36C1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
LKMMA42C1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
LKMMA48C1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)
24.5 inch		
LKMMA48D1	Ø3/4 (Ø19.05)	Ø3/8 (Ø9.52)

A-Coil Adapters

- Use adapters (shipped with the outdoor unit) to connect the A-Coil piping (braze).
- Connect the adapter nut to the outdoor unit, then braze the appropriate pipe diameter.

Figure 38: Adapters for A-Coil Piping.



CONNECTION LIMITATIONS / SYSTEM LAYOUT

LGRED°

NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Connection Limitations

Single-zone systems consist of one outdoor unit and one indoor unit. One of the most critical elements of a single zone system is the refrigerant piping. If the connection piping is not within allowable limits, there will be reliability, performance, noise, and vibration issues. The table below lists pipe length limits that must be followed in the design of a Single Zone LGRED Cassette refrigerant pipe system. Refer to the figure for maximum length and elevation of piping.

NOTICE

Depending on system and proposed / installed pipe length, it may be required to calculate maximum refrigerant charge to determine if the system complies with applicable regulations / standards. For residential applications, a refrigerant charge less than 4.1 lbs. complies with ASHRAE 15.2 and does not require additional calculation / consideration of maximum refrigerant charge for release in a space.

Table 64: R32 Singe-Zone Systems - A-Coil with LGRED Refrigerant Piping System Limitations.

System Model No.		KSSMA18AA, KSSMA18BA, KSSMA24BA	KSSMA25BA, KSSMA30BA, KSSMA36BA, KSSMA36CA, KSSMA42CA, KSSMA48CA, KSSMA48DA
Outdoor Unit Liquid Piping (in., O.D.)[1]		3/8 Flare	3/8 Flare
Outdoor Unit Vapor Piping (in., O.D.)[1]		5/8 Flare	5/8 Flare
A-Coil Unit Liquid Piping (in., O.D.)[1]		3/8 Braze	3/8 Braze
A-Coil Unit Vapor Piping (in., O.D.)[1]		3/4 Braze	3/4 Braze
Pipe Length (ELF = Equivalent Length of Pipe)	Standard length (no add'l refrigerant)	24.6 feet	24.6 feet
	Longest total equivalent piping length	164 feet	246 feet
	Shortest total equivalent piping length	16.4	16.4
	Distance between fittings and indoor or outdoor units	≥20 inches	≥20 inches
Elevation (All Elevation Limitations are Measured in Actual Feet)	If outdoor unit is above indoor unit	98.4 feet	98.4 feet
	If outdoor unit is below indoor unit	98.4 feet	98.4 feet
Additional Refrigerant Needed (oz. /ft.)		0.38	0.43

[1]*Adapters for piping connections are shipped with the outdoor unit.*

System Layout

Figure 39: Typical KSSMA18AA ~ KSSMA24BA System Layout.

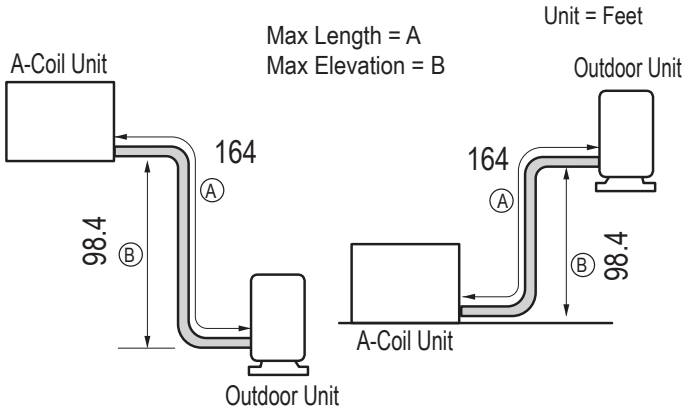
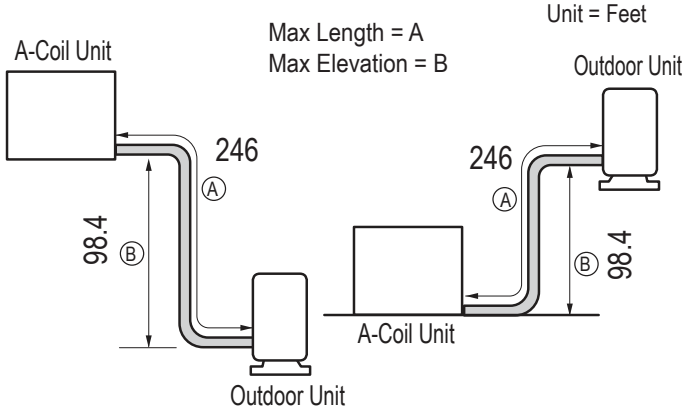


Figure 40: Typical KSSMA25BA ~ KSSMA48DA System Layout.



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ADDITIONAL REFRIGERANT CHARGE

NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Additional Refrigerant Charge

Each outdoor unit is factory charged (nameplate charge) for the evaporator as well as having a standard foot line (for each single zone system; listed in the specification tables). Any time a line set is used longer then the standard foot line set length for the single zone system, the refrigerant charge has to be adjusted.

The charge must be adjusted on the ounces of R32 (listed in the specification tables) per foot based on how many feet of piping are added. The factory charge accommodates pipe lengths up to the standard (no additional refrigerant) length without requiring refrigerant removal.

See table below for information on the additional refrigerant charges necessary for longer piping lengths. Refer to the previous page for maximum piping length and additional charge amount per additional foot of pipe length.

Table 65: R32 Singe-Zone Systems - A-Coil with LGRED Additional Refrigerant by Piping Length (oz.).

System Model No.	Add'l Charge (oz./ft.)	Std. Piping Length (no add'l refrig., ft.)	Refrigerant Piping Length (feet)																
			16.4	24.6	32.8	41	49.2	65.6	82	98.4	114.8	131.2	147.6	164	180.4	196.8	213.2	229.6	246
KSSMA18AA (18k)	0.38	24.6	0	0	3.1	6.2	9.3	15.6	21.8	28.0	34.3	40.5	46.7	53.0	-	-	-	-	-
KSSMA18BA (18k)	0.38	24.6	0	0	3.1	6.2	9.3	15.6	21.8	28.0	34.3	40.5	46.7	53.0	-	-	-	-	-
KSSMA24BA (24k)	0.38	24.6	0	0	3.1	6.2	9.3	15.6	21.8	28.0	34.3	40.5	46.7	53.0	-	-	-	-	-
KSSMA25BA (24k)	0.43	24.6	0	0	3.5	7.1	10.6	17.6	24.7	31.7	38.8	45.8	52.9	59.9	67.0	74.0	81.1	88.2	95.2
KSSMA30BA (30k)	0.43	24.6	0	0	3.5	7.1	10.6	17.6	24.7	31.7	38.8	45.8	52.9	59.9	67.0	74.0	81.1	88.2	95.2
KSSMA36BA (36k)	0.43	24.6	0	0	3.5	7.1	10.6	17.6	24.7	31.7	38.8	45.8	52.9	59.9	67.0	74.0	81.1	88.2	95.2
KSSMA36CA (36k)	0.43	24.6	0	0	3.5	7.1	10.6	17.6	24.7	31.7	38.8	45.8	52.9	59.9	67.0	74.0	81.1	88.2	95.2
KSSMA42CA (42k)	0.43	24.6	0	0	3.5	7.1	10.6	17.6	24.7	31.7	38.8	45.8	52.9	59.9	67.0	74.0	81.1	88.2	95.2
KSSMA48CA (48k)	0.43	24.6	0	0	3.5	7.1	10.6	17.6	24.7	31.7	38.8	45.8	52.9	59.9	67.0	74.0	81.1	88.2	95.2
KSSMA48DA (48k)	0.43	24.6	0	0	3.5	7.1	10.6	17.6	24.7	31.7	38.8	45.8	52.9	59.9	67.0	74.0	81.1	88.2	95.2

- *Values are in ounces (oz.).*
- *Capacity is based on standard length; maximum allowance length is based on reliability.*
- *Equivalent Pipe Length = Actual Pipe Length + Number of Bends x 0.3.*
- *Calculation: X oz. = ([Refrigerant Piping Length] - [(Chargeless Length]) × Additional Refrigerant*

Example:
A 50 foot line set is used: Additional 25.4 feet x 0.38 per foot = Add 9.6 of refrigerant.

