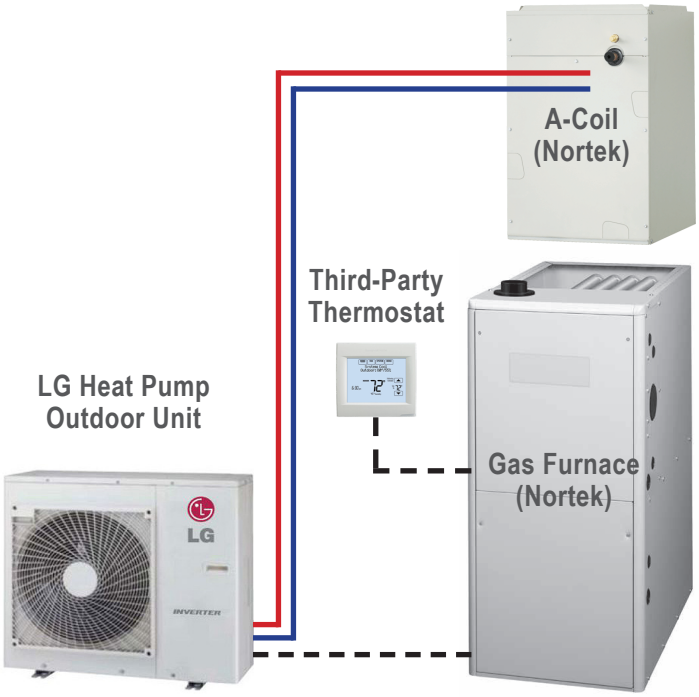
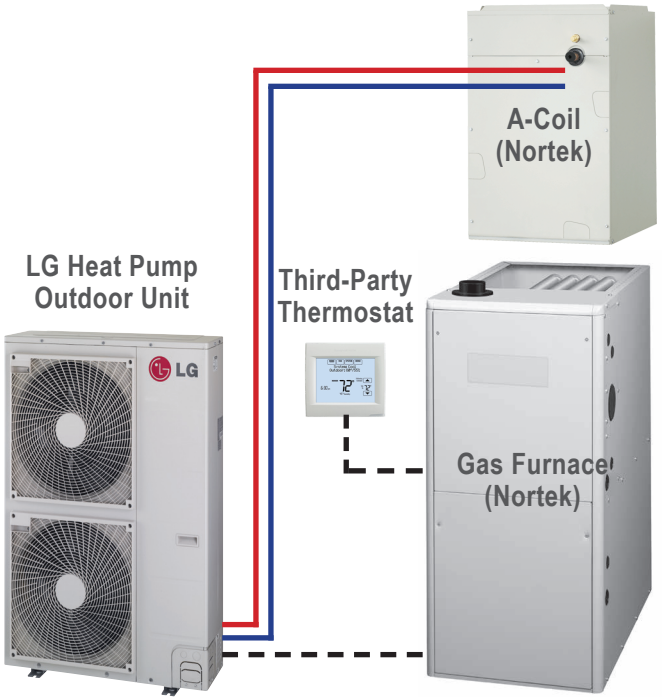
HYBRID HEAT PUMP (LG OUTDOOR UNIT + A-COIL + GAS FURNACE) SALES GUIDE



LUU180HV (18,000 Btu/h)
LUU240HV (24,000 Btu/h)



LUU360HV (30,000 and 36,000 Btu/h)
LUU420HV (42,000 Btu/h)
LUU480HV (48,000 Btu/h)

PROPRIETARY DATA NOTICE

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A summary list of safety precautions is on page 3.

For more technical materials, 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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TABLE OF CONTENTS

LG Heat Pump Nomenclature **4**

Pairing Table **5**

LG Heat Pump Mechanical Specifications **6**

General Data **7-10**

Electrical Data **11**

LG Heat Pump Outdoor Unit Dimensions **12-13**
LUU180HV, LUU240HV *12*
LUU360HV, LUU420HV, LUU480HV *13*

Nortek A-Coil Dimensions **14**

Nortek Gas Furnace Dimensions **15**

LG Heat Pump Wiring Diagrams **16-17**
LUU180HV, LUU240HV *16*
LUU360HV, LUU420HV, LUU480HV *17*

LG Heat Pump to Furnace / A-Coil Wiring Diagram **18**

LG Heat Pump Performance Data **19-**
Cooling Capacity Tables *19-24*
Heating Capacity Tables *25-27*
Correction Factors *28*

Comm. Line Connections and DIP Switch Settings **29**

Sequence of Operations **30**

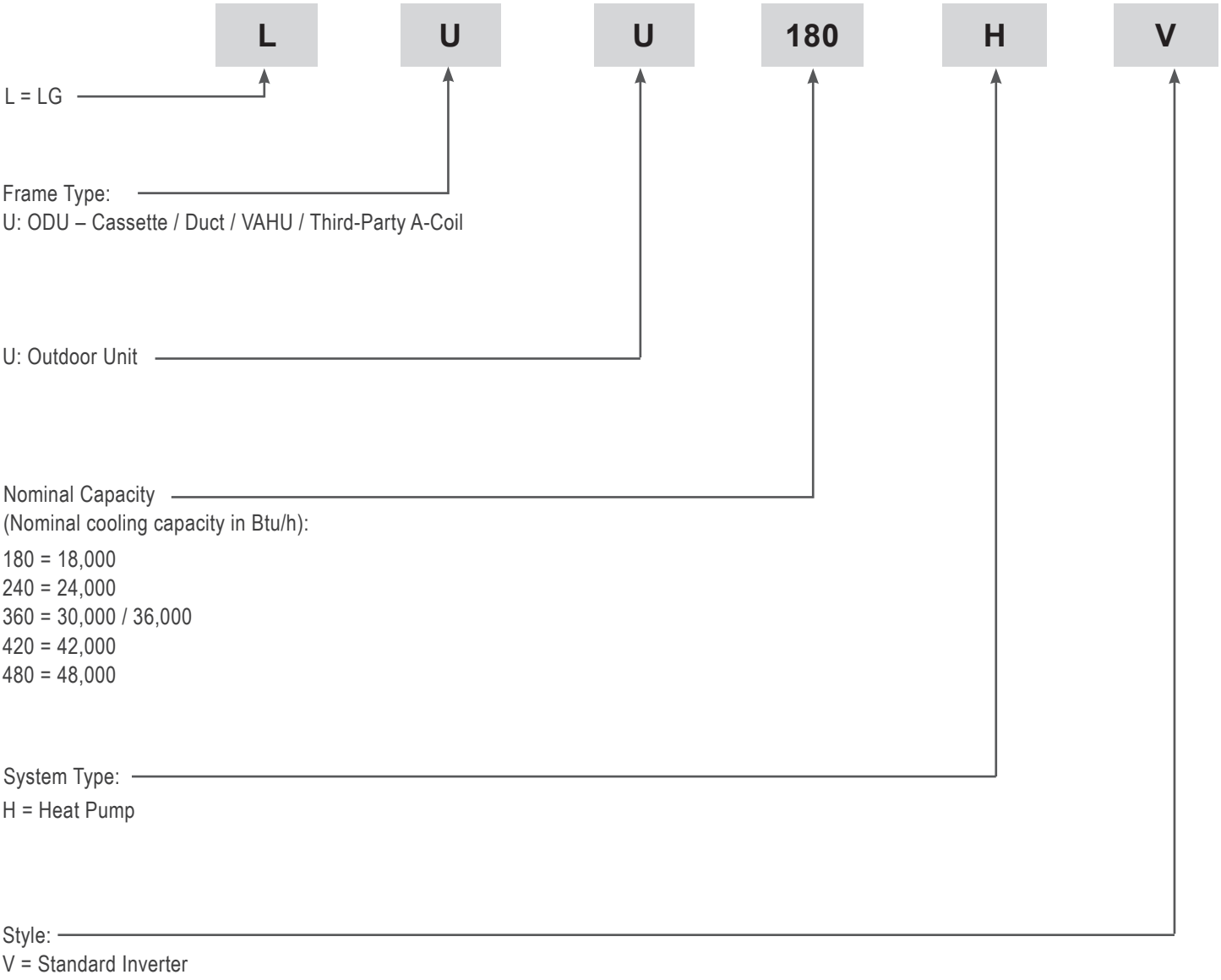
LG Heat Pump Placement Considerations **31-36**

TABLE OF SYMBOLS

⚠ **DANGER**	*This symbol indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.*
⚠ **WARNING**	*This symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.*
⚠ **CAUTION**	*This symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.*
⚠ **NOTE**	*This symbol indicates situations that may result in equipment or property damage accidents only.*
Note:	*This symbol indicates information related to the current procedure.*
⃠	*This symbol indicates an action that should not be performed.*

LG HEAT PUMP NOMENCLATURE

Heat Pump Outdoor Units



Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

PAIRING TABLE

Table 1: LG Hybrid Heat Pumps (Outdoor Unit) and Nortek A-Coil / Gas Furnace Combination Data.

LG Heat Pump Outdoor Unit Model	A-Coil (Nortek) Model	Gas Furnace (Nortek) Model
LUU180HV 	**C74BHM-X24C-B** 	**FG7TC-060D-V24B** 
LUU240HV 		
LUU360HV 	**C74BHM-X36C-B, C74BHMX36C-C** 	**FG7TC-060D-V24B, FG7TC-080D-V35C, FG7TC-100D-V35C** 
LUU420HV 	**C74BHM-X48C-C** 	**FG7TC-080D-V35C, FG7TC-100D-V35C** 
LUU480HV 	**C74BHM-X48C-C** 	**FG7TC-080D-V35C, FG7TC-100D-V35C** 

LG HEAT PUMP MECHANICAL SPECIFICATIONS

LG Heat Pump Outdoor Unit

The Single zone HVAC system is a variable capacity, direct expansion (DX) heat pump system consisting of a single outdoor unit and single indoor unit. The outdoor unit is equipped with a single inverter compressor with provision to be connected to a third-party A-Coil / gas furnace with piping and control wiring via a communication kit (provided by LG; embedded in the outdoor unit) / third-party thermostat. The outdoor unit includes an adapater kit for either flare or braze piping connections.

The heat pump outdoor unit will be available in 208/230V, 60Hz, 1 phase and uses R410A refrigerant. All refrigerant piping from outdoor unit to A-Coil are field installed / insulated.

Casing

The outdoor unit cabinet is made of pre-coated metal (PCM) with removable front/side panels of the outdoor unit for access to internal components. The outdoor unit cabinet is tested in accordance with ASTM B-117 salt spray test procedure for a minimum of 1,000 hours. All access panels are provided with gasket seals to minimize air leakage. The unit case is designed to accept an internal, optional, LG drain pan heater. The unit bears the CSA label. Unit breaker, fuses, and / or disconnect are provided by others.

Microprocessor Control

Factory installed microprocessor controls in the outdoor unit perform functions via communication kit to efficiently operate the single zone system and communicate to a third party A-Coil via minimum 14 AWG, 3 conductor, stranded, shielded or unshielded communication cable. If shielded, it must be grounded to chassis at ODU only.

The third-party gas furnace requires a separate power supply of 115V, 60Hz, 1 phase. Follow instructions provided by the gas furnace manufacturer.

Compressors

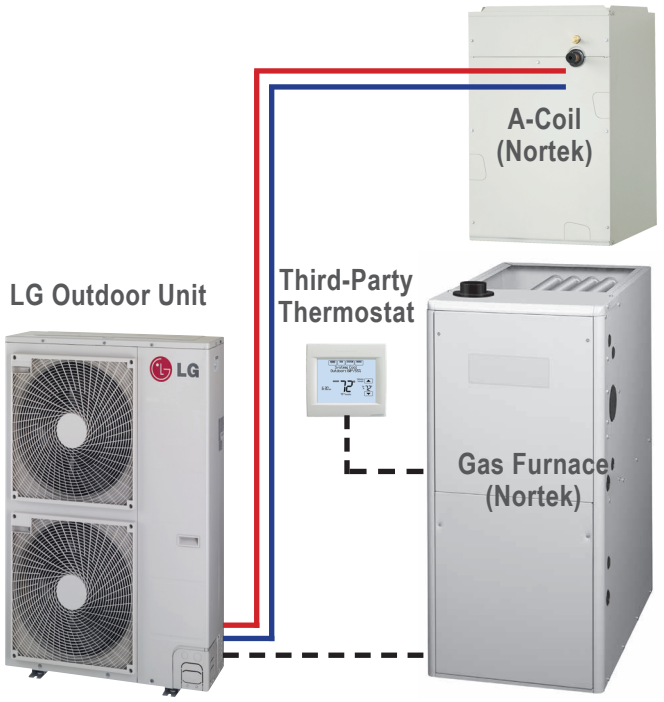
The 18,000 and 24,000 outdoor units are equipped with one hermetically sealed, digitally controlled, inverter-driven twin rotary compressor to modulate capacity (modulation in 1 Hz increments). The 36,000, 42,000, and 48,000 Btu/h outdoor units are equipped with one hermetically sealed, digitally controlled, inverter-driven 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 and 24,000 Btu/h outdoor units are:
Cooling: 15 to 80 Hz
Heating: 15 to 100 Hz

Frequency ranges for the 36,000, 42,000, and 48,000 Btu/h outdoor units are:
Cooling: 10 to 120 Hz
Heating: 10 to 135 Hz

Figure 1: LG Hybrid Outdoor Unit Heat Pumps LUU360HV, LUU420HV, LUU480HV with Nortek A-Coil / Gas Furnace.



Controls

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.

Condensate

The outdoor unit is designed for gravity draining of condensate.

Outdoor Unit Heat Pump Coil

Outdoor unit heat pump 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 pressure of 551 psig.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

Table 2: 18,000 and 24,000 Btu/h LG Hybrid Heat Pumps (Outdoor Units) and Nortek A-Coil / Gas Furnace Combination Data.

LG Outdoor Unit Model Number			LUU180HV			LUU240HV		
A-Coil (Nortek) Model Number			C74BHM-X24C-B			C74BHM-X24C-B		
Gas Furnace[1] (Nortek) Model Number			FG7TC-060D-V24B[1]			FG7TC-060D-V24B[1]		
Cooling[2]	Min. ~ Rated ~ Max.	Btu/h	7,200	18,000	22,000	9,600	23,000	29,000
Cooling Power Input[2]	Min. ~ Rated ~ Max.	kW	0.45	1.44	2.60	0.59	1.96	3.30
EER2 (@95°F)			12.50			11.70		
SEER2			17.5			17.1		
Heating[2]	Min. ~ Rated ~ Max.	Btu/h	8,000	20,000	24,000	10,000	26,000	30,000
Heating Power Input[2]	Min. ~ Rated ~ Max.	kW	0.53	1.915	2.47	0.65	2.385	3.20
COP (@47°F)			3.06			3.20		
HSPF2			9.1			9.0		
Maximum Heating (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	Btu/h	19,500			23,500		
	OD 6ºF / 5ºF DB / WB	Btu/h	17,100			21,400		
	OD -3ºF / -4ºF DB / WB	Btu/h	14,260			18,920		
Maximum Heating Power Input (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	W	2,620			3,120		
	OD 6ºF / 5ºF DB / WB	W	2,720			3,290		
	OD -3ºF / -4ºF DB / WB	W	2,500			3,030		
ENERGY STAR / Cold Climate ENERGY STAR			Yes / Yes			Yes / Yes		
AHRI Reference Number			213307887			213307504		
LG Outdoor Unit Heat Pump Data								
Air Flow Rate	Max. Air Flow (CFM)		2,048			2,048		
	Max. External Static Pressure (in. w.g.)		0.1			0.1		
Fan Motor Speed	Cooling, Min. - Max. (rpm)		150~760			150~760		
	Heating, Min. - Max. (rpm)		150~760			150~760		
Sound Pressure Level	Cooling, Rated (dB[A])		48			48		
	Heating, Rated (dB[A])		52			52		
Sound Power Level	Maximum (dB[A])		67			67		
Dimensions (W x H x D)	Net (inches)		37-13/32 x 32-27/32 x 13			37-13/32 x 32-27/32 x 13		
	Shipping (inches)		44-7/8 x 36-5/32 x 18-5/32			44-7/8 x 36-5/32 x 18-5/32		
Weight (lbs.)	Net (lbs.) / Shipping (lbs.)		130.1 / 147.7			130.1 / 147.7		
Piping	Installed Liquid Pipe Size (inches)		3/8			3/8		
	Installed Vapor Pipe Size (inches)		5/8~3/4			5/8~3/4		
	Outdoor Unit Liquid Connection Size (inches)		3/8			3/8		
	Outdoor Unit Vapor Connection Size (inches)		5/8			5/8		
	A-Coil Liquid Connection Size (inches)		3/8			3/8		
	A-Coil Vapor Connection Size (inches)		3/4			3/4		
	Connection Method[3]		Flare or Braze[3]			Flare or Braze[3]		
Piping Between Outdoor Unit and A-Coil	Max. System Piping Length (feet)		164			164		
	Piping Length (No Additional Charge) (feet)		24.6			24.6		
	Min. to Max. Main (feet)		16.4~164			16.4~164		
	Max. Elev. Diff. (ODU to A-Coil) (feet)		98.4			98.4		
Refrigerant	Type		R410A			R410A		
	Pre-Charge (oz.)		70.5			70.5		
	Additional Charge (Main) (oz. / feet)		0.43			0.43		
	Control[4]		Thermal Expansion Valve[4]			Thermal Expansion Valve[4]		
Compressor	Type		Twin Rotary			Twin Rotary		
	Oil Type		PVE			PVE		
Fan	Type x Qty.		Propeller x 1			Propeller x 1		
	Motor Type		Brushless Digitally Controlled			Brushless Digitally Controlled		
	Motor Output x Qty. (W)		124 x 1			124 x 1		

[1]Gas Furnace: 95% AFUE.