NOTICE

If the unit charge is unknown, reclaim, evacuate, and weigh in the correct charge using the unit nameplate (capacity) charge adjusting for line sets longer than 246 feet. This will prevent any interruptions to unit operation and possible damage.

NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Selecting Field-Supplied Copper Piping

NOTICE

Always follow local codes when selecting and installing copper pipe and piping system components.

Approved piping for use with LG Single Zone products will be marked "R32 RATED" along the length of the pipe. Piping wall thickness must meet local code requirements and be approved for maximum allowable pressure of 626 psig. When bending piping, try to keep the number of bends to a minimum, and use the largest radii possible to reduce the equivalent length of installed piping; also, bending radii greater than ten (10) piping diameters can minimize pressure drop. Be sure no traps or sags are present.

For Single Zone Systems

LG prefers the use of ACR copper piping rated at the system working pressure was used.

NOTICE

Always properly support the piping as per the instructions on page 100.

Table 66: ACR Rated Copper Tubing Material.

Type	Seamless Phosphorous Deoxidized
Class	UNS C12200 DHP
Straight Lengths	H58 Temper
Coils	O60 Temper

Table 67: Piping Tube Thicknesses.

OD (in.)	1/4	3/8	1/2	5/8	3/4	7/8	1-1/8	1-3/8
Material	Rigid or Soft ACR Rated for R32			Rigid or Soft ACR Rated for R32				
Min. Bend Radius (in.)	0.563	0.9375	1.5	2.25	3.0	3.0	3.5	4.0
Min. Wall Thickness (in.)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.040

Table 68: ACR Copper Tubing Dimensions and Physical Characteristics[1-3].

Nominal Pipe Outside Diameter (in.)	**Actual Outside Diameter (in.)**	**Drawn Tempered (Hard)**			**Annealed Temper (Soft)**		
		Nominal Wall Thickness (in.)	**Weight (lb. / ft.)**	**Cubic ft. per Linear ft.**	**Nominal Wall Thickness (in.)**	**Weight (lb. / ft.)**	**Cubic ft. per Linear ft.**
1/4	0.250	-	-	-	0.030	0.0804	0.00020
3/8	0.375	0.030	0.126	0.00054	0.032	0.134	0.00053
1/2	0.500	0.035	0.198	0.00101	0.032	0.182	0.00103
5/8	0.625	0.040	0.285	0.00162	0.035	0.251	0.00168
3/4	0.750	0.042	0.362	0.00242	0.035	0.305	0.00252
7/8	0.875	0.045	0.455	0.00336	0.045	0.455	0.00336
1-1/8	1.125	0.050	0.655	0.00573	0.050	0.655	0.00573
1-3/8	1.375	0.055	0.884	0.00875	0.055	0.884	0.00875

[1]All dimensions provided are in accordance with ASTM B 280 – Standard.
[2]Maximum allowable design pressure = 626 psig.
[3]The Copper Tube Handbook: Industry Standard Guide for the Design and Installation of Copper Piping Systems; Copper Development Association Inc., Copper Alliance; https://www.copper.org/publications/pub_list/pdf/copper_tube_handbook.pdf.

NOTICE

- *Commercially available piping often contains dust and other materials. Always blow it clean with a dry inert gas.*
- *Prevent dust, water or other contaminants from entering the piping during installation.*

NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Copper Expansion and Contraction

Under normal operating conditions, the vapor pipe temperature of a Single Zone System can vary as much as 280°F. With this large variance in pipe temperature, the designer must consider pipe expansion and contraction to avoid pipe and fitting fatigue failures.

Refrigerant pipe along with the insulation jacket form a cohesive unit that expands and contracts together. During system operation, thermal heat transfer occurs between the pipe and the surrounding insulation.

If the pipe is mounted in free air space, no natural restriction to movement is present if mounting clamps are properly spaced and installed. In extreme cases, the restrictive force of surface friction between insulating jackets could become so great that natural expansion ceases and the pipe is "fixed" in place. In this situation, opposing force caused by change in refrigerant fluid / vapor temperature can lead to pipe/fitting stress failure.

The refrigerant pipe support system must be engineered to allow free expansion to occur. When a segment of pipe is mounted between two fixed points, provisions must be provided to allow pipe expansion to naturally occur. The most common method is the inclusion of expansion Loop or U-bends. Each segment of pipe has a natural fixed point where no movement occurs. This fixed point is located at the center point of the segment assuming the entire pipe is insulated in a similar fashion. The natural fixed point of the pipe segment is typically where the expansion Loop or U-bend must be.

Linear pipe expansion can be calculated using the following formula:

$LE = C \times L \times (T_r - T_a) \times 12$

LE	=	Anticipated linear tubing expansion (in.)
C	=	Constant (For copper = 9.2×10^{-6} in./in.°F)
L	=	Length of pipe (ft.)
T_R	=	Refrigerant pipe temperature (°F)
T_a	=	Ambient air temperature (°F)
12	=	Inches to feet conversion (12 in./ft.)

1. From the "Linear Thermal Expansion of Copper Tubing in Inches" Table on the next page, find the row corresponding with the actual length of the straight pipe segment.

2. Estimate the minimum and maximum temperature of the pipe. In the column showing the minimum pipe temperature, look up the anticipated expansion distance. Do the same for the maximum pipe temperature.

3. Calculate the difference in the two expansion distance values. The result will be the anticipated change in pipe length.

General Example:

A system is installed and the design shows that there is a 100 foot straight segment of tubing between an indoor unit and the outdoor unit. In heating, this pipe transports hot gas vapor to the indoor units at 120°F. In cooling, the same tube is a suction line returning refrigerant vapor to the outdoor unit at 40°F. Look up the copper tubing expansion at each temperature and calculate the difference.

Vapor Line

Transporting Hot Vapor: 100 ft. pipe at 120°F = 1.40 in.
Transporting Suction Vapor: 100 ft. pipe at 40°F = 0.40 in.
Anticipated Change in Length: 1.40 in. – 0.40 in. = 1.00 in.

Liquid Line

The liquid temperature remains relatively the same temperature; only the direction of flow will reverse. Therefore, no significant change in length of the liquid line is anticipated.

When creating an expansion joint, the joint height must be a minimum of two times the joint width. Although different types of expansion arrangements are available, the data for correctly sizing an Expansion Loop is provided in the "Radii of Coiled Expansion Loops and Developed Lengths of Expansion Offsets" Table on the next page. Use soft copper with long radius bends on longer runs or long radius elbows for shorter pipe segments. Using the anticipated linear expansion (LE) distance calculated, look up the Expansion Loop or U-bend minimum design dimensions. If other types of expansion joints are chosen, design per ASTM B-88 Standards.

See table on next page for precalculated anticipated expansion for various pipe sizes and lengths of refrigerant tubing.

To find the anticipated expansion value:

1. From the table on the next page, find the row corresponding with the actual feet of the straight pipe segment.
2. Estimate the minimum and maximum temperature of the pipe.
3. In the column showing the minimum pipe temperature, look up the anticipated expansion distance corresponding to the segment length. Do the same for the maximum pipe temperature.
4. Calculate the difference in the two expansion distance values. The result will be the change in pipe length.