[2]Test conditions are based on AHRI 210 / 240.

[3]Outdoor unit includes adapter kit for either flare or braze piping connections.

[4]The refrigerant control device is located in the Nortek A-Coil component; see Nortek technical materials for more information.

[5]Power supply, power wiring / communication cables, and circuit breakers are field-supplied and must comply with applicable local and national codes.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

GENERAL DATA

Table 3: 30,000 Btu/h and 36,000 Btu/h LG Hybrid Heat Pumps (Outdoor Units) and Nortek A-Coil / Gas Furnace Combination Data.

LG Outdoor Unit Model Number			LUU360HV			LUU360HV			LUU360HV		
A-Coil (Nortek) Model Number			C74BHM-X36C-B			C74BHM-X36C-C			C74BHM-X36C-C		
Gas Furnace[1] (Nortek) Model Number			FG7TC-060D-V24B[1]			FG7TC-080D-V35C[1]			FG7TC-100D-V35C[1]		
Cooling[2]	Min. ~ Rated ~ Max.	Btu/h	13,200	33,200	36,000	14,400	36,000	40,000	14,400	36,000	40,000
Cooling Power Input[2]	Min. ~ Rated ~ Max.	kW	0.87	2.79	3.50	1.00	2.95	3.80	1.00	2.95	3.80
EER2 (@95°F)			11.90			12.20			12.20		
SEER2			17.6			18.2			18.2		
Heating[2]	Min. ~ Rated ~ Max.	Btu/h	14,000	36,000	39,000	16,000	40,000	44,000	16,000	40,000	44,000
Heating Power Input[2]	Min. ~ Rated ~ Max.	kW	1.00	3.05	4.10	1.00	3.20	4.30	1.00	3.20	4.30
COP (@47°F)			3.46			3.66			3.66		
HSPF2			8.5			9.2			9.2		
Maximum Heating (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	Btu/h	33,000			38,000			38,000		
	OD 6ºF / 5ºF DB / WB	Btu/h	30,000			33,800			33,800		
	OD -3ºF / -4ºF DB / WB	Btu/h	26,450			28,830			28,830		
Maximum Heating Power Input (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	W	4,420			5,100			5,100		
	OD 6ºF / 5ºF DB / WB	W	4,750			5,290			5,290		
	OD -3ºF / -4ºF DB / WB	W	4,370			4,870			4,870		
ENERGY STAR / Cold Climate ENERGY STAR			Yes / Yes			Yes / Yes			Yes / Yes		
AHRI Reference Number			213307505			213307506			213307507		
LG Outdoor Unit Heat Pump Data											
Air Flow Rate	Max. Air Flow (CFM)		1,942 x 2			1,942 x 2			1,942 x 2		
	Max. ESP (in. w.g.)		0.1			0.1			0.1		
Fan Motor Speed	Cooling, Min. - Max. (rpm)		150~750			150~750			150~750		
	Heating, Min. - Max. (rpm)		150~750			150~750			150~750		
Sound Pressure Level	Cooling, Rated (dB[A])		52			52			52		
	Heating, Rated (dB[A])		54			54			54		
Sound Power Level	Maximum (dB[A])		65			65			65		
Dimensions (W x H x D)	Net (inches)		37-13/32 x 54-11/32 x 13			37-13/32 x 54-11/32 x 13			37-13/32 x 54-11/32 x 13		
	Shipping (inches)		44-7/8 x 57-9/16 x 18-5/32			44-7/8 x 57-9/16 x 18-5/32			44-7/8 x 57-9/16 x 18-5/32		
Weight (lbs.)	Net (lbs.) / Shipping (lbs.)		193.1 / 217.4			193.1 / 217.4			193.1 / 217.4		
Piping	Installed Liquid Pipe Size (inches)		3/8			3/8			3/8		
	Installed Vapor Pipe Size (inches)		5/8~7/8			5/8~7/8			5/8~7/8		
	Outdoor Unit Liquid Conn. Size (inches)		3/8			3/8			3/8		
	Outdoor Unit Vapor Conn. Size (inches)		5/8			5/8			5/8		
	A-Coil Liquid Connection Size (inches)		3/8			3/8			3/8		
	A-Coil Vapor Connection Size (inches)		7/8			7/8			7/8		
	Connection Method[3]		Flare or Braze[3]			Flare or Braze[3]			Flare or Braze[3]		
Piping Between Outdoor Unit and A-Coil	Max. System Piping Length (feet)		246			246			246		
	Piping Length (No Add'l Charge) (feet)		24.6			24.6			24.6		
	Min. to Max. Main (feet)		16.4~246			16.4~246			16.4~246		
	Max. Elev. Diff. (ODU to A-Coil) (feet)		98.4			98.4			98.4		
Refrigerant	Type		R410A			R410A			R410A		
	Pre-Charge (oz.)		120			120			120		
	Additional Charge (Main) (oz. / feet)		0.43			0.43			0.43		
	Control[4]		Thermal Expansion Valve[4]			Thermal Expansion Valve[4]			Thermal Expansion Valve[4]		
Compressor	Type		R1 Scroll			R1 Scroll			R1 Scroll		
	Oil Type		PVE			PVE			PVE		
Fan	Type x Qty.		Propeller x 2			Propeller x 2			Propeller x 2		
	Motor Type		Brushless Digitally Controlled								
	Motor Output x Qty. (W)		124 x 2			124 x 2			124 x 2		

[1]Gas Furnace: 95% AFUE.

[2]Test conditions are based on AHRI 210 / 240.

[3]Outdoor unit includes adapater kit for either flare or braze piping connections.

[4]The refrigerant control device is located in the Nortek A-Coil component; see Nortek technical materials for more information.

[5]Power supply, power wiring / communication cables, and circuit breakers are field-supplied and must comply with applicable local and national codes.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

Table 4: 42,000 Btu/h LG Hybrid Heat Pumps (Outdoor Units) and Nortek A-Coil / Gas Furnace Combination Data.

LG Outdoor Unit Model Number			LUU420HV			LUU420HV		
A-Coil (Nortek) Model Number			C74BHM-X48C-C			C74BHM-X48C-C		
Gas Furnace[1] (Nortek) Model Number			FG7TC-080D-V35C[1]			FG7TC-100D-V35C[1]		
Cooling[2]	Min. ~ Rated ~ Max.	Btu/h	17,000	42,000	47,000	17,000	42,000	47,000
Cooling Power Input[2]	Min. ~ Rated ~ Max.	kW	1.28	3.59	5.20	1.28	3.59	5.20
EER2 (@95°F)			11.70			11.70		
SEER2			17.2			17.2		
Heating[2]	Min. ~ Rated ~ Max.	Btu/h	18,000	45,000	51,000	18,000	45,000	51,000
Heating Power Input[2]	Min. ~ Rated ~ Max.	kW	1.40	3.60	5.15	1.40	3.60	5.15
COP (@47°F)			3.66			3.66		
HSPF2			9.3			9.3		
Maximum Heating (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	Btu/h	40,000			40,000		
	OD 6ºF / 5ºF DB / WB	Btu/h	38,000			38,000		
	OD -3ºF / -4ºF DB / WB	Btu/h	35,640			35,640		
Maximum Heating Power Input (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	W	5,410			5,410		
	OD 6ºF / 5ºF DB / WB	W	6,110			6,110		
	OD -3ºF / -4ºF DB / WB	W	5,620			5,620		
ENERGY STAR / Cold Climate ENERGY STAR			Yes / Yes			Yes / Yes		
AHRI Reference Number			213307888			213307889		
LG Outdoor Unit Heat Pump Data								
Air Flow Rate	Max. Air Flow (CFM)		1,942 x 2			1,942 x 2		
	Max. External Static Pressure (in. w.g.)		0.1			0.1		
Fan Motor Speed	Cooling, Min. - Max. (rpm)		150~750			150~750		
	Heating, Min. - Max. (rpm)		150~750			150~750		
Sound Pressure Level	Cooling, Rated (dB[A])		52			52		
	Heating, Rated (dB[A])		54			54		
Sound Power Level	Maximum (dB[A])		67			67		
Dimensions (W x H x D)	Net (inches)		37-13/32 x 54-11/32 x 13			37-13/32 x 54-11/32 x 13		
	Shipping (inches)		44-7/8 x 57-9/16 x 18-5/32			44-7/8 x 57-9/16 x 18-5/32		
Weight (lbs.)	Net (lbs.) / Shipping (lbs.)		193.1 / 217.4			193.1 / 217.4		
Piping	Installed Liquid Pipe Size (inches)		3/8			3/8		
	Installed Vapor Pipe Size (inches)		5/8~7/8			5/8~7/8		
	Outdoor Unit Liquid Connection Size (inches)		3/8			3/8		
	Outdoor Unit Vapor Connection Size (inches)		5/8			5/8		
	A-Coil Liquid Connection Size (inches)		3/8			3/8		
	A-Coil Vapor Connection Size (inches)		7/8			7/8		
	Connection Method[3]		Flare or Braze[3]			Flare or Braze[3]		
Piping Between Outdoor Unit and A-Coil	Max. System Piping Length (feet)		246			246		
	Piping Length (No Additional Charge) (feet)		24.6			24.6		
	Min. to Max. Main (feet)		16.4~246			16.4~246		
	Max. Elev. Diff. (ODU to A-Coil) (feet)		98.4			98.4		
Refrigerant	Type		R410A			R410A		
	Pre-Charge (oz.)		120			120		
	Additional Charge (Main) (oz. / feet)		0.43			0.43		
	Control[4]		Thermal Expansion Valve[4]			Thermal Expansion Valve[4]		
Compressor	Type		R1 Scroll			R1 Scroll		
	Oil Type		PVE			PVE		
Fan	Type x Qty.		Propeller x 2			Propeller x 2		
	Motor Type		Brushless Digitally Controlled			Brushless Digitally Controlled		
	Motor Output x Qty. (W)		124 x 2			124 x 2		

[1]Gas Furnace: 95% AFUE.

[2]Test conditions are based on AHRI 210 / 240.

[3]Outdoor unit includes adapater kit for either flare or braze piping connections.

[4]The refrigerant control device is located in the Nortek A-Coil component; see Nortek technical materials for more information.

[5]Power supply, power wiring / communication cables, and circuit breakers are field-supplied and must comply with applicable local and national codes.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

GENERAL DATA

Table 5: 48,000 Btu/h LG Hybrid Heat Pumps (Outdoor Units) and Nortek A-Coil / Gas Furnace Combination Data.

LG Outdoor Unit Model Number			LUU480HV			LUU480HV		
A-Coil (Nortek) Model Number			C74BHM-X48C-C			C74BHM-X48C-C		
Gas Furnace[1] (Nortek) Model Number			FG7TC-080D-V35C[1]			FG7TC-100D-V35C[1]		
Cooling[2]	Min. ~ Rated ~ Max.	Btu/h	18,000	48,000	52,000	18,000	48,000	52,000
Cooling Power Input[2]	Min. ~ Rated ~ Max.	kW	1.51	4.90	6.00	1.51	4.90	6.00
EER2 (@95°F)			9.80			9.80		
SEER2			16.8			16.8		
Heating[2]	Min. ~ Rated ~ Max.	Btu/h	19,000	50,000	56,000	19,000	50,000	56,000
Heating Power Input[2]	Min. ~ Rated ~ Max.	kW	1.48	4.14	5.75	1.48	4.14	5.75
COP (@47°F)			3.54			3.54		
HSPF2			9.0			9.0		
Maximum Heating (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	Btu/h	42,000			42,000		
	OD 6ºF / 5ºF DB / WB	Btu/h	40,000			40,000		
	OD -3ºF / -4ºF DB / WB	Btu/h	37,640			37,640		
Maximum Heating Power Input (@ ID 70ºF DB)	OD 19ºF / 17ºF DB / WB	W	5,750			5,750		
	OD 6ºF / 5ºF DB / WB	W	6,160			6,160		
	OD -3ºF / -4ºF DB / WB	W	5,670			5,670		
ENERGY STAR / Cold Climate ENERGY STAR			No / Yes			No / Yes		
AHRI Reference Number			213307508			213307509		
LG Outdoor Unit Heat Pump Data								
Air Flow Rate	Max. Air Flow (CFM)		1,942 x 2			1,942 x 2		
	Max. ESP (in. w.g.)		0.1			0.1		
Fan Motor Speed	Cooling, Min. - Max. (rpm)		150~750			150~750		
	Heating, Min. - Max. (rpm)		150~750			150~750		
Sound Pressure Level	Cooling, Rated (dB[A])		52			52		
	Heating, Rated (dB[A])		54			54		
Sound Power Level	Maximum (dB[A])		68			68		
Dimensions (W x H x D)	Net (inches)		37-13/32 x 54-11/32 x 13			37-13/32 x 54-11/32 x 13		
	Shipping (inches)		44-7/8 x 57-9/16 x 18-5/32			44-7/8 x 57-9/16 x 18-5/32		
Weight (lbs.)	Net (lbs.) / Shipping (lbs.)		193.1 / 217.4			193.1 / 217.4		
Piping	Installed Liquid Pipe Size (inches)		3/8			3/8		
	Installed Vapor Pipe Size (inches)		5/8~7/8			5/8~7/8		
	Outdoor Unit Liquid Conn. Size (inches)		3/8			3/8		
	Outdoor Unit Vapor Conn. Size (inches)		5/8			5/8		
	A-Coil Liquid Connection Size (inches)		3/8			3/8		
	A-Coil Vapor Connection Size (inches)		7/8			7/8		
	Connection Method[3]		Flare or Braze[3]			Flare or Braze[3]		
Piping Between Outdoor Unit and A-Coil	Max. System Piping Length (feet)		246			246		
	Piping Length (No Add'l Charge) (feet)		24.6			24.6		
	Min. to Max. Main (feet)		16.4~246			16.4~246		
	Max. Elev. Diff. (ODU to A-Coil) (feet)		98.4			98.4		
Refrigerant	Type		R410A			R410A		
	Pre-Charge (oz.)		120			120		
	Additional Charge (Main) (oz. / feet)		0.43			0.43		
	Control[4]		Thermal Expansion Valve[4]			Thermal Expansion Valve[4]		
Compressor	Type		R1 Scroll			R1 Scroll		
	Oil Type		PVE			PVE		
Fan	Type x Qty.		Propeller x 2			Propeller x 2		
	Motor Type		Brushless Digitally Controlled			Brushless Digitally Controlled		
	Motor Output x Qty. (W)		124 x 2			124 x 2		

[1]Gas Furnace: 95% AFUE.