REFRIGERANT PIPING SYSTEM ENGINEERING

LGRED°

NOTICE

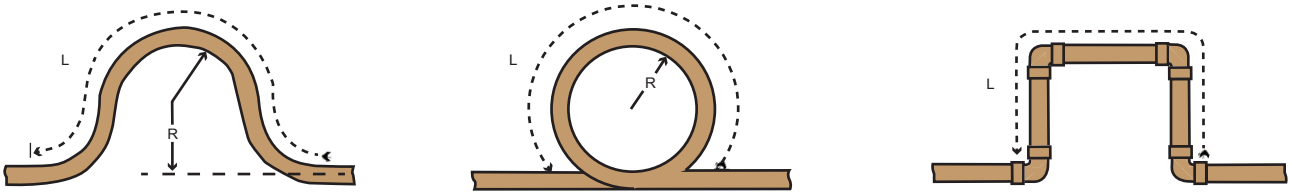
Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Table 69: Linear Thermal Expansion of Copper Tubing in Inches.

Pipe Length[1]	Fluid Temperature °F																			
	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°
10	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.12	0.13	0.14	0.15	0.15
20	0.08	0.08	0.10	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.22	0.23	0.26	0.28	0.29	0.30
30	0.12	0.12	0.15	0.18	0.20	0.21	0.23	0.24	0.26	0.27	0.29	0.30	0.32	0.33	0.32	0.35	0.39	0.42	0.44	0.45
40	0.16	0.16	0.20	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	0.42	0.44	0.43	0.46	0.52	0.56	0.58	0.60
50	0.20	0.20	0.25	0.30	0.33	0.35	0.38	0.40	0.43	0.45	0.48	0.50	0.53	0.55	0.54	0.58	0.65	0.70	0.73	0.75
60	0.24	0.24	0.30	0.36	0.39	0.42	0.45	0.48	0.51	0.54	0.57	0.60	0.63	0.66	0.65	0.69	0.78	0.84	0.87	0.90
70	0.28	0.28	0.35	0.42	0.46	0.49	0.53	0.56	0.60	0.63	0.67	0.70	0.74	0.77	0.76	0.81	0.91	0.98	1.02	1.05
80	0.32	0.32	0.40	0.48	0.52	0.56	0.60	0.64	0.68	0.72	0.76	0.80	0.84	0.88	0.86	0.92	1.04	1.12	1.16	1.20
90	0.36	0.36	0.45	0.54	0.59	0.63	0.68	0.72	0.77	0.81	0.86	0.90	0.95	0.99	0.97	1.04	1.17	1.26	1.31	1.35
100	0.40	0.40	0.50	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.08	1.15	1.30	1.40	1.45	1.50
120	0.48	0.48	0.60	0.72	0.78	0.84	0.90	0.96	1.02	1.08	1.14	1.20	1.26	1.32	1.30	1.38	1.56	1.68	1.74	1.80
140	0.56	0.56	0.70	0.84	0.91	0.98	1.05	1.12	1.19	1.26	1.33	1.40	1.47	1.54	1.51	1.61	1.82	1.96	2.03	2.10
160	0.64	0.64	0.80	0.96	1.04	1.12	1.20	1.28	1.36	1.44	1.52	1.60	1.68	1.76	1.73	1.84	2.08	2.24	2.32	2.40
180	0.72	0.72	0.90	1.08	1.17	1.26	1.35	1.44	1.53	1.62	1.71	1.80	1.89	1.98	1.94	2.07	2.34	2.52	2.61	2.70

[1]Pipe length baseline temperature = 0°F. "Expansion of Carbon, Copper and Stainless Steel Pipe," *The Engineers' Toolbox*, www.engineeringtoolbox.com.

Figure 41: Coiled Expansion Loops and Offsets (Plan View).



Large Tubing U-bend (>3/4 in.) Loop Small Tubing U-bend (<3/4 in.)

NOTICE

All expansion loops and offsets must be installed in the horizontal plane to prevent the possibility of trapping oil. Loops and offsets in vertical risers must also be installed in a horizontal plane.

Table 70: Radii of Coiled Expansion Loops and Developed Lengths of Expansion Offsets. (See *The Copper Tube Handbook: Industry Standard Guide for the Design and Installation of Copper Piping Systems; Copper Development Association Inc., Copper Alliance; https://www.copper.org/publications/pub_list/pdf/copper_tube_handbook.pdf* for additional information.)

Anticipated Linear Expansion (LE) (inches)		Nominal Tube Size (OD) inches			
		1/4	3/8	1/2	3/4
1/2	R[1]	6	7	8	9
	L[2]	38	44	50	59
1	R[1]	9	10	11	13
	L[2]	54	63	70	83
1-1/2	R[1]	11	12	14	16
	L[2]	66	77	86	101
2	R[1]	12	14	16	19
	L[2]	77	89	99	117
2-1/2	R[1]	14	16	18	21
	L[2]	86	99	111	131
3	R[1]	15	17	19	23
	L[2]	94	109	122	143
3-1/2	R[1]	16	19	21	25
	L[2]	102	117	131	155
4	R[1]	17	20	22	26
	L[2]	109	126	140	166

[1]R = Centerline Length of Pipe. [2]L = Centerline Minimum Radius (inches).

LG

NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Proper system operation depends on the installer using utmost care while assembling the piping system. The following pages are an overview of best practices when installing the refrigerant piping system.

NOTICE

LG Electronics U.S.A.,Inc., is not responsible for any piping calculations, refrigerant leaks, degradation of performance, any other potential problems or damages caused by the interconnecting piping, their joint connections, isolation valves, or introduced debris inside the piping system.

⃠ No Pipe Size Substitutions

Use only the pipe size selected by the information in this manual. Using a different size is prohibited and will result in a system malfunction or failure to work at all.

⃠ No In-line Refrigeration Components

Components such as oil traps, solenoid valves, filter-driers, sight glasses, tee fittings, and other after-market accessories are ⃠ not permitted on the refrigerant piping system between the outdoor units and the indoor units. LG Single Zone systems are provided with redundant systems that make sure oil is properly returned to the compressor. Sight-glasses and solenoid valves will cause vapor to form in the liquid stream. Over time, driers will deteriorate and introduce debris into the system. The designer and installer must verify the refrigerant piping system is free of traps, sagging pipes, sight glasses, filter driers, etc.

Field-Provided Isolation Ball Valves

LG maintains a neutral position on using isolation valves in LG HVAC refrigerant piping systems. LG does not endorse any manufacturer of isolation valves. It is recognized that installing isolation valves will simplify future maintenance requirements, and, if used, considerations must be taken including, but not limited to, the following:

- Pressure drops for any component used, including isolation valves, must be known in equivalent pipe length and calculated into the total and segment equivalent piping lengths and compared to product design limitations.
- In all cases, materials must be suitable for the application and any applicable codes, including, but not limited to, diameter and wall thickness continuity per ACR standards.

Failure to do so will cause significant performance degradation. Proper leak checks must be performed. Using isolation valves does not automatically void any LG product warranty, however, a limited warranty will be voided in whole or part if any field supplied accessory fail in any way that causes product failure.

Using Elbows

Field-supplied elbows are allowed if they are long radius and designed for use with R32 refrigerant. The designer and installer, however, must be cautious with the quantity and size of fittings used, and must account for the additional pressure losses in equivalent pipe length calculation for each branch. The equivalent pipe length of each elbow must be added to each pipe segment in the LATS program.

Pipe Bends

When bending soft copper, use long radius bends. Refer to the "Radii of Coiled Expansion Loops and Developed Lengths of Expansion Offsets" table on the previous page for minimum radius specifications.

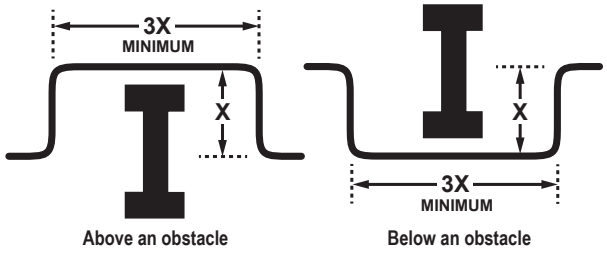
NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Obstacles

When an obstacle, such as an I-beam or concrete T, is in the path of the planned refrigerant pipe run, it is best practice to route the pipe over the obstacle. If adequate space is not available to route the insulated pipe over the obstacle, then route the pipe under the obstacle. In either case, it is imperative the length of the horizontal section of pipe above or below the obstacle be a minimum of three (3) times the longest vertical rise (or fall) at either end of the segment.

Figure 42: Installing Piping Above and Below an Obstacle.



Pipe Supports

A properly installed pipe system must be adequately supported to avoid pipe sagging. Sagging pipes become oil traps that lead to equipment malfunction.

Pipe supports must ⃠ never touch the pipe wall; supports must be installed outside (around) the primary pipe insulation jacket. Insulate the pipe first because pipe supports must be installed outside (around) the primary pipe insulation jacket. Clevis hangers must be used with shields between the hangers and insulation. Field provided pipe supports must be designed to meet local codes. If allowed by code, use fiber straps or split-ring hangers suspended from the ceiling on all-thread rods (fiber straps or split ring hangers can be used as long as they do not compress the pipe insulation). Place a second layer of insulation over the pipe insulation jacket to prevent chafing and compression of the primary insulation within the confines of the support pipe clamp.

A properly installed pipe system will have sufficient supports to avoid pipes from sagging during the life of the system. As necessary, place supports closer for segments where potential sagging could occur. Maximum spacing of pipe supports must meet local codes. If local codes do not specify pipe support spacing, pipe must be supported:

- Maximum of five (5) feet on center for straight segments of pipe up to 3/4 inches outside diameter size.
- Maximum of six (6) feet on center for pipe up to one (1) inch outside diameter size.
- Maximum of eight (8) feet on center for pipe up to two (2) inches outside diameter size.

Wherever the pipe changes direction, place a hanger within twelve (12) inches on one side and within twelve (12) to nineteen (19) inches of the bend on the other side.

Support piping at A-Coil unit(s) as shown.

Figure 43: Pipe Hanger Details.

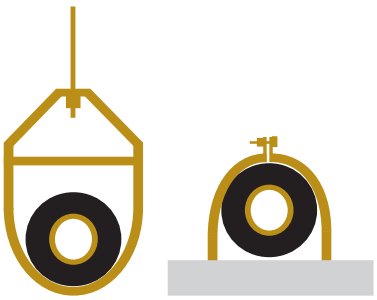


Figure 44: Typical Pipe Support Location—Change in Pipe Direction.

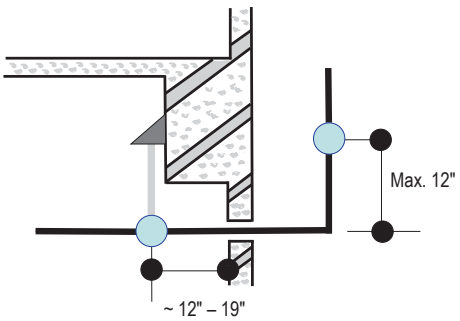
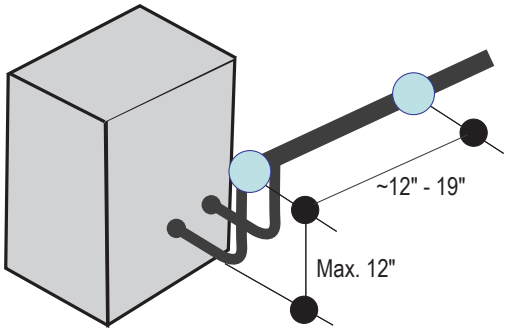


Figure 45: Pipe Support at A-Coil Unit.



NOTICE

Use a 4" + long sheet curved sheet metal saddles between hanger bracket and insulation to promote linear expansion/contraction.

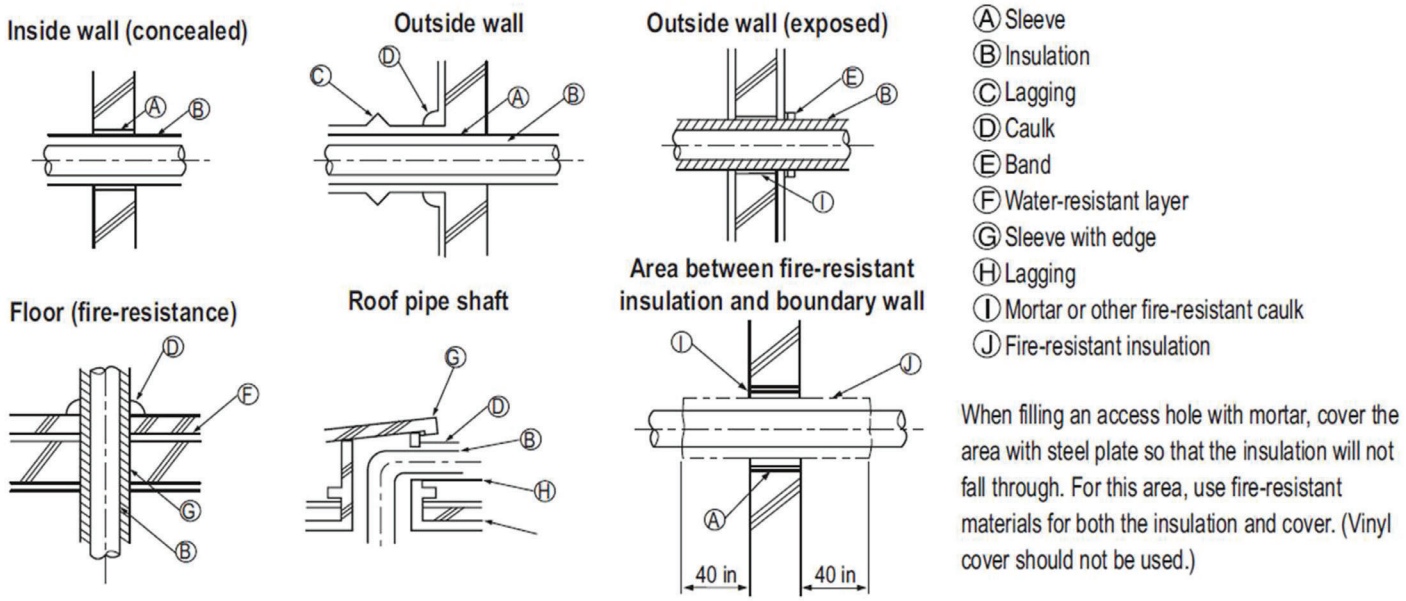
NOTICE

Various tools are available to assist in properly designing LG R32 split systems. Refer to the "R32 Application Guide"; the "Simple Calculator for Capacity, Refrigerant Charge and ESP"; the "LG Air Conditioner Technical Solutions" (LATS) software program; and the local LG Sales Representative.

Pipe Sleeves at Penetrations

LG recommends that all pipe penetrations through walls, floors, and pipes buried underground be properly insulated and routed through an appropriate wall sleeve of sufficient size to prevent compression of refrigerant pipe insulation and free movement of the pipe within the sleeve. Use 4"+ curved sheet metal saddles between the bottom surface of the pipe and the bottom surface of the penetration.

Figure 46: Pipe Sleeve Options.



NOTICE

Diameter of penetrations must be determined by pipe diameter plus the thickness of the insulation.