[2]Test conditions are based on AHRI 210 / 240.

[3]Outdoor unit includes adapater kit for either flare or braze piping connections.

[4]The refrigerant control device is located in the Nortek A-Coil component; see Nortek technical materials for more information.

[5]Power supply, power wiring / communication cables, and circuit breakers are field-supplied and must comply with applicable local and national codes.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

Table 6: LG Heat Pump Outdoor Unit Electrical Data.

Model Name	Hz	Voltage	Phase	Voltage Range (Min. to Max.)	MCA	MOP	Compressor Quantity	Compressor Motor RLA (Cooling)	Condenser Fan Motor(s)	
									Condenser Fan Quantity	Condenser Fan Motor FLA
LUU180HV	60	208/230	1	187~253	20.0	30	1	13.5	1	1.6
LUU240HV					20.0	30	1	13.5	1	1.6
LUU360HV					32.0	40	1	22	2	1.6 x 2
LUU420HV					32.0	40	1	22	2	1.6 x 2
LUU480HV					32.0	40	1	22	2	1.6 x 2

Voltage tolerance is ±10%.
Maximum allowable voltage unbalance is 2%.
RLA = Rated Load Amps.

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.

Table 7: Nortek Gas Furnace Electrical Data.[1]

Model Name	Hz	Voltage	Phase	Voltage Range (Min. to Max.)	Maximum Furnace Amps	Maximum Fuse or Circuit Breaker Amps
FG7TC-060D-V24B	60	115	1	103-127	7.0	15
FG7TC-080D-V35C					9.4	15
FG7TC-100D-V35C					9.4	15

[1]Gas Furnace: 95% AFUE.
[2]Time-delay fuses or circuit breakers are required.
[3]Separate power supply required for gas furnace.

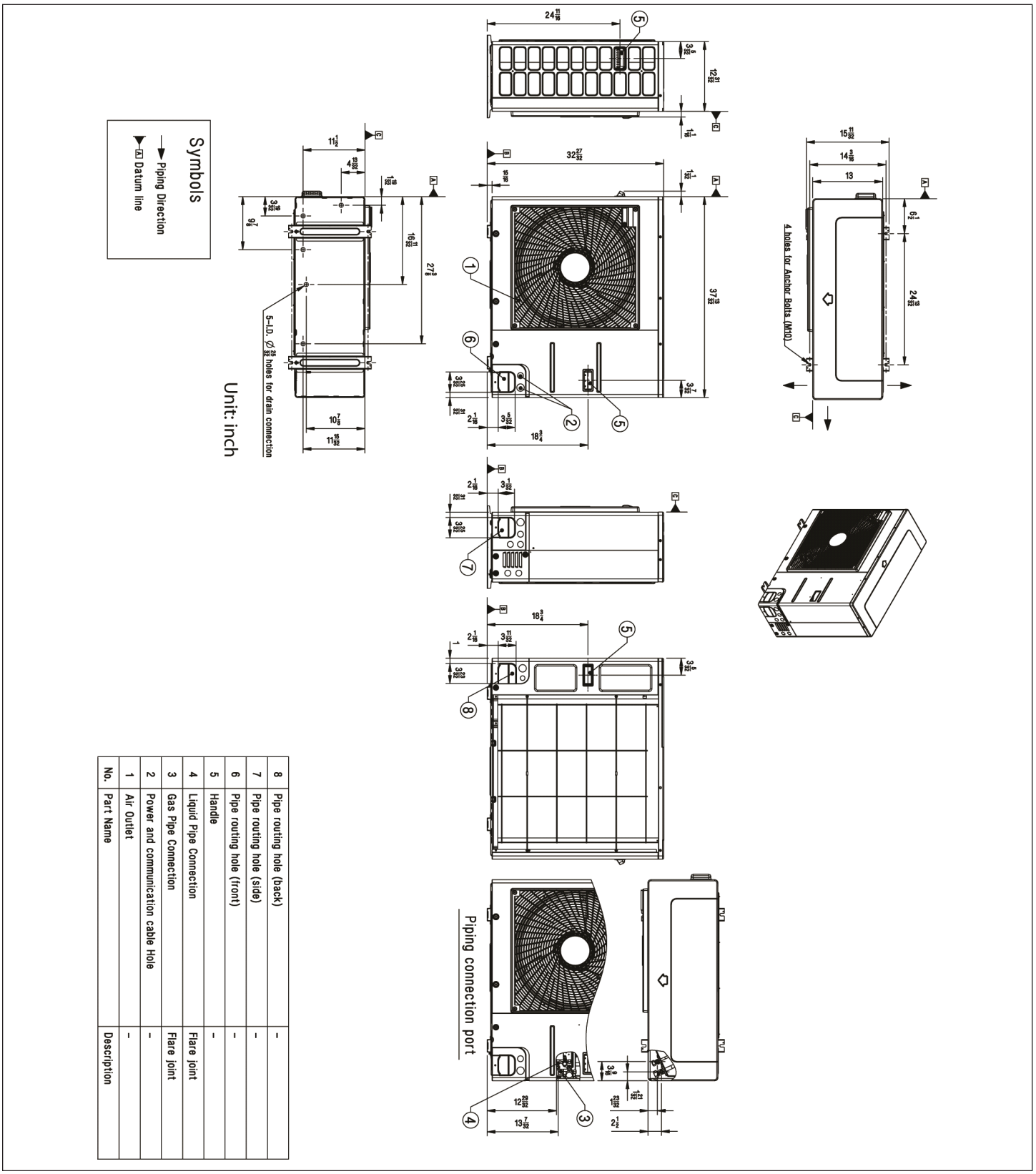
Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

LG HEAT PUMP DIMENSIONS

LUU180HV, LUU240HV

Figure 2: LUU180HV, LUU240HV Heat Pump Outdoor Unit Dimensions.

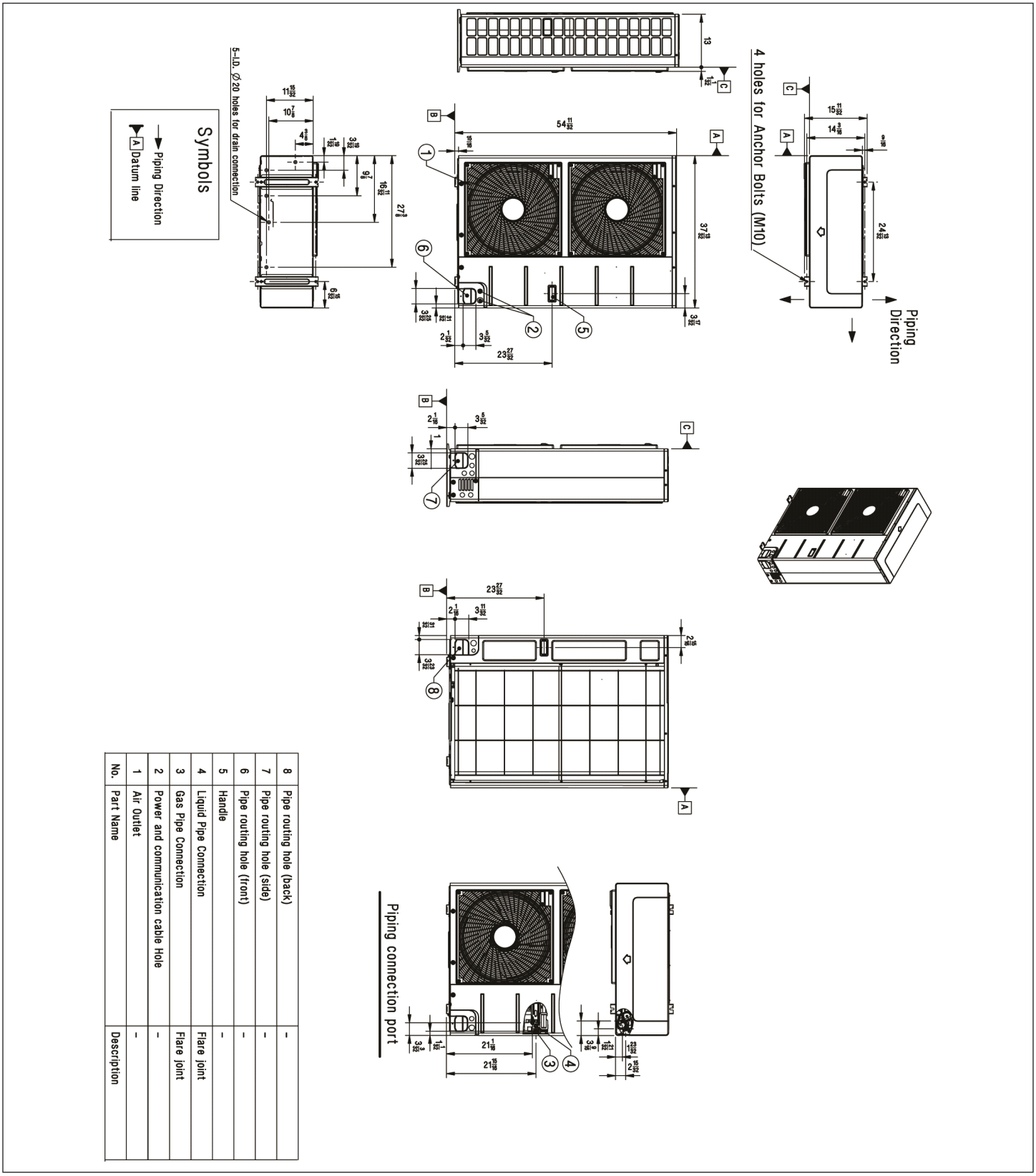


No.	Part Name	Description
1	Air Outlet	–
2	Power and communication cable Hole	–
3	Gas Pipe Connection	Flare joint
4	Liquid Pipe Connection	Flare joint
5	Handle	–
6	Pipe routing hole (front)	–
7	Pipe routing hole (side)	–
8	Pipe routing hole (back)	–

LG HEAT PUMP DIMENSIONS

LUU360HV, LUU420HV, LUU480HV

Figure 3: LUU360HV, LUU420HV, LUU480HV Heat Pump Outdoor Unit Dimensions.

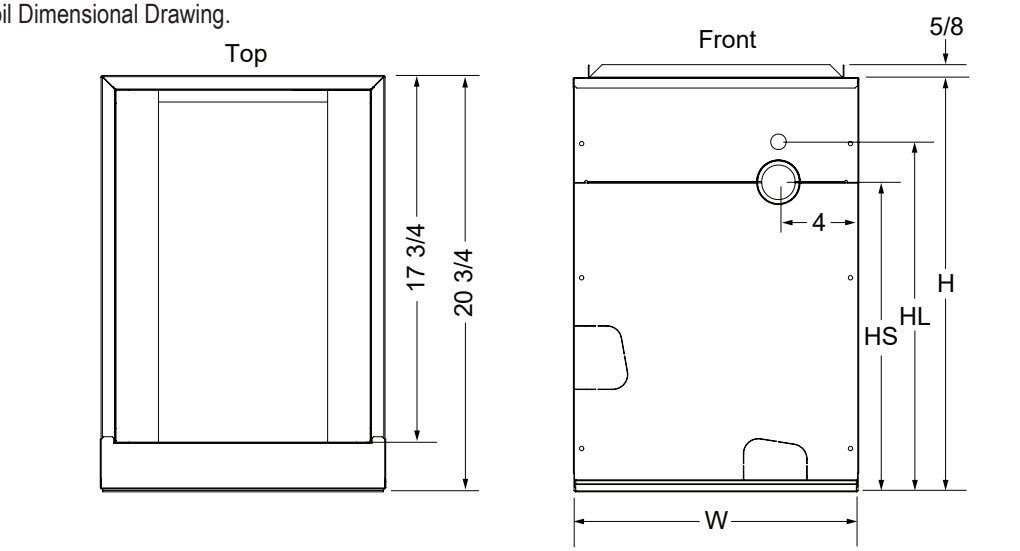


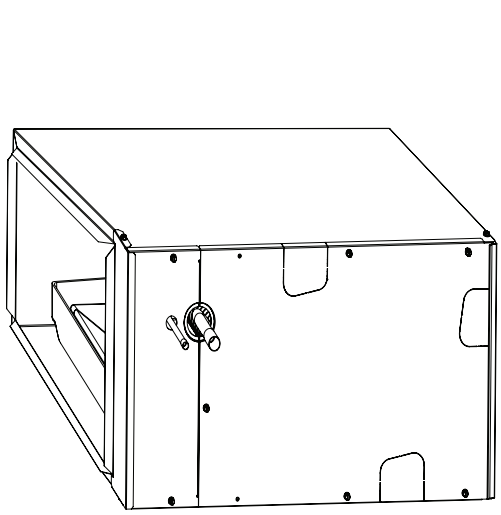
No.	Part Name	Description
1	Air Outlet	–
2	Power and communication cable Hole	–
3	Gas Pipe Connection	Flare joint
4	Liquid Pipe Connection	Flare joint
5	Handle	–
6	Pipe routing hole (front)	–
7	Pipe routing hole (side)	–
8	Pipe routing hole (back)	–

Product Data

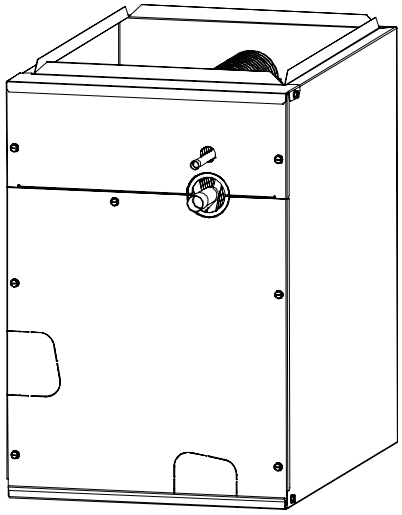
NORTEK A-COIL DIMENSIONS

Figure 4: Nortek A-Coil Dimensional Drawing.





Cased Coil (Horizontal Left)



Cased Coil

Table 8: Nortek A-Coil Dimensions Table.

C74BHM-	X24C-B	X36C-B	X36C-C	X48C-C
Nominal Capacity (Btu/h)	24,000	36,000	36,000	48,000
Width (W, in.)	17.5	17.5	21	21
Height (H, in.)	26.75	26.75	26.75	30.25
Height of Liquid Line (HL, in.)	23.5	23.5	23.5	27
Height of Suction Line (HS, in.)	21.5	21.5	21.5	25
Liquid Line Connection (in.)	3/8	3/8	3/8	3/8
Suction Line Connection (in.)	3/4	7/8	7/8	7/8

Note:

For additional Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

NORTEK GAS FURNACE DIMENSIONS

Figure 5: Nortek Gas Furnace Dimensional Drawing.