ELECTRICAL

General Electrical Guidelines

⚠ WARNING

- *Separately wire the high and low voltage lines. There is a risk of electric shock, physical injury, or death.*
- *Use heat-proof electrical wire capable of withstanding temperatures up to 167°F to avoid wiring malfunction and electrical shock, which may cause physical injury or death.*
- *Power wiring and communication cables must be firmly attached to the terminals; connect the wiring so that the wires cannot be easily pulled out. Loose wiring may cause unit malfunction, the wires to burnout or the terminal to overheat and catch fire. There is a risk of electric shock, physical injury or death.*
- *Terminal screws will become loose during transport. Properly tighten the terminal connections during installation or risk electric shock, physical injury, or death.*
- *Use outdoor and waterproof connection cable rated up to 300V for the connection between the indoor and outdoor unit to avoid electrical shock, which may cause physical injury or death.*

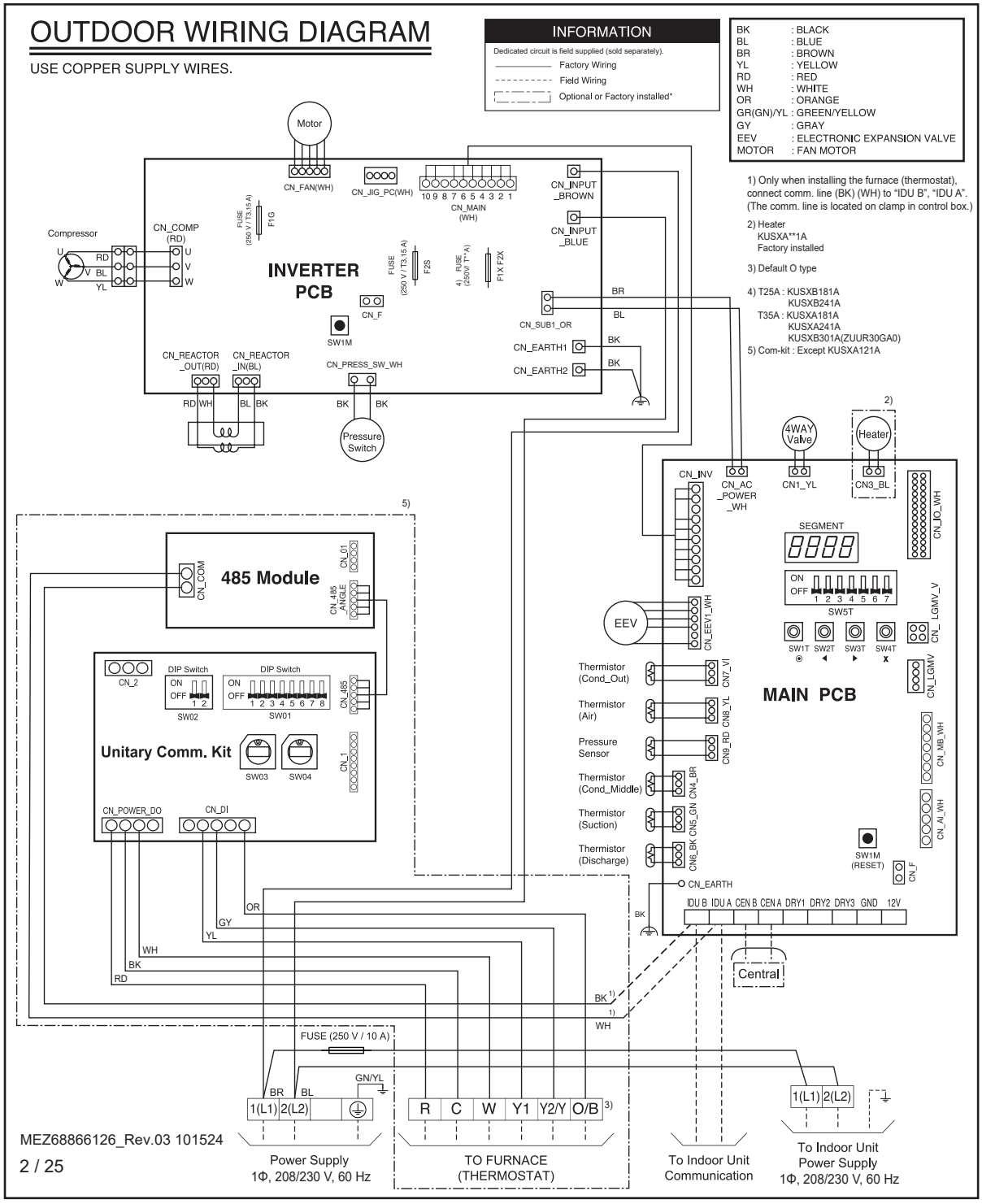
NOTICE

- *Separately wire the high and low voltage lines to avoid damage to units.*
- ⃠ *Do not install power wiring to the outdoor unit and the communication / connection (power) cable to the indoor unit in the same conduit. Use separate conduits.*
- *Local codes may require field-installed disconnect switches from outdoor unit to indoor unit.*
- *Use heat-proof electrical wire capable of withstanding temperatures up to 167°F to avoid damage to unit.*
- *Always use a circuit breaker or time delay fuse when connecting electrical wiring to the unit.*
- *Power wiring and communication cables must be firmly attached to the terminals. Loose wiring may cause unit malfunction, the wires to burnout or the terminal to overheat and catch fire. There is a risk of equipment malfunction or property damage.*
- *Terminal screws will become loose during transport. Properly tighten the terminal connections during installation or risk equipment malfunction or property damage. There is a risk of equipment malfunction or property damage.*
- *Use outdoor and waterproof connection cable rated up to 300V for the connection between the indoor and outdoor unit to avoid damage to the unit.*
- *Comply with local codes while running wire from the indoor unit to the outdoor unit.*
- ⃠ *Do not allow wire to touch refrigerant piping, the compressor or any moving parts since it can lead to mechanical failure.*