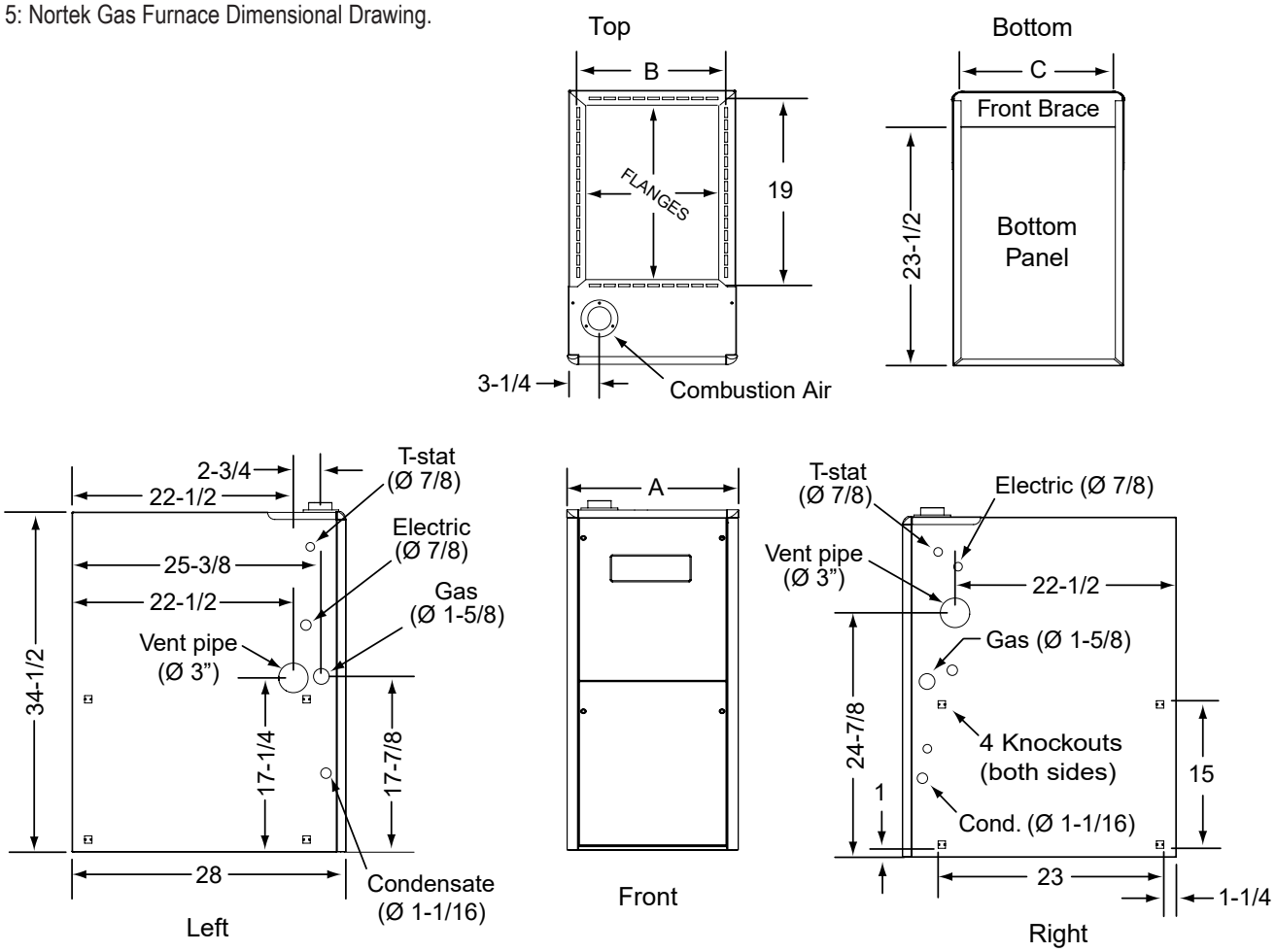


Table 9: Nortek A-Coil Dimensions Table.

FG7TC-	060D-VB	080D-VC	100D-VC
Dimension A (in.)	17-1/2	21	
Dimension B (in.)	15-7/8	19-3/8	
Dimension C (in.)	16-1/8	19-5/8	

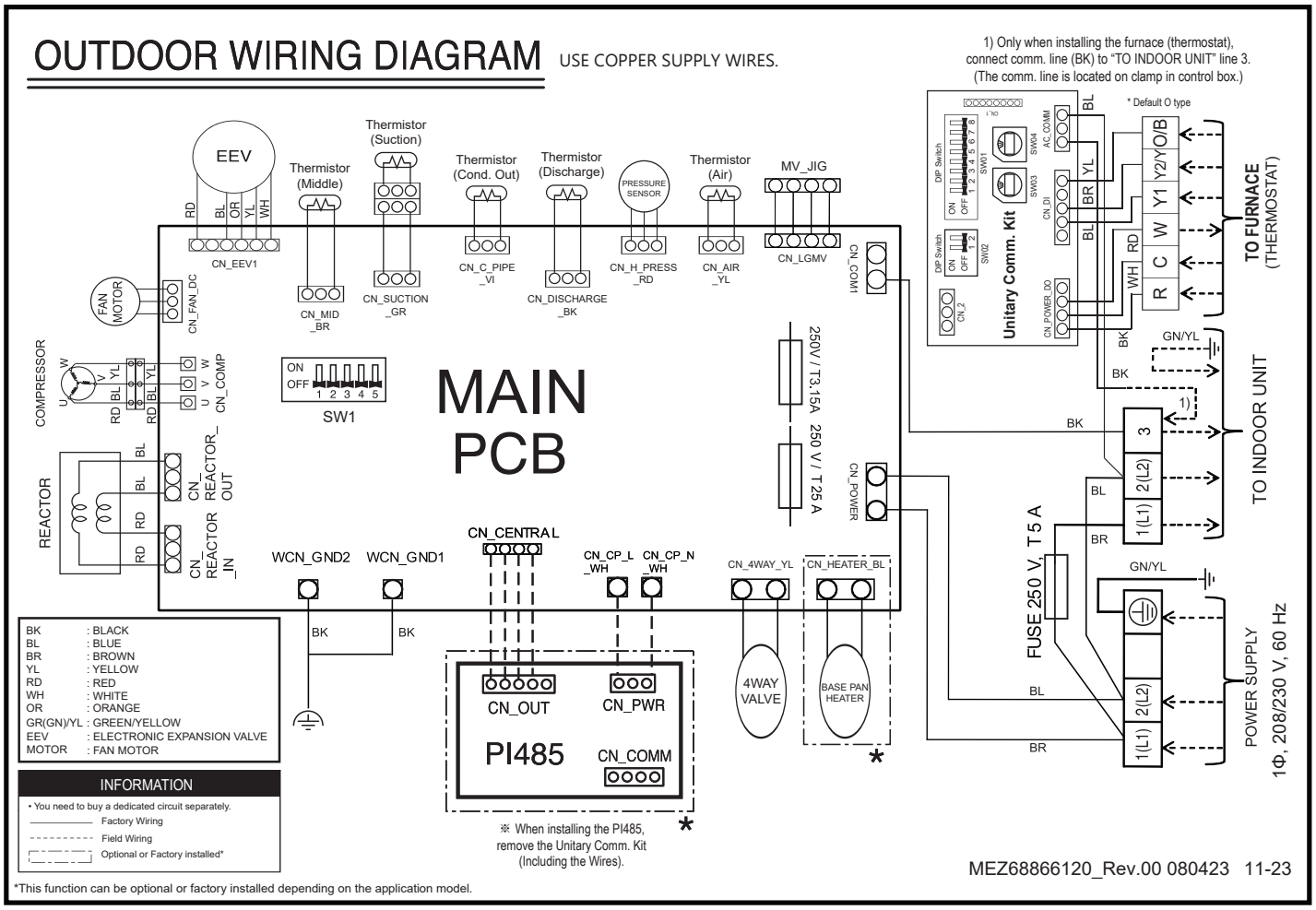
Note:

For additional Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

LG HEAT PUMP WIRING DIAGRAMS

LUU180HV, LUU240HV

Figure 6: LUU180HV, LUU240HV Heat Pump Outdoor Unit Wiring Diagram.



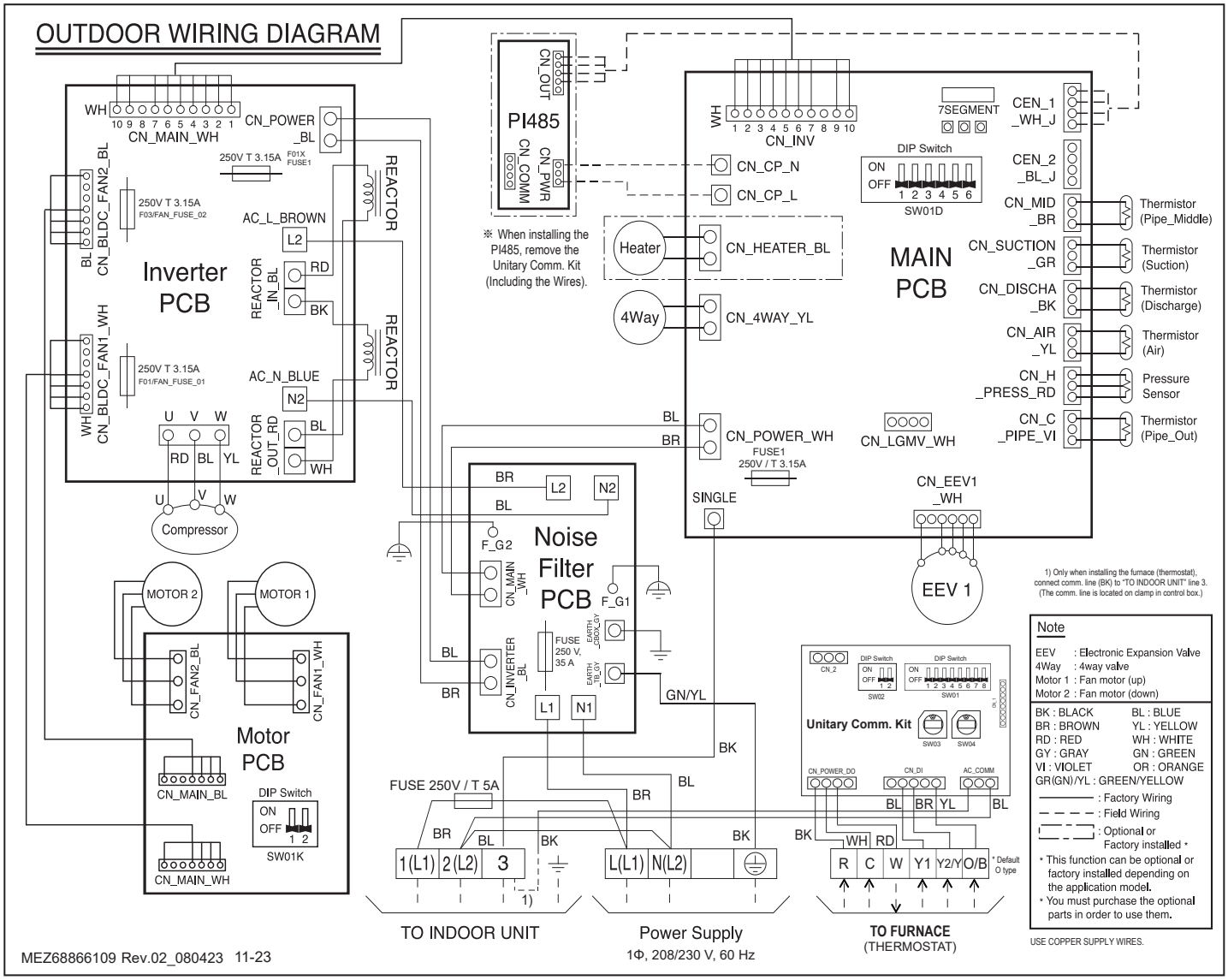
⚠WARNING

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.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

Figure 7: LUU360HV, LUU420HV, LUU480HV Heat Pump Outdoor Unit Wiring Diagram.



⚠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.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

LG HEAT PUMP TO FURNACE / A-COIL WIRING DIAGRAM

Heat Pump 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 Stage 1 (75% of Stage 2)

W2 (Gas Furnace) - Heating Stage 2 (100% per specifications listed in manufacturer's manual)

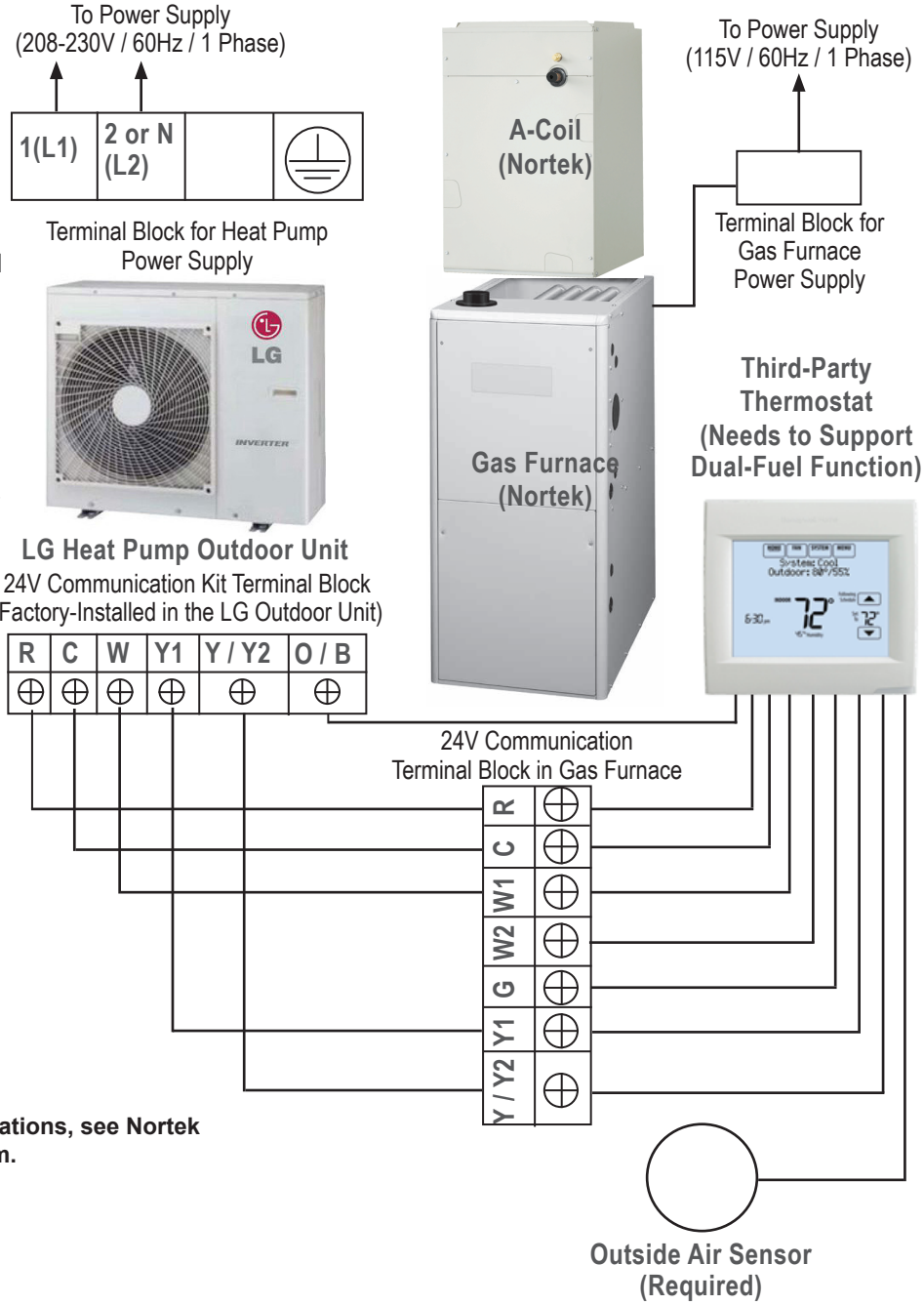
Y1 – Compressor Stage 1 (Cooling; Cooling Target Pressure: 114 psi [780 kPa])

Y / Y2 – Compressor Stage 2 (Cooling; Cooling Target Pressure: 102 psi [700 kPa])

G (Gas Furnace): Fan Operation at Gas Furnace

O/B – Reversing Valve for Heat Pump Systems

Figure 8: Detailed Two-Stage Wiring Diagram.



Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

⚠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.