WIRING DIAGRAMS

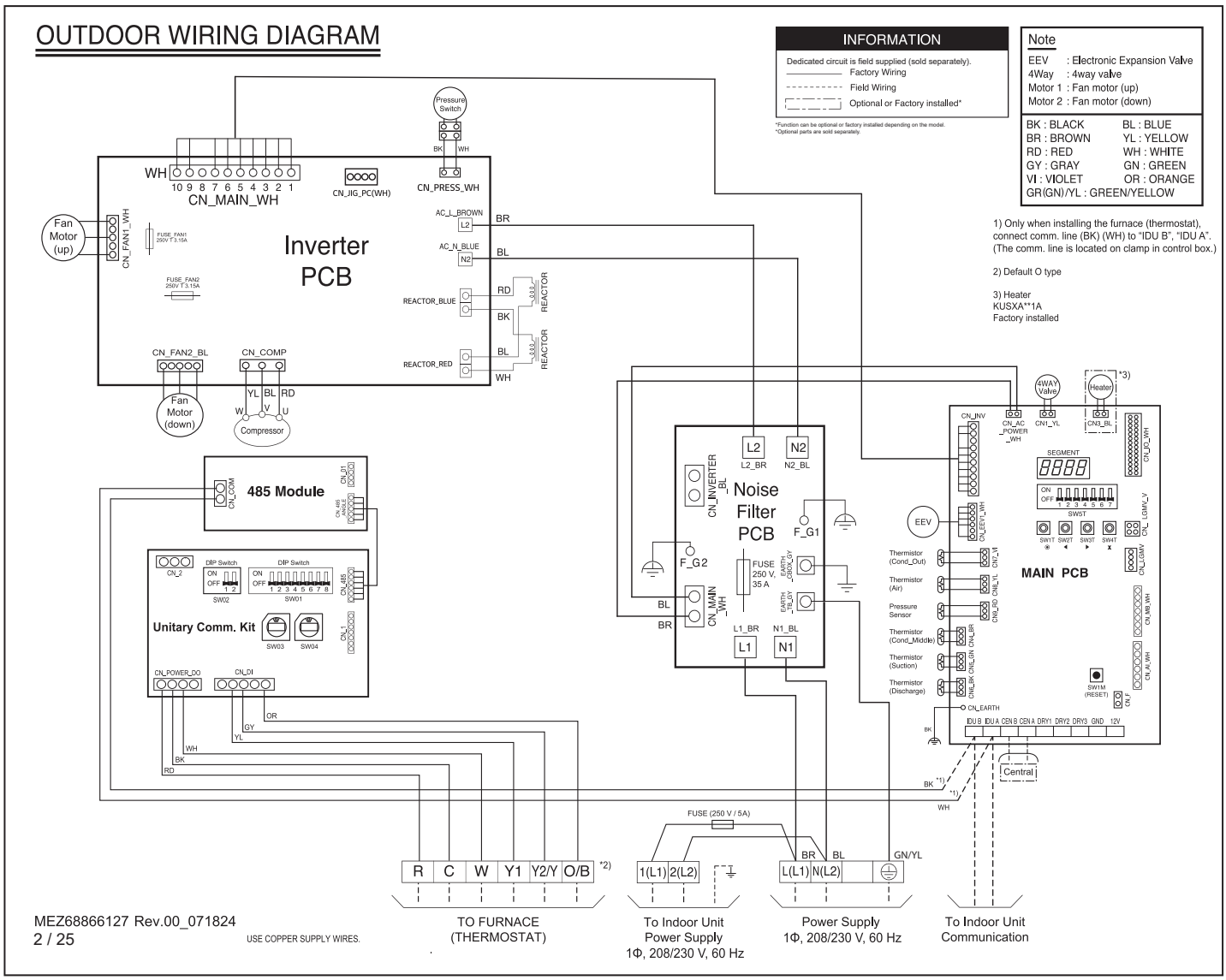
KUSXA181A, KUSXA241A Outdoor Units

Figure 47: KUSXA181A, KUSXA241A Outdoor Unit Wiring Diagram.



1. Only when installing the furnace (thermostat):Connect the communication wiring (BK) (WH) to "IDU B", "IDU A". (The communication wiring is clamped onto the control box.).
*2. Heater: KUSXA**1A; Factory installed.*
3. Default O type
4. Conventional Thermostat Interface only. To be connected to A-Coil / Furnace only.
5. T25A : KUSXB181A; KUSXB241A
T35A : KUSXA181A; KUSXA241A; KUSXB301A.

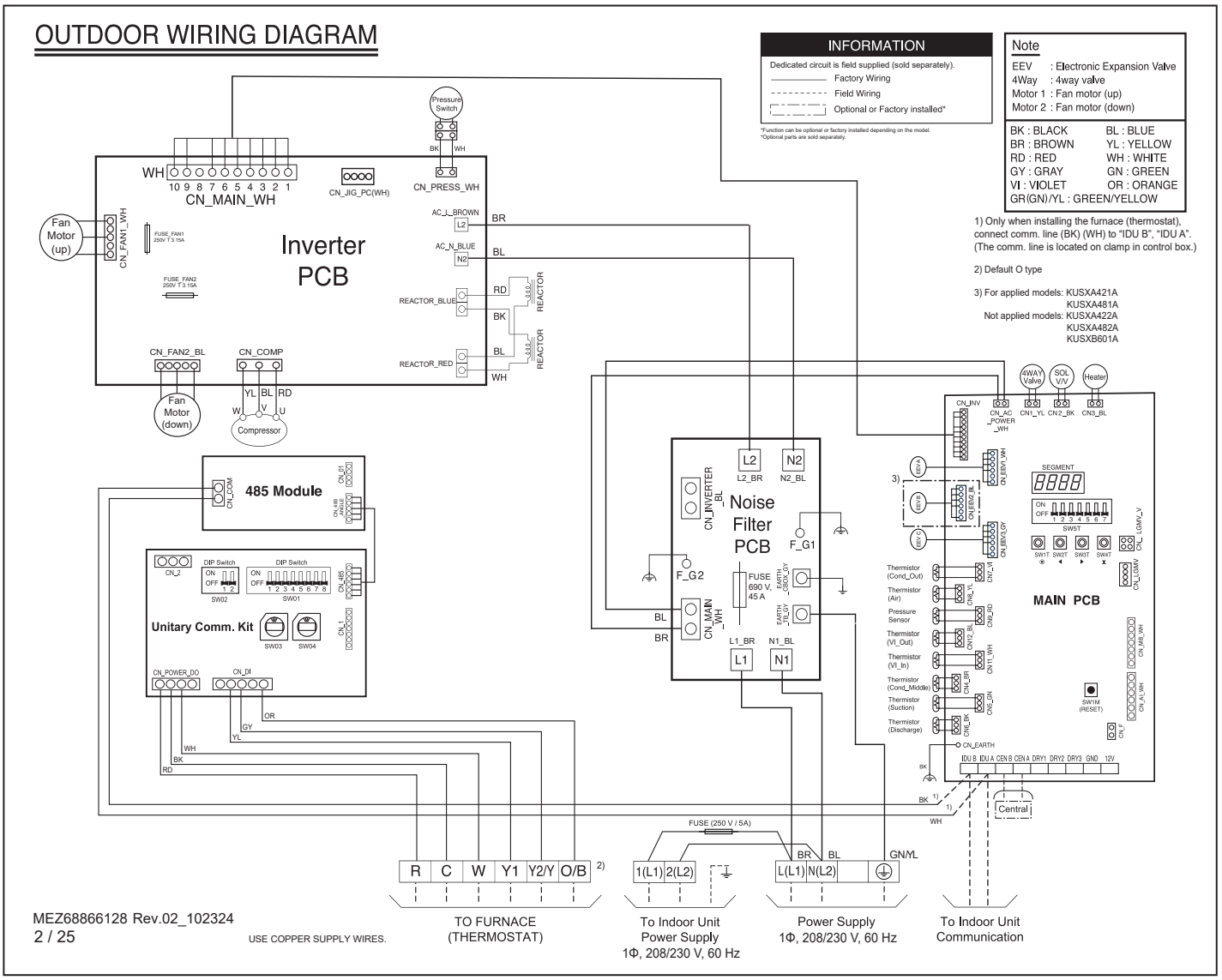
Figure 48: KUSXA301A, KUSXA361A Outdoor Unit Wiring Diagram.



WIRING DIAGRAMS

KUSXA422A, KUSXA482A Outdoor Units

Figure 49: KUSXA422A, KUSXA482A Outdoor Unit Wiring Diagram.



Power Supply / Power Wiring

- LG single zone systems operate at 1Ø, 208-230V, 60Hz; confirm power source specifications.
- Follow manufacturer's circuit diagrams displayed on the inside of the control box cover.
- It is recommended that a circuit breaker is installed, especially if conditions could become wet or moist.
- Include a disconnect in the power wiring system. Add an air gap contact separation of at least 1/8 inch in each active (phase) conductor.
- Power supply wiring to the outdoor unit(s) must be a minimum of 12 AWG, three (3) conductor for 18,000 and 24,000 Btu/h capacities; a minimum of 10 AWG, three (3) conductor for 30,000, 36,000, 42,000, and 48,000 Btu/h capacities; solid or stranded; and must comply with all National Electrical Code (NEC), UL, and local electrical codes.
- Maximum allowable voltage fluctuation ±10% or nameplate rated value. Confirm that the electrical capacity is sufficient.

A voltage drop will cause the following problems:

- Magnetic switch vibration, fuse breaks, or disturbance to the normal function of an overload protection device.
- Compressor will not receive the proper starting current.

- Any openings where the field wiring enters the cabinet must be completely sealed.
- Properly ground the outdoor unit per National Electrical Code (NEC) and local codes.

Figure 50: Circuit Breaker.

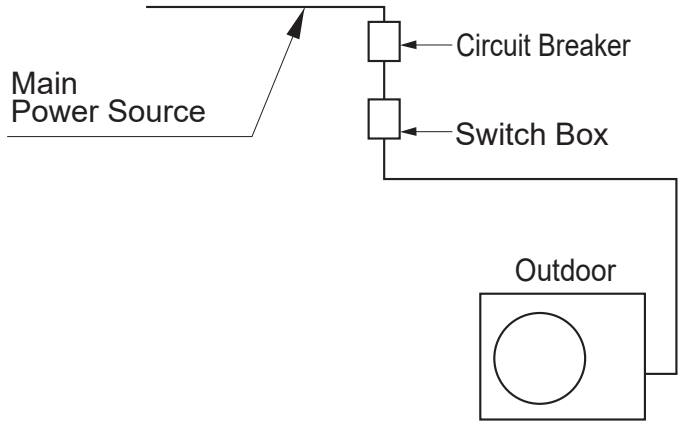
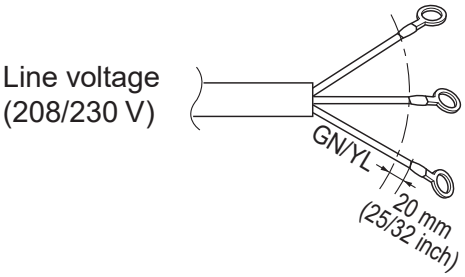


Figure 51: Power Wiring Example.



LG HEAT PUMP OUTDOOR UNIT TO INDOOR COMPONENT WIRING SYSTEM

Heat Pump Outdoor Unit with One-Stage Thermostats

S – Indoor and Outdoor Wired Sensors

R, C:

- 24 Voltage Supply for Thermostat and Communication Kit (Heat Pump)
- 24 VAC Power From the Gas Furnace (R,C) should be connected to both Heat Pump R,C) and Thermostat (R,C)

W (Heat Pump) - Gas Furnace Operation Signal when Heat Pump Enters Defrost Mode (If W is connected to W1 at Gas Furnace; If W is connected to W2 at Gas Furnace)

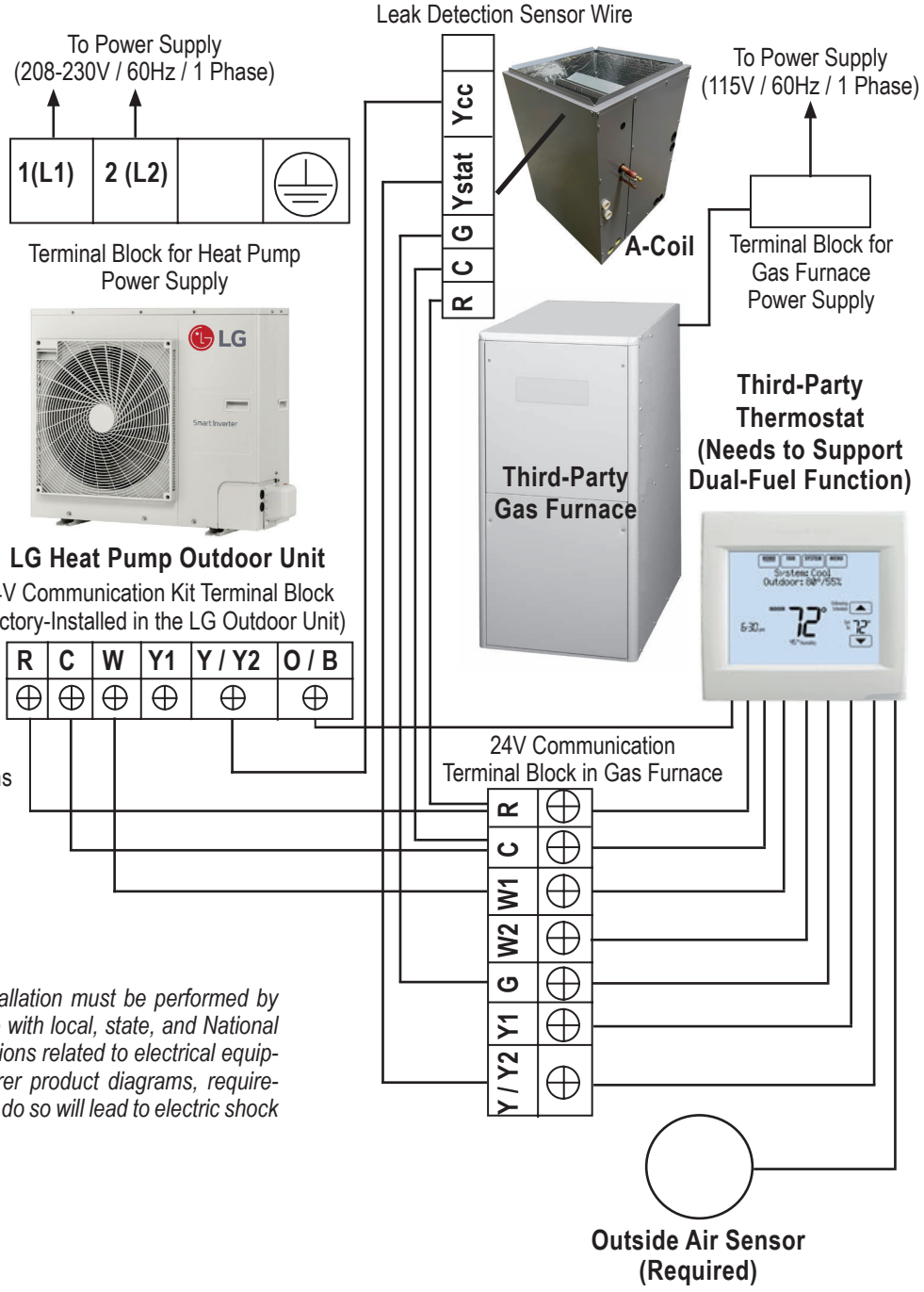
W1 (Gas Furnace) – Heating Stage1 (Specifications listed in manufacturer's manual.)

Y - Compressor Stage 1 (Cooling): Based on the load conditions, LG inverter driven compressors with variable frequency will operate in most optimal energy efficient method to achieve the set temperature.

O/B – Reversing Valve for Heat Pump Systems

O/B – Reversing Valve for Heat Pump Systems

Figure 52: Detailed One-Stage Wiring Diagram (For Illustrative Purposes Only).



⚠ WARNING

All power wiring and communication cable installation must be performed by trained service providers working in accordance with local, state, and National Electrical Code (NEC) / UL / ETL federal regulations related to electrical equipment and wiring, and following the manufacturer product diagrams, requirements, and instructions in this manual. Failure to do so will lead to electric shock which can cause physical injury or death.

LG HEAT PUMP OUTDOOR UNIT TO INDOOR COMPONENT WIRING SYSTEM

Heat Pump Outdoor Unit with Two-Stage Thermostats

S – Indoor and Outdoor Wired Sensors

R, C:

- 24 Voltage Supply for Thermostat and Communication Kit (Heat Pump)
- 24 VAC Power From the Gas Furnace (R,C) should be connected to both Heat Pump R,C) and Thermostat (R,C)

W (Heat Pump) - Gas Furnace Operation Signal when Heat Pump Enters Defrost Mode (If W is connected to W1 at Gas Furnace; If W is connected to W2 at Gas Furnace)

W1 (Gas Furnace) – Heating Stage1 (Specifications listed in manufacturer's manual.)

W2 (Gas Furnace) – Heating Stage2 (Specifications listed in manufacturer's manual.)