Cooling Capacity Table for LUU180HV (18,000 Btu/h)

(When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Table 10: Cooling Capacity Table for LUU180HV (When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB / °F WB																	
	68 / 57			73 / 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	13.52	0.85	18.80	14.28	0.88	19.89	13.83	0.92	20.69	14.12	0.93	22.09	14.24	0.94	23.19	14.51	0.96
-0.4	17.69	13.60	0.86	18.79	14.36	0.89	19.88	13.91	0.93	20.68	14.20	0.94	22.08	14.32	0.95	23.18	14.59	0.97
5	17.67	13.72	0.88	18.77	14.49	0.91	19.87	14.03	0.94	20.66	14.32	0.95	22.06	14.45	0.97	23.16	14.72	0.99
10	17.66	13.83	0.89	18.76	14.60	0.92	19.85	14.14	0.95	20.64	14.44	0.97	22.05	14.56	0.98	23.14	14.84	1.00
15	17.65	13.93	0.90	18.74	14.72	0.93	19.84	14.25	0.97	20.63	14.55	0.98	22.03	14.68	1.00	23.12	14.95	1.02
20	17.63	14.04	0.91	18.73	14.84	0.95	19.82	14.36	0.98	20.61	14.67	0.99	22.01	14.79	1.01	23.11	15.07	1.03
25	17.62	14.15	0.93	18.71	14.95	0.96	19.81	14.48	1.00	20.60	14.78	1.01	22.00	14.90	1.03	23.09	15.19	1.05
30	17.60	14.26	0.94	18.70	15.06	0.97	19.79	14.59	1.01	20.58	14.89	1.02	21.98	15.02	1.04	23.07	15.30	1.06
35	17.59	14.37	0.95	18.68	15.18	0.99	19.78	14.70	1.02	20.57	15.01	1.04	21.96	15.13	1.05	23.05	15.42	1.08
40	17.58	14.48	0.97	18.67	15.29	1.00	19.76	14.81	1.04	20.55	15.12	1.05	21.94	15.25	1.07	23.04	15.54	1.09
45	17.56	14.59	0.98	18.66	15.41	1.01	19.75	14.92	1.05	20.53	15.23	1.06	21.93	15.36	1.08	23.02	15.65	1.11
50	17.55	14.69	0.99	18.64	15.52	1.03	19.73	15.03	1.07	20.52	15.35	1.08	21.91	15.47	1.10	23.00	15.77	1.12
55	17.54	14.80	1.00	18.63	15.64	1.04	19.72	15.14	1.08	20.50	15.46	1.09	21.89	15.59	1.11	22.98	15.88	1.13
60	17.52	14.91	1.02	18.61	15.75	1.05	19.70	15.25	1.09	20.49	15.57	1.11	21.88	15.70	1.13	22.97	16.00	1.15
65	17.51	15.02	1.03	18.60	15.86	1.07	19.69	15.36	1.11	20.47	15.68	1.12	21.86	15.81	1.14	22.95	16.11	1.16
70	17.50	15.12	1.04	18.58	15.98	1.08	19.67	15.47	1.12	20.46	15.79	1.13	21.84	15.93	1.16	22.93	16.23	1.18
75	17.08	14.87	1.10	18.16	15.73	1.14	19.24	15.25	1.18	20.03	15.58	1.20	21.41	15.73	1.22	22.50	16.05	1.24
80	16.66	14.62	1.16	17.74	15.48	1.20	18.82	15.03	1.24	19.60	15.37	1.26	20.98	15.54	1.28	22.06	15.86	1.31
85	16.24	14.35	1.21	17.32	15.22	1.26	18.40	14.79	1.30	19.17	15.14	1.32	20.55	15.33	1.34	21.63	15.66	1.37
90	15.82	14.08	1.27	16.90	14.96	1.32	17.97	14.55	1.36	18.75	14.91	1.38	20.12	15.11	1.40	21.20	15.45	1.43
95	15.37	13.93	1.33	16.44	14.82	1.37	17.51	14.44	1.42	**18.00**	**14.58**	**1.44**	19.65	15.03	1.47	20.72	15.38	1.50
100	14.99	13.56	1.38	16.06	14.45	1.43	17.13	14.10	1.48	17.77	14.35	1.50	19.28	14.71	1.53	20.35	15.07	1.56
105	14.62	13.19	1.44	15.69	14.08	1.49	16.76	13.76	1.54	17.53	14.13	1.56	18.90	14.38	1.59	19.97	14.75	1.62
110	14.24	12.74	1.49	15.32	13.62	1.55	16.39	13.33	1.61	17.16	13.71	1.62	18.53	13.98	1.65	19.60	14.35	1.69
115	13.87	12.36	1.55	14.94	13.24	1.61	16.01	12.98	1.67	16.79	13.36	1.68	18.15	13.64	1.72	19.22	14.02	1.75
118	13.65	12.27	1.58	14.72	13.16	1.64	15.79	12.91	1.70	16.56	13.30	1.72	17.93	13.60	1.75	19.00	13.98	1.79
122	13.57	12.24	1.63	14.64	13.13	1.69	15.71	12.89	1.75	16.49	13.28	1.77	17.85	13.58	1.80	18.92	13.97	1.84

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, indoor fan motor 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. When operating at this temperature, these values can be different if the system is not running consistently.

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Test conditions are based on AHRI 210 / 240.

LG HEAT PUMP PERFORMANCE DATA

Cooling Capacity Tables

Cooling Capacity Table for LUU240HV (24,000 Btu/h)

(When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Table 11: Rated Cooling Capacity Table for LUU240HV (When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB / °F WB																	
	68 / 57			73 / 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	22.61	17.27	1.16	24.02	18.25	1.20	25.42	17.67	1.25	26.44	18.04	1.26	28.23	18.19	1.28	29.63	18.54	1.31
-0.4	22.60	17.38	1.17	24.00	18.35	1.22	25.41	17.77	1.26	26.42	18.15	1.27	28.21	18.30	1.30	29.62	18.65	1.32
5	22.58	17.53	1.19	23.98	18.51	1.23	25.39	17.93	1.28	26.40	18.30	1.29	28.19	18.46	1.32	29.59	18.81	1.35
10	22.56	17.67	1.21	23.97	18.66	1.25	25.37	18.07	1.30	26.38	18.45	1.31	28.17	18.61	1.34	29.57	18.96	1.37
15	22.55	17.81	1.23	23.95	18.81	1.27	25.35	18.21	1.32	26.36	18.60	1.33	28.15	18.75	1.36	29.55	19.11	1.39
20	22.53	17.94	1.24	23.93	18.96	1.29	25.33	18.35	1.34	26.34	18.74	1.35	28.13	18.90	1.38	29.53	19.26	1.41
25	22.51	18.08	1.26	23.91	19.10	1.31	25.31	18.50	1.36	26.32	18.89	1.37	28.10	19.05	1.40	29.50	19.41	1.43
30	22.50	18.22	1.28	23.89	19.25	1.33	25.29	18.64	1.37	26.30	19.03	1.39	28.08	19.19	1.42	29.48	19.55	1.44
35	22.48	18.36	1.30	23.87	19.40	1.34	25.27	18.78	1.39	26.28	19.18	1.41	28.06	19.34	1.44	29.46	19.70	1.46
40	22.46	18.50	1.31	23.86	19.54	1.36	25.25	18.92	1.41	26.26	19.32	1.43	28.04	19.48	1.46	29.44	19.85	1.48
45	22.44	18.64	1.33	23.84	19.69	1.38	25.23	19.06	1.43	26.24	19.46	1.45	28.02	19.63	1.47	29.41	20.00	1.50
50	22.43	18.77	1.35	23.82	19.83	1.40	25.21	19.20	1.45	26.22	19.61	1.47	28.00	19.77	1.49	29.39	20.15	1.52
55	22.41	18.91	1.37	23.80	19.98	1.42	25.19	19.34	1.47	26.20	19.75	1.49	27.98	19.92	1.51	29.37	20.30	1.54
60	22.39	19.05	1.39	23.78	20.12	1.44	25.17	19.48	1.49	26.18	19.89	1.51	27.95	20.06	1.53	29.35	20.44	1.56
65	22.37	19.19	1.40	23.76	20.27	1.45	25.15	19.62	1.51	26.16	20.04	1.52	27.93	20.21	1.55	29.32	20.59	1.58
70	22.36	19.32	1.42	23.75	20.41	1.47	25.13	19.76	1.53	26.14	20.18	1.54	27.91	20.35	1.57	29.30	20.74	1.60
75	21.82	19.01	1.50	23.20	20.10	1.55	24.59	19.49	1.61	25.59	19.91	1.63	27.36	20.10	1.66	28.75	20.50	1.69
80	21.28	18.68	1.57	22.66	19.79	1.63	24.04	19.20	1.69	25.04	19.64	1.71	26.81	19.85	1.74	28.19	20.26	1.78
85	20.75	18.34	1.65	22.13	19.45	1.71	23.50	18.90	1.77	24.50	19.35	1.79	26.26	19.58	1.83	27.64	20.01	1.86
90	20.22	17.99	1.73	21.59	19.11	1.79	22.96	18.60	1.86	23.96	19.05	1.88	25.71	19.31	1.91	27.09	19.74	1.95
95	19.64	17.80	1.80	21.00	18.94	1.87	22.37	18.46	1.94	**23.00**	**18.63**	**1.96**	25.11	19.21	2.00	26.48	19.66	2.04
100	19.16	17.33	1.88	20.53	18.46	1.95	21.89	18.02	2.02	22.70	18.34	2.04	24.63	18.79	2.08	26.00	19.25	2.12
105	18.68	16.85	1.96	20.05	17.99	2.03	21.42	17.58	2.10	22.40	18.05	2.13	24.15	18.38	2.17	25.52	18.85	2.21
110	18.20	16.27	2.03	19.57	17.40	2.11	20.94	17.03	2.18	21.93	17.51	2.21	23.67	17.86	2.25	25.04	18.33	2.30
115	17.72	15.79	2.11	19.09	16.91	2.19	20.46	16.58	2.27	21.45	17.07	2.29	23.20	17.43	2.34	24.56	17.92	2.38
118	17.44	15.67	2.16	18.80	16.81	2.23	20.17	16.50	2.32	21.16	16.99	2.34	22.91	17.37	2.39	24.28	17.87	2.43
122	17.34	15.63	2.22	18.71	16.78	2.30	20.08	16.47	2.38	21.07	16.97	2.41	22.81	17.35	2.45	24.18	17.85	2.50

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, indoor fan motor 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. When operating at this temperature, these values can be different if the system is not running consistently.

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Test conditions are based on AHRI 210 / 240.

Cooling Capacity Table for LUU360HV (30,000 Btu/h)

(When Combined with C74BHM-X36C-B + FG7TC-060D-V24B).

Table 12: Cooling Capacity Table for LUU360HV (When Combined with C74BHM-X36C-B + FG7TC-060D-V24B).

Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB / °F WB																	
	68 / 57			73 / 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	32.64	23.40	1.65	34.67	24.71	1.71	36.69	23.93	1.77	38.16	24.43	1.79	40.75	24.64	1.83	42.78	25.11	1.86
-0.4	32.62	23.53	1.67	34.65	24.86	1.73	36.67	24.07	1.79	38.14	24.58	1.81	40.73	24.78	1.85	42.75	25.25	1.88
5	32.60	23.74	1.70	34.62	25.08	1.76	36.64	24.28	1.82	38.11	24.79	1.84	40.69	25.00	1.88	42.72	25.47	1.92
10	32.57	23.93	1.72	34.59	25.27	1.78	36.62	24.47	1.85	38.08	24.99	1.87	40.66	25.20	1.91	42.68	25.68	1.94
15	32.55	24.12	1.75	34.57	25.47	1.81	36.59	24.67	1.88	38.05	25.19	1.90	40.63	25.40	1.93	42.65	25.88	1.97
20	32.52	24.30	1.77	34.54	25.67	1.84	36.56	24.86	1.90	38.02	25.38	1.92	40.60	25.60	1.96	42.62	26.08	2.00
25	32.50	24.49	1.80	34.51	25.87	1.86	36.53	25.05	1.93	37.99	25.58	1.95	40.57	25.79	1.99	42.59	26.28	2.03
30	32.47	24.68	1.82	34.49	26.07	1.89	36.50	25.24	1.96	37.96	25.77	1.98	40.54	25.99	2.02	42.55	26.48	2.06
35	32.45	24.87	1.85	34.46	26.27	1.91	36.48	25.44	1.98	37.93	25.97	2.01	40.51	26.19	2.04	42.52	26.69	2.09
40	32.42	25.05	1.87	34.44	26.47	1.94	36.45	25.63	2.01	37.90	26.17	2.03	40.48	26.39	2.07	42.49	26.89	2.11
45	32.40	25.24	1.90	34.41	26.66	1.97	36.42	25.82	2.04	37.87	26.36	2.06	40.44	26.58	2.10	42.46	27.09	2.14
50	32.37	25.43	1.92	34.38	26.86	1.99	36.39	26.01	2.06	37.85	26.56	2.09	40.41	26.78	2.13	42.42	27.29	2.17
55	32.35	25.61	1.95	34.36	27.06	2.02	36.37	26.20	2.09	37.82	26.75	2.12	40.38	26.98	2.16	42.39	27.49	2.20
60	32.32	25.80	1.97	34.33	27.25	2.04	36.34	26.39	2.12	37.79	26.95	2.14	40.35	27.17	2.18	42.36	27.69	2.23
65	32.30	25.99	2.00	34.30	27.45	2.07	36.31	26.58	2.15	37.76	27.14	2.17	40.32	27.37	2.21	42.33	27.89	2.26
70	32.27	26.17	2.02	34.28	27.65	2.10	36.28	26.77	2.17	37.73	27.33	2.20	40.29	27.56	2.24	42.29	28.09	2.28
75	31.50	25.74	2.13	33.50	27.23	2.21	35.49	26.39	2.29	36.94	26.97	2.32	39.49	27.23	2.36	41.49	27.77	2.41
80	30.72	25.30	2.24	32.71	26.80	2.32	34.71	26.01	2.41	36.15	26.60	2.43	38.70	26.89	2.48	40.69	27.44	2.53
85	29.95	24.84	2.35	31.94	26.35	2.43	33.93	25.60	2.52	35.37	26.20	2.55	37.91	26.52	2.60	39.90	27.10	2.65
90	29.18	24.37	2.46	31.16	25.89	2.55	33.15	25.19	2.64	34.58	25.80	2.67	37.12	26.15	2.72	39.10	26.74	2.78
95	28.34	24.11	2.57	30.32	25.65	2.66	32.29	25.00	2.76	**33.20**	**25.23**	**2.79**	36.24	26.01	2.84	38.22	26.62	2.90
100	27.65	23.47	2.68	29.63	25.01	2.77	31.60	24.40	2.88	32.77	24.84	2.91	35.55	25.45	2.96	37.53	26.08	3.02
105	26.96	22.82	2.79	28.94	24.36	2.89	30.91	23.81	2.99	32.34	24.45	3.03	34.86	24.89	3.08	36.84	25.53	3.15
110	26.27	22.04	2.89	28.25	23.57	3.00	30.22	23.07	3.11	31.65	23.72	3.15	34.17	24.19	3.20	36.15	24.83	3.27
115	25.58	21.38	3.00	27.56	22.91	3.11	29.53	22.46	3.23	30.96	23.12	3.26	33.48	23.61	3.33	35.46	24.27	3.39
118	25.17	21.23	3.07	27.14	22.77	3.18	29.12	22.34	3.30	30.55	23.01	3.34	33.07	23.53	3.40	35.04	24.20	3.47
122	25.03	21.17	3.16	27.01	22.72	3.27	28.98	22.31	3.39	30.41	22.98	3.43	32.93	23.50	3.49	34.90	24.18	3.56

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, indoor fan motor 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. When operating at this temperature, these values can be different if the system is not running consistently.

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Test conditions are based on AHRI 210 / 240.

LG HEAT PUMP PERFORMANCE DATA

Cooling Capacity Tables

Cooling Capacity Table for LUU360HV (36,000 Btu/h)

(When Combined with C74BHMX36C-C + FG7TC-080D-V35C); (When Combined with C74BHMX36C-C + FG7TC-100D-V35C).

Table 13: Cooling Capacity Table for LUU360HV (When Combined with C74BHMX36C-C + FG7TC-080D-V35C); (When Combined with C74BHMX36C-C + FG7TC-100D-V35C).

Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB / °F WB																	
	68 / 57			73 / 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	26.37	1.75	37.59	27.86	1.81	39.79	26.97	1.88	41.38	27.54	1.90	44.19	27.77	1.93	46.38	28.30	1.97
-0.4	35.37	26.52	1.76	37.57	28.02	1.83	39.77	27.13	1.90	41.35	27.70	1.92	44.16	27.94	1.95	46.36	28.46	1.99
5	35.34	26.76	1.79	37.54	28.26	1.86	39.73	27.37	1.93	41.32	27.94	1.95	44.12	28.18	1.99	46.32	28.71	2.02
10	35.32	26.97	1.82	37.51	28.49	1.89	39.70	27.58	1.95	41.29	28.16	1.98	44.09	28.40	2.01	46.28	28.94	2.05
15	35.29	27.18	1.85	37.48	28.71	1.91	39.67	27.80	1.98	41.26	28.39	2.01	44.06	28.63	2.04	46.25	29.17	2.08
20	35.26	27.39	1.87	37.45	28.94	1.94	39.64	28.02	2.01	41.23	28.61	2.04	44.02	28.85	2.07	46.21	29.40	2.11
25	35.24	27.61	1.90	37.43	29.16	1.97	39.61	28.24	2.04	41.19	28.83	2.06	43.99	29.07	2.10	46.18	29.62	2.14
30	35.21	27.82	1.93	37.40	29.39	2.00	39.58	28.45	2.07	41.16	29.05	2.09	43.96	29.30	2.13	46.14	29.85	2.17
35	35.18	28.03	1.95	37.37	29.61	2.02	39.55	28.67	2.10	41.13	29.27	2.12	43.92	29.52	2.16	46.11	30.08	2.20
40	35.16	28.24	1.98	37.34	29.83	2.05	39.52	28.88	2.13	41.10	29.49	2.15	43.89	29.74	2.19	46.07	30.30	2.23
45	35.13	28.45	2.01	37.31	30.05	2.08	39.49	29.10	2.15	41.07	29.71	2.18	43.86	29.96	2.22	46.04	30.53	2.26
50	35.10	28.66	2.03	37.28	30.28	2.11	39.46	29.32	2.18	41.04	29.93	2.21	43.82	30.19	2.25	46.00	30.76	2.29
55	35.08	28.87	2.06	37.25	30.50	2.13	39.43	29.53	2.21	41.01	30.15	2.24	43.79	30.41	2.28	45.97	30.98	2.32
60	35.05	29.08	2.08	37.23	30.72	2.16	39.40	29.74	2.24	40.97	30.37	2.27	43.76	30.63	2.31	45.93	31.21	2.35
65	35.02	29.29	2.11	37.20	30.94	2.19	39.37	29.96	2.27	40.94	30.59	2.29	43.72	30.85	2.34	45.90	31.43	2.38
70	34.99	29.50	2.14	37.17	31.16	2.22	39.34	30.17	2.30	40.91	30.81	2.32	43.69	31.07	2.37	45.86	31.66	2.41
75	34.15	29.01	2.25	36.32	30.69	2.34	38.49	29.75	2.42	40.05	30.40	2.45	42.82	30.69	2.49	44.99	31.30	2.54
80	33.31	28.52	2.37	35.47	30.20	2.46	37.64	29.31	2.54	39.20	29.98	2.57	41.96	30.30	2.62	44.12	30.93	2.67
85	32.48	28.00	2.48	34.63	29.70	2.57	36.79	28.86	2.67	38.35	29.53	2.70	41.10	29.89	2.75	43.26	30.54	2.81
90	31.64	27.47	2.60	33.79	29.18	2.69	35.94	28.39	2.79	37.50	29.08	2.82	40.25	29.48	2.88	42.40	30.14	2.94
95	30.74	27.18	2.71	32.88	28.92	2.81	35.02	28.17	2.92	**36.00**	**28.44**	**2.95**	39.30	29.32	3.01	41.44	30.01	3.07
100	29.99	26.45	2.83	32.13	28.19	2.93	34.27	27.50	3.04	35.53	28.00	3.08	38.55	28.69	3.13	40.69	29.39	3.20
105	29.24	25.72	2.95	31.38	27.46	3.05	33.52	26.83	3.16	35.07	27.56	3.20	37.80	28.06	3.26	39.94	28.78	3.33
110	28.49	24.84	3.06	30.63	26.57	3.17	32.77	26.00	3.29	34.32	26.74	3.33	37.05	27.26	3.39	39.20	27.99	3.46
115	27.74	24.10	3.18	29.88	25.82	3.29	32.02	25.31	3.41	33.57	26.05	3.45	36.31	26.61	3.52	38.45	27.35	3.59
118	27.29	23.93	3.25	29.43	25.66	3.36	31.57	25.19	3.49	33.12	25.94	3.53	35.86	26.52	3.59	38.00	27.28	3.66
122	27.14	23.87	3.34	29.28	25.61	3.46	31.43	25.14	3.59	32.97	25.90	3.63	35.71	26.49	3.69	37.85	27.25	3.77

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, indoor fan motor 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. When operating at this temperature, these values can be different if the system is not running consistently.
4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Test conditions are based on AHRI 210 / 240.

Cooling Capacity Table for LUU420HV (42,000 Btu/h)

(When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Table 14: Cooling Capacity Table for LUU420HV (When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB / °F WB																	
	68 / 57			73 / 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	41.29	31.15	2.12	43.86	32.91	2.20	46.42	31.87	2.28	48.27	32.54	2.31	51.55	32.81	2.35	54.11	33.43	2.40
-0.4	41.27	31.34	2.15	43.83	33.10	2.23	46.40	32.05	2.31	48.25	32.73	2.33	51.52	33.00	2.38	54.08	33.63	2.42
5	41.24	31.61	2.18	43.80	33.39	2.26	46.36	32.33	2.34	48.21	33.01	2.37	51.48	33.29	2.42	54.04	33.92	2.46
10	41.20	31.86	2.21	43.76	33.66	2.30	46.32	32.59	2.38	48.17	33.27	2.41	51.44	33.56	2.45	54.00	34.19	2.50
15	41.17	32.11	2.25	43.73	33.92	2.33	46.29	32.85	2.41	48.13	33.54	2.44	51.40	33.82	2.49	53.96	34.46	2.54
20	41.14	32.36	2.28	43.70	34.19	2.36	46.25	33.10	2.45	48.10	33.80	2.48	51.36	34.08	2.52	53.92	34.73	2.57
25	41.11	32.61	2.31	43.66	34.45	2.40	46.22	33.36	2.48	48.06	34.06	2.51	51.32	34.35	2.56	53.88	35.00	2.61
30	41.08	32.86	2.34	43.63	34.72	2.43	46.18	33.62	2.52	48.02	34.32	2.55	51.28	34.61	2.59	53.83	35.27	2.65
35	41.05	33.11	2.38	43.60	34.98	2.46	46.15	33.87	2.55	47.99	34.58	2.58	51.24	34.88	2.63	53.79	35.54	2.68
40	41.02	33.36	2.41	43.56	35.24	2.50	46.11	34.13	2.59	47.95	34.84	2.62	51.20	35.14	2.67	53.75	35.80	2.72
45	40.98	33.61	2.44	43.53	35.51	2.53	46.07	34.38	2.62	47.91	35.10	2.65	51.17	35.40	2.70	53.71	36.07	2.76
50	40.95	33.86	2.47	43.50	35.77	2.56	46.04	34.63	2.66	47.88	35.36	2.69	51.13	35.66	2.74	53.67	36.34	2.79
55	40.92	34.11	2.50	43.46	36.03	2.60	46.00	34.89	2.69	47.84	35.62	2.72	51.09	35.92	2.77	53.63	36.60	2.83
60	40.89	34.36	2.54	43.43	36.29	2.63	45.97	35.14	2.73	47.80	35.88	2.76	51.05	36.18	2.81	53.59	36.87	2.87
65	40.86	34.60	2.57	43.40	36.55	2.66	45.93	35.39	2.76	47.77	36.14	2.79	51.01	36.44	2.84	53.55	37.13	2.90
70	40.83	34.85	2.60	43.36	36.82	2.70	45.90	35.65	2.80	47.73	36.40	2.83	50.97	36.70	2.88	53.50	37.40	2.94
75	39.84	34.28	2.74	42.37	36.26	2.84	44.90	35.15	2.95	46.73	35.91	2.98	49.96	36.26	3.04	52.49	36.98	3.10
80	38.86	33.69	2.88	41.39	35.68	2.99	43.91	34.63	3.10	45.73	35.42	3.13	48.95	35.80	3.19	51.48	36.54	3.26
85	37.89	33.08	3.02	40.41	35.08	3.13	42.92	34.09	3.25	44.74	34.89	3.28	47.96	35.32	3.35	50.47	36.08	3.41
90	36.91	32.45	3.16	39.43	34.47	3.28	41.94	33.54	3.40	43.75	34.36	3.44	46.96	34.82	3.50	49.47	35.61	3.57
95	35.86	32.11	3.30	38.36	34.16	3.42	40.85	33.29	3.55	**42.00**	**33.60**	**3.59**	45.85	34.64	3.66	48.35	35.45	3.73
100	34.98	31.25	3.44	37.48	33.30	3.57	39.98	32.49	3.70	41.46	33.08	3.74	44.98	33.89	3.81	47.47	34.72	3.89
105	34.11	30.39	3.58	36.61	32.44	3.72	39.11	31.70	3.85	40.91	32.56	3.90	44.10	33.15	3.97	46.60	34.00	4.05
110	33.24	29.35	3.72	35.74	31.39	3.86	38.23	30.72	4.00	40.04	31.59	4.05	43.23	32.21	4.12	45.73	33.07	4.21
115	32.37	28.47	3.86	34.86	30.51	4.01	37.36	29.91	4.15	39.17	30.78	4.20	42.36	31.44	4.28	44.86	32.31	4.36
118	31.84	28.27	3.95	34.34	30.32	4.09	36.84	29.75	4.24	38.64	30.65	4.29	41.83	31.33	4.37	44.33	32.23	4.46
122	31.67	28.20	4.06	34.16	30.26	4.21	36.66	29.70	4.36	38.47	30.60	4.41	41.66	31.29	4.50	44.16	32.20	4.59

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, indoor fan motor 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. When operating at this temperature, these values can be different if the system is not running consistently.

4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Test conditions are based on AHRI 210 / 240.

LG HEAT PUMP PERFORMANCE DATA

Cooling Capacity Tables

Cooling Capacity Table for LUU480HV (48,000 Btu/h)

(When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Table 15: Cooling Capacity Table for LUU480HV (When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB / °F WB																	
	68 / 57			73 / 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	35.16	2.90	50.12	37.14	3.00	53.05	35.96	3.11	55.17	36.72	3.15	58.91	37.03	3.21	61.84	37.73	3.27
-0.4	47.16	35.37	2.93	50.09	37.36	3.04	53.02	36.17	3.15	55.14	36.94	3.18	58.88	37.25	3.24	61.81	37.95	3.31
5	47.13	35.67	2.98	50.05	37.68	3.09	52.98	36.49	3.20	55.09	37.26	3.24	58.83	37.57	3.30	61.76	38.28	3.36
10	47.09	35.96	3.02	50.01	37.98	3.13	52.94	36.78	3.25	55.05	37.55	3.28	58.79	37.87	3.35	61.71	38.59	3.41
15	47.05	36.24	3.07	49.98	38.28	3.18	52.90	37.07	3.29	55.01	37.85	3.33	58.74	38.17	3.39	61.67	38.89	3.46
20	47.02	36.52	3.11	49.94	38.58	3.22	52.86	37.36	3.34	54.97	38.15	3.38	58.70	38.47	3.44	61.62	39.20	3.51
25	46.98	36.81	3.15	49.90	38.88	3.27	52.82	37.65	3.39	54.93	38.44	3.43	58.65	38.77	3.49	61.57	39.50	3.56
30	46.95	37.09	3.20	49.86	39.18	3.32	52.78	37.94	3.44	54.88	38.74	3.48	58.61	39.06	3.54	61.52	39.80	3.61
35	46.91	37.37	3.24	49.82	39.48	3.36	52.74	38.23	3.48	54.84	39.03	3.52	58.56	39.36	3.59	61.48	40.10	3.66
40	46.87	37.65	3.29	49.79	39.78	3.41	52.70	38.51	3.53	54.80	39.32	3.57	58.52	39.66	3.64	61.43	40.41	3.71
45	46.84	37.93	3.33	49.75	40.07	3.45	52.66	38.80	3.58	54.76	39.62	3.62	58.47	39.95	3.69	61.38	40.71	3.76
50	46.80	38.21	3.37	49.71	40.37	3.50	52.62	39.09	3.63	54.72	39.91	3.67	58.43	40.25	3.74	61.34	41.01	3.81
55	46.77	38.49	3.42	49.67	40.66	3.54	52.58	39.37	3.67	54.67	40.20	3.72	58.38	40.54	3.78	61.29	41.31	3.86
60	46.73	38.77	3.46	49.63	40.96	3.59	52.54	39.66	3.72	54.63	40.49	3.76	58.34	40.84	3.83	61.24	41.61	3.91
65	46.70	39.05	3.51	49.60	41.25	3.64	52.50	39.94	3.77	54.59	40.79	3.81	58.30	41.13	3.88	61.20	41.91	3.96
70	46.66	39.33	3.55	49.56	41.55	3.68	52.46	40.23	3.82	54.55	41.08	3.86	58.25	41.42	3.93	61.15	42.21	4.01
75	45.54	38.68	3.74	48.43	40.92	3.88	51.32	39.66	4.02	53.41	40.53	4.07	57.10	40.92	4.14	59.99	41.73	4.23
80	44.41	38.02	3.93	47.30	40.27	4.08	50.18	39.09	4.23	52.26	39.97	4.28	55.95	40.41	4.36	58.83	41.24	4.44
85	43.30	37.33	4.13	46.18	39.59	4.28	49.05	38.48	4.43	51.13	39.38	4.48	54.81	39.86	4.57	57.68	40.72	4.66
90	42.19	36.62	4.32	45.06	38.90	4.47	47.93	37.85	4.64	50.00	38.77	4.69	53.66	39.30	4.78	56.53	40.19	4.88
95	40.98	36.24	4.51	43.84	38.55	4.67	46.69	37.57	4.84	**48.00**	**37.92**	**4.90**	52.40	39.09	4.99	55.25	40.01	5.09
100	39.98	35.27	4.70	42.84	37.58	4.87	45.69	36.67	5.05	47.38	37.33	5.11	51.40	38.25	5.20	54.26	39.19	5.31
105	38.98	34.30	4.89	41.84	36.61	5.07	44.69	35.78	5.26	46.76	36.75	5.32	50.40	37.41	5.42	53.26	38.37	5.52
110	37.99	33.13	5.08	40.84	35.42	5.27	43.70	34.67	5.46	45.76	35.65	5.52	49.41	36.35	5.63	52.26	37.32	5.74
115	36.99	32.13	5.28	39.84	34.43	5.47	42.70	33.75	5.67	44.76	34.74	5.73	48.41	35.48	5.84	51.26	36.47	5.96
118	36.39	31.90	5.39	39.24	34.22	5.59	42.10	33.58	5.79	44.16	34.59	5.86	47.81	35.36	5.97	50.66	36.37	6.09
122	36.19	31.82	5.54	39.05	34.15	5.75	41.90	33.52	5.96	43.96	34.53	6.02	47.61	35.32	6.14	50.46	36.34	6.26

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, indoor fan motor 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. When operating at this temperature, these values can be different if the system is not running consistently.
4. Direct interpolation is permissible. ⃠ Do not extrapolate.

Test conditions are based on AHRI 210 / 240.