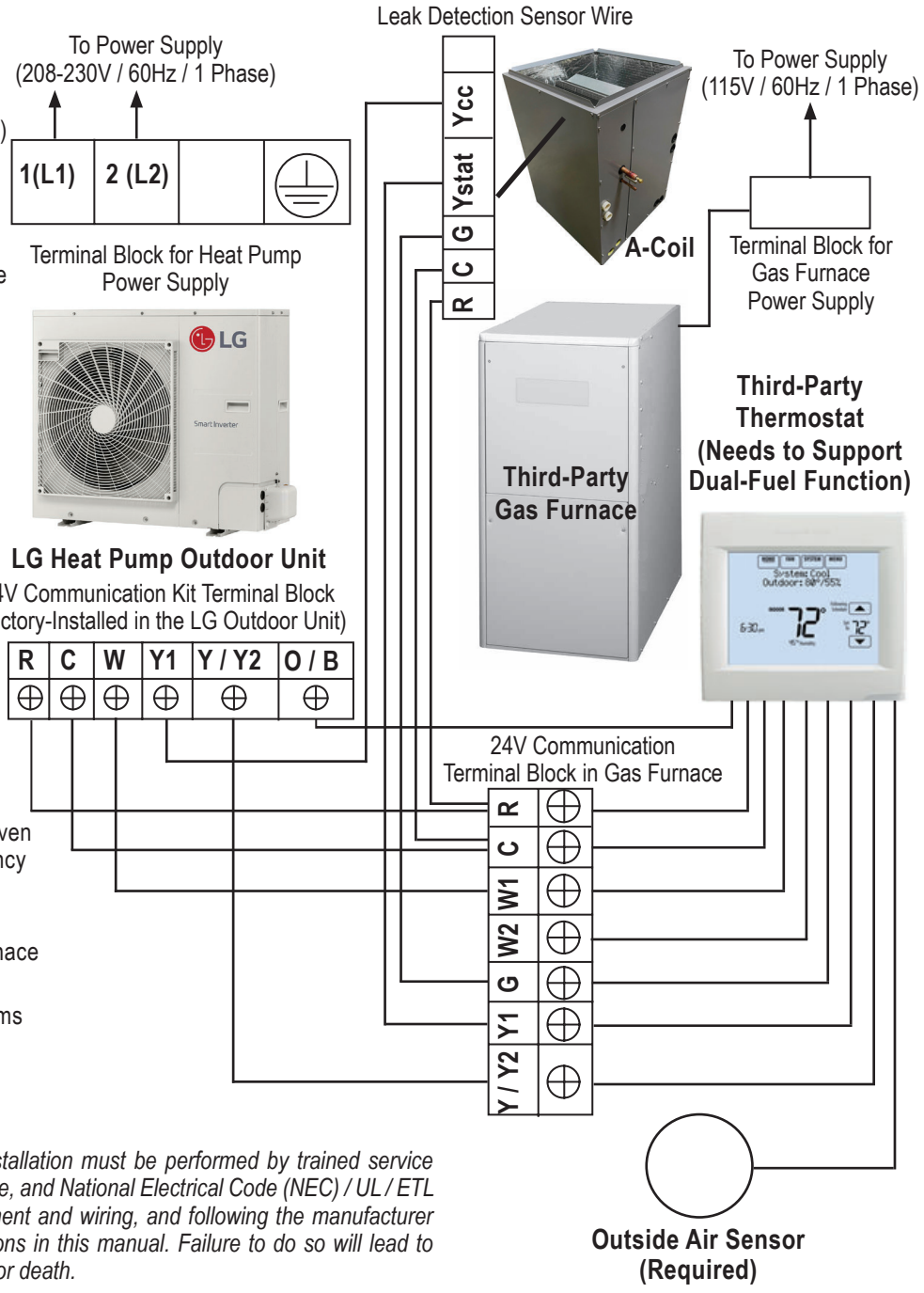
Y1 - Compressor Stage 1 (Cooling):
Based on the load conditions, LG inverter driven compressors with variable frequency will operate in most optimal energy efficient method to achieve the set temperature.

Y / Y2 - Compressor Stage 2 (Cooling):
As the load increases further, LG inverter driven compressors will further increase the frequency to full load to overcome the increased load.

G (Gas Furnace): Fan Operation at Gas Furnace

O/B – Reversing Valve for Heat Pump Systems

Figure 53: Detailed Two-Stage Wiring Diagram (For Illustrative Purposes Only).



⚠WARNING

All power wiring and communication cable installation must be performed by trained service providers working in accordance with local, state, and National Electrical Code (NEC) / UL / ETL federal regulations related to electrical equipment and wiring, and following the manufacturer product diagrams, requirements, and instructions in this manual. Failure to do so will lead to electric shock which can cause physical injury or death.

OUTDOOR UNIT COMMUNICATION CONNECTIONS AND DIP SWITCH SETTINGS

Heat Pump Outdoor Unit Communication Kit DIP Switch Setting

Figure 54: DIP SWITCH SW-01 On Communication Kit PCB (Appearances May Vary).

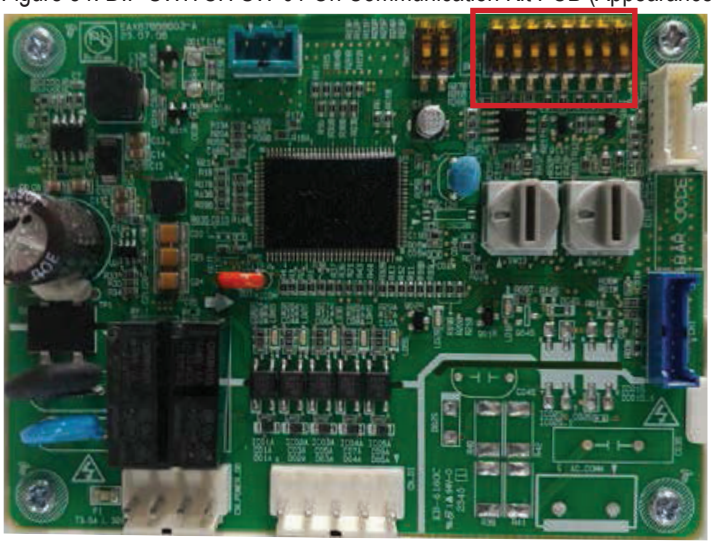


Figure 55: SW-01 DIP Switch Heat Pump Communication Kit Default Setting (All Off).

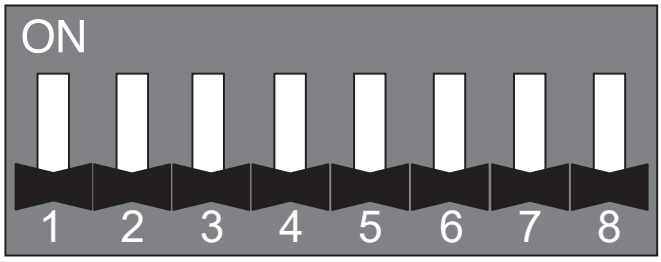


Figure 56: SW-01 DIP Switch Heat Pump Communication Kit Setting for A-Coil / Third-Party Furnace.

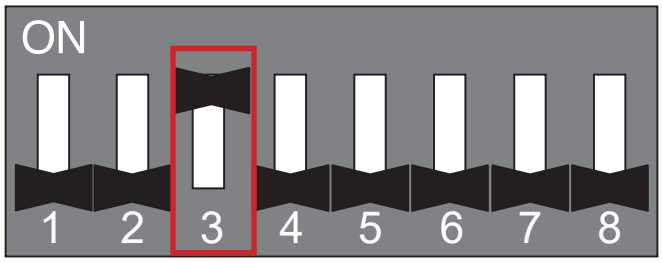


Table 71: Heat Pump Outdoor Unit Communication Kit PCB DIP Switch Functions.

DIP Switch	Function	ON	OFF
1	Heat Pump Outdoor Unit Communication	-	-
2	Remote Controller	For Test Purposes (Standard)	-
3	Thermostat Heat Pump Outdoor Unit Setting*	B Type	O Type
4	Stage Setting (Furnace)	One (1) Stage	Two (2) Stage
5	Reserved	-	-
6	Reserved	-	-
7	Reserved	-	-
8	Reserved	-	-

*Thermostat Heat Pump Setting

For Heat Pump Outdoor Unit and A-Coil / Gas Furnace combinations, only SW-01 DIP Switch No. 3 needs to be set on the communication kit.

- O Type: Heating (Open) / Cooling (Close)
- B Type: Heating (Close) / Cooling (Open)

O Type is usually the default for heat pump settings; it can be adjusted by the thermostat.

⚠ WARNING

All power wiring and communication cable installation must be performed by trained service providers working in accordance with local, state, and National Electrical Code (NEC) / UL / ETL federal regulations related to electrical equipment and wiring, and following the manufacturer product diagrams, requirements, and instructions in this manual. Failure to do so will lead to electric shock which can cause physical injury or death.

LIMITED WARRANTY (USA)

The product's full Limited Warranty terms and conditions and arbitration requirements are available at https://www.lghvac.com.

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EM_SZ_A-Coil_with_LGRED_R32_03_25