Heating Capacity Table for LUU180HV (18,000 Btu/h)

(When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Table 16: Heating Capacity Table for LUU180HV (When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Outdoor Air Temp.		Indoor Air Temp. °F DB											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-4	-4.4	10.38	1.26	9.76	1.30	9.61	1.33	9.47	1.36	9.37	1.37	8.97	1.41
0	-0.4	11.36	1.30	10.77	1.34	10.55	1.38	10.39	1.40	10.26	1.42	9.84	1.46
5	4.5	12.45	1.35	11.89	1.40	11.59	1.44	11.40	1.46	11.25	1.48	10.80	1.52
10	9	13.38	1.40	12.84	1.45	12.48	1.49	12.26	1.51	12.09	1.53	11.62	1.58
17	15	14.49	1.47	13.99	1.51	13.55	1.56	13.30	1.59	13.10	1.61	12.60	1.65
20	19	15.20	1.51	14.71	1.56	14.22	1.61	13.96	1.63	13.75	1.65	13.22	1.70
25	23	16.38	1.55	15.90	1.60	15.34	1.65	15.05	1.68	14.82	1.70	14.26	1.75
30	28	17.58	1.60	17.04	1.66	16.45	1.71	16.15	1.74	15.91	1.76	15.32	1.81
35	32	18.78	1.65	18.18	1.70	17.56	1.76	17.24	1.79	16.99	1.81	16.38	1.86
40	36	19.73	1.69	19.18	1.75	18.57	1.80	18.25	1.83	17.99	1.86	17.34	1.91
45	41	20.93	1.74	20.43	1.80	19.83	1.86	19.50	1.89	19.24	1.92	18.54	1.97
47	43	21.41	1.77	20.93	1.82	20.33	1.88	**20.00**	**1.92**	19.73	1.94	19.02	2.00
50	46	21.47	1.75	21.04	1.81	20.52	1.86	20.22	1.89	19.98	1.91	19.31	1.96
55	51	21.58	1.74	21.22	1.78	20.83	1.82	20.59	1.84	20.40	1.86	19.79	1.90
60	56	21.68	1.72	21.40	1.75	21.14	1.78	20.95	1.80	20.81	1.81	20.28	1.84
63	59	21.74	1.71	21.51	1.73	21.32	1.76	21.18	1.77	21.06	1.78	20.57	1.80
68	64	21.81	1.70	21.62	1.72	21.51	1.74	21.40	1.74	21.31	1.75	20.86	1.76

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

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

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

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

3. Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Test conditions are based on AHRI 210 / 240.

Heating Capacity Table for LUU240HV (24,000 Btu/h)

(When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Table 17: Heating Capacity Table for LUU240HV (When Combined with C74BHM-X24C-B + FG7TC-060D-V24B).

Outdoor Air Temp.		Indoor Air Temp. °F DB											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-4	-4.4	11.79	1.48	11.06	1.53	10.91	1.57	10.76	1.60	10.64	1.62	10.18	1.66
0	-0.4	13.27	1.54	12.56	1.59	12.32	1.64	12.13	1.66	11.98	1.69	11.49	1.73
5	4.5	14.91	1.62	14.23	1.67	13.88	1.72	13.65	1.75	13.47	1.77	12.93	1.82
10	9	16.30	1.68	15.65	1.74	15.21	1.79	14.95	1.82	14.74	1.84	14.16	1.90
17	15	17.98	1.78	17.35	1.83	16.80	1.89	16.50	1.92	16.26	1.95	15.63	2.00
20	19	19.04	1.84	18.43	1.89	17.82	1.95	17.49	1.99	17.22	2.01	16.57	2.07
25	23	20.82	1.90	20.20	1.96	19.50	2.02	19.13	2.05	18.84	2.08	18.13	2.14
30	28	22.62	1.97	21.92	2.04	21.16	2.10	20.77	2.14	20.46	2.16	19.71	2.23
35	32	24.41	2.03	23.63	2.10	22.83	2.17	22.42	2.20	22.09	2.23	21.29	2.30
40	36	25.65	2.09	24.93	2.16	24.14	2.23	23.72	2.27	23.39	2.30	22.54	2.37
45	41	27.21	2.17	26.56	2.24	25.78	2.31	25.35	2.35	25.01	2.38	24.10	2.46
47	43	27.83	2.20	27.21	2.27	26.43	2.34	**26.00**	**2.39**	25.65	2.42	24.72	2.49
50	46	27.91	2.19	27.35	2.25	26.67	2.32	26.29	2.35	25.98	2.38	25.10	2.44
55	51	28.05	2.16	27.58	2.22	27.07	2.27	26.76	2.29	26.52	2.31	25.73	2.36
60	56	28.19	2.14	27.82	2.18	27.48	2.22	27.24	2.24	27.05	2.25	26.36	2.29
63	59	28.27	2.13	27.96	2.16	27.72	2.19	27.53	2.20	27.38	2.21	26.74	2.24
68	64	28.35	2.11	28.10	2.14	27.96	2.16	27.82	2.17	27.70	2.17	27.12	2.19

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

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

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

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

3. Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Test conditions are based on AHRI 210 / 240.

LG HEAT PUMP PERFORMANCE DATA

Heating Capacity Tables

Heating Capacity Table for LUU360HV (30,000 Btu/h)

(When Combined with C74BHM-X36C-B + FG7TC-060D-V24B).

Table 18: Heating Capacity Table for LUU360HV (When Combined with C74BHM-X36C-B + FG7TC-060D-V24B).

Outdoor Air Temp.		Indoor Air Temp. °F DB											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-4	-4.4	10.64	1.79	9.86	1.85	9.80	1.90	9.68	1.93	9.59	1.96	9.16	2.01
0	-0.4	13.36	1.88	12.58	1.94	12.38	1.99	12.20	2.03	12.06	2.05	11.55	2.11
5	4.5	16.37	1.98	15.60	2.05	15.23	2.11	14.98	2.14	14.79	2.17	14.19	2.23
10	9	18.93	2.08	18.16	2.15	17.66	2.21	17.35	2.25	17.11	2.28	16.44	2.34
17	15	22.01	2.21	21.24	2.28	20.57	2.35	20.20	2.39	19.90	2.42	19.14	2.49
20	19	23.96	2.30	23.20	2.37	22.42	2.44	22.01	2.48	21.67	2.52	20.85	2.59
25	23	27.23	2.38	26.42	2.46	25.50	2.54	25.02	2.58	24.63	2.61	23.70	2.69
30	28	30.51	2.49	29.57	2.57	28.55	2.65	28.03	2.70	27.61	2.73	26.60	2.81
35	32	33.80	2.58	32.72	2.66	31.61	2.74	31.04	2.79	30.59	2.83	29.48	2.91
40	36	35.52	2.66	34.52	2.75	33.42	2.84	32.84	2.89	32.38	2.92	31.21	3.01
45	41	37.67	2.77	36.77	2.86	35.69	2.95	35.10	3.00	34.62	3.04	33.37	3.13
47	43	38.54	2.81	37.67	2.91	36.60	3.00	**36.00**	**3.05**	35.52	3.09	34.23	3.18
50	46	38.65	2.79	37.87	2.88	36.93	2.96	36.40	3.01	35.97	3.04	34.75	3.12
55	51	38.84	2.77	38.19	2.83	37.49	2.90	37.06	2.93	36.71	2.96	35.63	3.02
60	56	39.03	2.74	38.52	2.79	38.04	2.84	37.72	2.86	37.46	2.88	36.50	2.92
63	59	39.14	2.72	38.71	2.76	38.38	2.80	38.12	2.82	37.91	2.83	37.02	2.86
68	64	39.25	2.70	38.91	2.73	38.71	2.77	38.52	2.77	38.36	2.78	37.56	2.80

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

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

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

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

3. Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Test conditions are based on AHRI 210 / 240.

Heating Capacity Table for LUU360HV (36,000 Btu/h)

(When Combined with C74BHMX36C-C + FG7TC-080D-V35C); (When Combined with C74BHMX36C-C + FG7TC-100D-V35C).

Table 19: Heating Capacity Table for LUU360HV (When Combined with C74BHMX36C-C + FG7TC-080D-V35C); (When Combined with C74BHMX36C-C + FG7TC-100D-V35C).

Outdoor Air Temp.		Indoor Air Temp. °F DB											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-4	-4.4	16.02	2.20	14.99	2.27	14.81	2.33	14.61	2.37	14.46	2.40	13.83	2.47
0	-0.4	18.55	2.26	17.54	2.33	17.21	2.40	16.95	2.44	16.75	2.47	16.05	2.54
5	4.5	21.34	2.34	20.36	2.41	19.87	2.49	19.54	2.53	19.29	2.56	18.51	2.63
10	9	23.73	2.41	22.77	2.49	22.13	2.56	21.75	2.61	21.45	2.64	20.60	2.72
17	15	26.58	2.51	25.66	2.59	24.85	2.67	24.40	2.71	24.04	2.75	23.12	2.83
20	19	28.40	2.57	27.49	2.65	26.57	2.73	26.08	2.78	25.69	2.82	24.71	2.90
25	23	31.43	2.63	30.50	2.72	29.44	2.80	28.88	2.85	28.44	2.89	27.37	2.97
30	28	34.50	2.71	33.43	2.80	32.28	2.89	31.69	2.94	31.21	2.98	30.07	3.06
35	32	37.55	2.78	36.36	2.87	35.12	2.96	34.49	3.01	33.98	3.05	32.76	3.14
40	36	39.47	2.84	38.36	2.93	37.14	3.03	36.49	3.08	35.98	3.12	34.68	3.21
45	41	41.86	2.92	40.86	3.02	39.66	3.11	39.00	3.17	38.47	3.21	37.07	3.30
47	43	42.82	2.95	41.86	3.05	40.66	3.15	**40.00**	**3.20**	39.47	3.24	38.03	3.34
50	46	42.94	2.93	42.08	3.02	41.04	3.11	40.44	3.15	39.97	3.19	38.62	3.28
55	51	43.15	2.90	42.44	2.97	41.65	3.04	41.18	3.08	40.79	3.11	39.59	3.17
60	56	43.36	2.87	42.80	2.93	42.27	2.98	41.91	3.00	41.62	3.02	40.56	3.07
63	59	43.49	2.85	43.01	2.90	42.64	2.94	42.35	2.96	42.12	2.97	41.14	3.00
68	64	43.61	2.83	43.23	2.87	43.02	2.90	42.80	2.91	42.62	2.92	41.73	2.94

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

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

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

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

3. Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Test conditions are based on AHRI 210 / 240.

Heating Capacity Table for LUU420HV (42,000 Btu/h)

(When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Table 20: Heating Capacity Table for LUU420HV (When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Outdoor Air Temp.		Indoor Air Temp. °F DB											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-4	-4.4	19.21	2.35	17.99	2.42	17.76	2.49	17.52	2.53	17.33	2.57	16.59	2.64
0	-0.4	21.91	2.43	20.73	2.51	20.33	2.58	20.03	2.62	19.79	2.66	18.96	2.73
5	4.5	24.90	2.53	23.76	2.61	23.18	2.69	22.80	2.73	22.50	2.77	21.59	2.85
10	9	27.45	2.62	26.34	2.71	25.61	2.79	25.16	2.84	24.81	2.87	23.84	2.95
17	15	30.51	2.75	29.44	2.83	28.52	2.92	28.00	2.97	27.59	3.01	26.53	3.10
20	19	32.45	2.83	31.41	2.92	30.36	3.01	29.80	3.06	29.35	3.10	28.23	3.19
25	23	35.70	2.91	34.64	3.00	33.43	3.10	32.80	3.15	32.29	3.19	31.08	3.29
30	28	38.97	3.01	37.77	3.11	36.47	3.21	35.80	3.26	35.27	3.31	33.97	3.40
35	32	42.25	3.09	40.90	3.20	39.51	3.30	38.80	3.35	38.23	3.40	36.85	3.50
40	36	44.40	3.18	43.15	3.28	41.78	3.38	41.06	3.44	40.48	3.49	39.01	3.59
45	41	47.09	3.28	45.97	3.39	44.61	3.49	43.87	3.56	43.28	3.60	41.71	3.71
47	43	48.17	3.32	47.09	3.43	45.75	3.54	**45.00**	**3.60**	44.40	3.65	42.79	3.76
50	46	48.31	3.30	47.34	3.40	46.16	3.50	45.50	3.55	44.96	3.59	43.44	3.69
55	51	48.55	3.26	47.74	3.34	46.86	3.42	46.32	3.46	45.89	3.49	44.53	3.57
60	56	48.78	3.23	48.15	3.29	47.56	3.35	47.15	3.38	46.82	3.40	45.63	3.45
63	59	48.92	3.21	48.39	3.26	47.97	3.31	47.64	3.33	47.38	3.34	46.28	3.38
68	64	49.07	3.19	48.64	3.23	48.39	3.27	48.15	3.27	47.95	3.28	46.94	3.31

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

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

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

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

3. Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Test conditions are based on AHRI 210 / 240.

Heating Capacity Table for LUU480HV (48,000 Btu/h)

(When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Table 21: Heating Capacity Table for LUU480HV (When Combined with C74BHMX48C-C + FG7TC-080D-V35C); (When Combined with C74BHMX48C-C + FG7TC-100D-V35C).

Outdoor Air Temp.		Indoor Air Temp. °F DB											
°F DB	°F WB	61		64		68		70		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-4	-4.4	24.12	2.74	22.64	2.82	22.32	2.91	22.01	2.96	21.76	2.99	20.83	3.08
0	-0.4	26.79	2.83	25.38	2.92	24.87	3.01	24.50	3.06	24.19	3.09	23.19	3.18
5	4.5	29.75	2.94	28.40	3.03	27.70	3.13	27.24	3.18	26.88	3.22	25.80	3.31
10	9	32.27	3.04	30.98	3.14	30.11	3.24	29.59	3.29	29.17	3.33	28.03	3.43
17	15	35.30	3.18	34.07	3.28	33.00	3.38	32.40	3.44	31.92	3.49	30.69	3.59
20	19	37.22	3.27	36.03	3.38	34.83	3.48	34.19	3.54	33.67	3.59	32.39	3.69
25	23	40.44	3.36	39.24	3.47	37.88	3.58	37.16	3.64	36.59	3.69	35.21	3.80
30	28	43.69	3.48	42.34	3.59	40.89	3.70	40.14	3.77	39.54	3.82	38.08	3.93
35	32	46.94	3.57	45.45	3.68	43.90	3.80	43.11	3.87	42.48	3.92	40.95	4.03
40	36	49.34	3.66	47.95	3.78	46.42	3.90	45.62	3.97	44.97	4.02	43.34	4.14
45	41	52.33	3.77	51.08	3.90	49.57	4.02	48.75	4.09	48.09	4.15	46.34	4.27
47	43	53.52	3.82	52.33	3.94	50.83	4.07	**50.00**	**4.14**	49.34	4.20	47.54	4.32
50	46	53.68	3.79	52.60	3.91	51.29	4.02	50.55	4.08	49.96	4.13	48.27	4.24
55	51	53.94	3.75	53.05	3.85	52.07	3.94	51.47	3.98	50.99	4.02	49.48	4.10
60	56	54.20	3.71	53.50	3.79	52.84	3.85	52.39	3.88	52.03	3.91	50.69	3.97
63	59	54.36	3.69	53.77	3.75	53.30	3.80	52.94	3.82	52.65	3.84	51.42	3.89
68	64	54.52	3.67	54.04	3.71	53.77	3.76	53.49	3.77	53.27	3.77	52.16	3.81

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

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

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

2. Direct interpolation is permissible. ⃠ Do not extrapolate.

3. Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Test conditions are based on AHRI 210 / 240.

LG HEAT PUMP PERFORMANCE DATA

Correction Factors

Cooling / Heating Correction Factors

Calculate the equivalent length of the liquid line from the heat pump outdoor unit to the A-coil / gas furnace. Also, determine the elevation difference of the A-coil / gas furnace above or below the heat pump 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 result 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 22: Cooling Capacity Coefficient Factors.

Piping Length (ft.)		24.6	32.8	49.2	65.6	98.4	131.2	164	196.9	229.7	246
Rate of Capacity Change (%)	LUU180HV (18,000 Btu/h)	100	100	99.3	97.9	96.6	93.8	91.1	-	-	-
	LUU240HV (24,000 Btu/h)	100	100	99.3	97.9	96.6	93.8	91.1	-	-	-
	LUU360HV (36,000 Btu/h)	100	100	99.3	97.9	96.6	93.8	91.1	88.4	85.6	82.9
	LUU420HV (42,000 Btu/h)	100	99.3	97.9	96.6	93.8	91.1	88.4	85.6	82.9	81.5
	LUU480HV (48,000 Btu/h)	100	99.3	97.9	96.6	93.8	91.1	88.4	85.6	82.9	81.5

Table 23: 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
Rate of Capacity Change (%)	LUU180HV (18,000 Btu/h)	100	99.3	97.9	96.6	93.8	91.1	88.4	-	-	-
	LUU240HV (24,000 Btu/h)	100	99.3	97.9	96.6	93.8	91.1	88.4	-	-	-
	LUU360HV (36,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93.0
	LUU420HV (42,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93.0
	LUU480HV (48,000 Btu/h)	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93.0

COMMUNICATION LINE CONNECTIONS AND DIP SWITCH SETTINGS

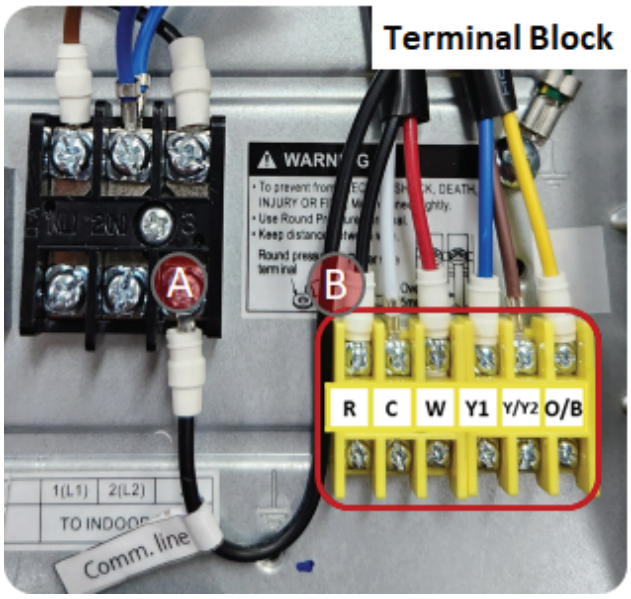
Heat Pump Communication Line Connections

- Communication Line (A) is not connected when shipped (factory default: disconnected).
- Communication Line (A) MUST be connected for Hybrid Heat Pump (LG Outdoor Unit + A-Coil + Gas Furnace) applications.
- Yellow Terminal Block (B) is for the Gas Furnace and Third-party Thermostat connections.

⚠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.

Figure 9: Communications Cable (A) MUST be Connected for Gas Furnace and Third-Party Thermostat Applications (Default: Disconnected)



Heat Pump Communication Kit DIP Switch Setting

Figure 10: SW-01 DIP Switch Heat Pump Communication Kit Default Setting (All Off).

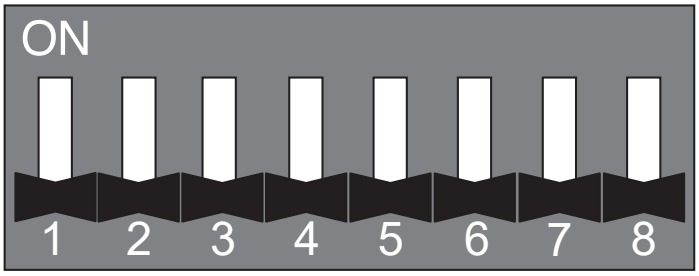


Figure 11: SW-01 DIP Switch Heat Pump Communication Kit Setting for A-Coil / Gas Furnace.

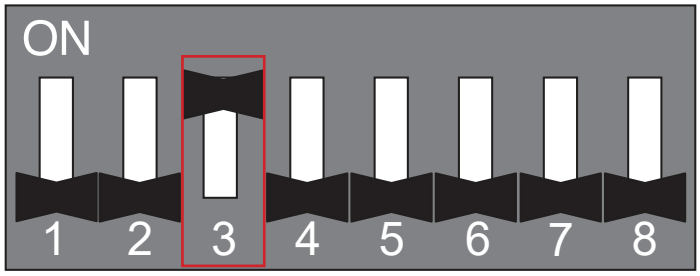


Table 24: Heat Pump Communication Kit DIP Switch Functions.

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	Reserved	-	-
5	Reserved	-	-
6	Reserved	-	-
7	Reserved	-	-
8	Reserved	-	-

*Thermostat Heat Pump Setting

For Hybrid Heat Pump 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.

SEQUENCE OF OPERATIONS

Cooling

1. Cooling operation set at Thermostat.
2. O / B Terminal at Thermostat is Closed (if DIP Switch No. 3 is OFF) ► Cooling (Reversing Valve Position Changed for Cooling).
3. Heat Pump Y1 (Closed) and Gas Furnace G (Closed) ► Compressor Stage 1 (Target Pressure: 114 psi [780kPa]) and Low Fan Speed.
4. Heat Pump Y1 (Opened) → Y2 (Closed) ► Compressor Stage 2 (Target Pressure: 102 psi [700kPa]) and High Fan Speed.
5. Compressor HZ can vary to reach the target pressure.

Note:

The compressor operating speed may also be impacted as the outdoor or indoor loads change.

Heating

1. Heating operation set at Thermostat.
2. O / B Terminal at Thermostat is Opened (if DIP Switch No. 3 is OFF) ► Heating (Reversing Valve Position for Heating).
3. Heat Pump Y1 (Closed) and Gas Furnace G (Closed) ► Compressor Stage 1 (Target Pressure: 429 psi [2,960kPa]) and Low Fan Speed.
4. Heat Pump Y1 (Opened) → Y2 (Closed) ► Compressor Stage 2 (Target Pressure: 461 psi [3,180kPa]) and High Fan Speed.
5. Compressor HZ can vary to reach the target pressure.

Note:

- *The compressor operating speed may also be impacted as the outdoor or indoor loads change.*
- *Dual Fuel Application can be activated if the installed third-party Thermostat enables dual fuel function settings.*

Defrost Mode

During Defrost Operation, the Heat Pump will circulate hot vapor refrigerant through its heat exchanger (defrost any accumulated ice). Usually the Heat Pump cannot provide Heating while in Defrost Operation. In LG Hybrid Heat Pump applications, the Heat Pump can activate the Gas Furnace for provide for continuous Heating Operation.

Heat Pump is in Heating Operation → Heat Pump switches to Defrost Operation → W Port of the Heat Pump Communication Kit is Closed → Gas Furnace is Activated → Defrost Operation is Complete → W Port Heat Pump Communication Kit is Opened → Heat Pump switches back to Heating Operation.

[1]Requires third-party outside air sensor accessory (field-supplied; sold separately) that communications to third-party thermostat (field-supplied; sold separately) via cable or Wi-Fi.
[2]Heating with gas furnace (if Dual Fuel Function Activated), fan speed is different (see the Nortek Gas Furnace Installation Manual).
[3]During defrost operation, the gas furnace fan speed maintains the fan speed from the previous heat pump operation.

LG HEAT PUMP PLACEMENT CONSIDERATIONS

Selecting the Best Location for the Heat Pump 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.*

⚠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. Properly install and insulate any drain hoses to prevent the hose from freezing, cracking, leaking, and causing unsafe conditions from frozen condensate.

⚠WARNING

Install a fence to prevent vermin from crawling into the unit or unauthorized individuals from accessing it. Vermin and unauthorized individuals will cause a fire, electric shock, physical injury or death. Follow the placement guidelines set forth in "Clearance Requirements".

⚠NOTE

Install a fence to prevent vermin from crawling into the unit or unauthorized individuals from accessing it. Vermin and unauthorized individuals will damage the unit. Follow the placement guidelines set forth in "Clearance Requirements".

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

- 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 Not's

- *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).*

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

LG HEAT PUMP PLACEMENT CONSIDERATIONS

Outdoor Unit Condensate Drain Piping

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

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. Properly install and insulate any drain hoses to prevent the hose from freezing, cracking, leaking, and causing unsafe conditions from frozen condensate.

Tie-Downs and Lightning Protection

Tie-Downs

- The strength of the roof must be checked before installing the outdoor units.
- 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.

Note:

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

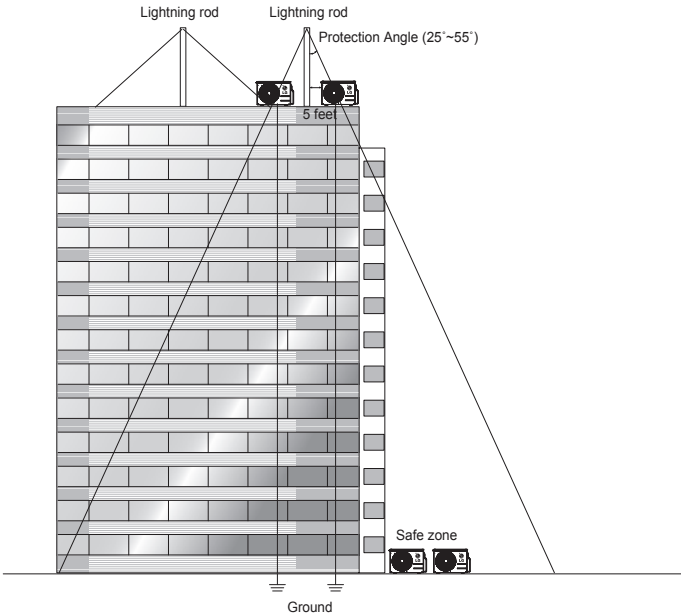
Lightning Protection

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

Table 25: Safety Zone Specifications.

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

Figure 12: Lightning Protection Diagram.



- 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.

⚠NOTE

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.

Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

Oceanside Applications

Use of a Windbreak to Shield from Sea Wind

Note:

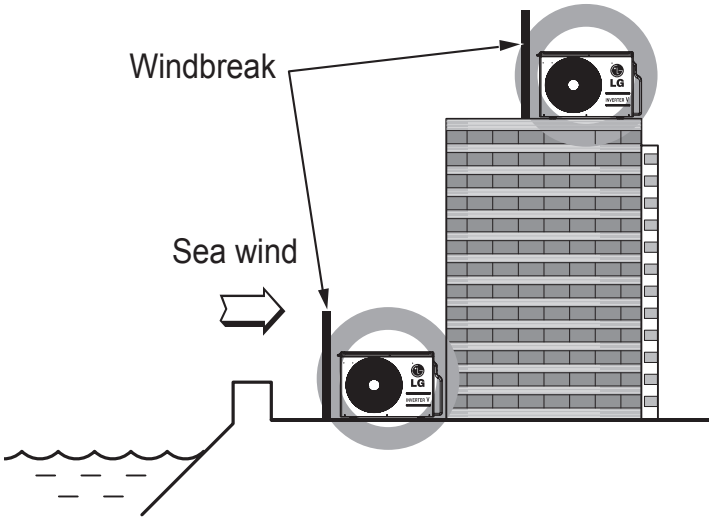
Ocean winds will cause corrosion, particularly on the condenser and evaporator fins, which, in turn could cause product malfunction or inefficient performance.

- ⃠ 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.
- Windbreak must be more than 150% of the outdoor unit's height. There must be 2 to 3-1/2 inches of clearance between the outdoor unit and the windbreaker for purposes of air flow.

Use of a Building to Shield from Sea Wind

If a windbreak is not possible, a building or larger structure must be used to shield the outdoor unit from direct exposure to the sea wind. The unit must be placed on the side of the building directly opposite to the direction of the wind as shown in the figure at right.

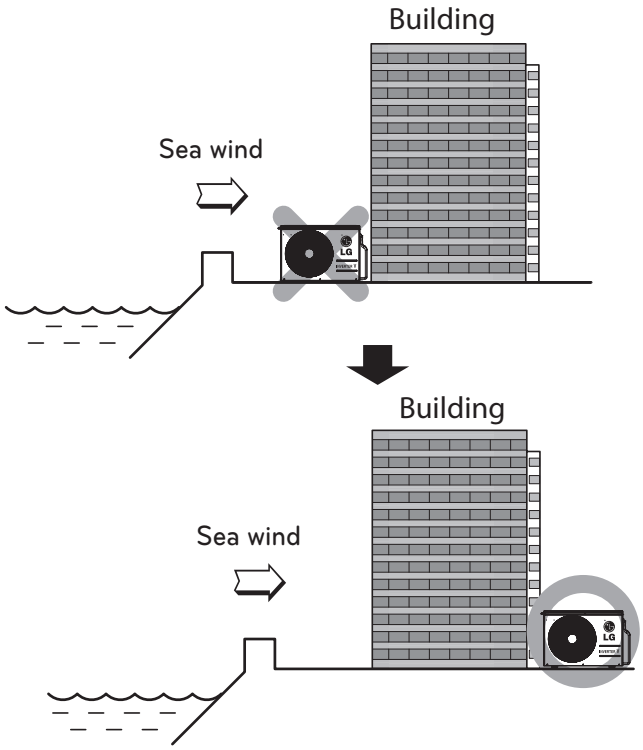
Figure 13: Oceanside Placement Using Windbreak.



Note:

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

Figure 14: Placement Using Building as Shield.



Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

LG HEAT PUMP PLACEMENT CONSIDERATIONS

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.)

Outdoor Unit (18,000 and 24,000 Capacity) Service Access and Allowable Clearances

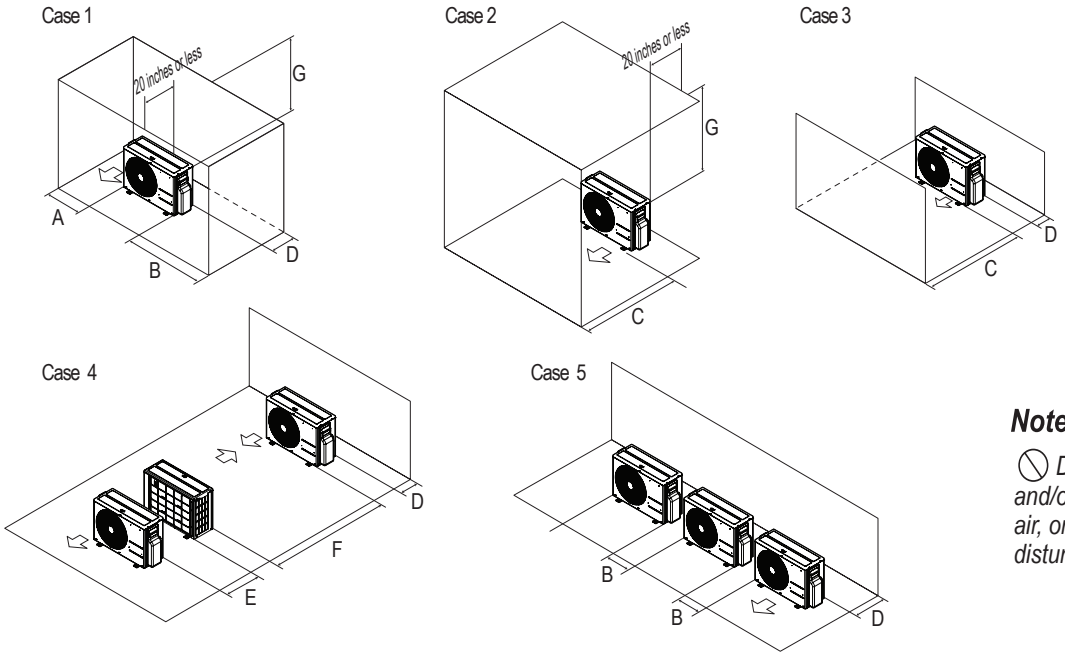
Specific clearance requirements in the diagram below are for (18,000 and 24,000 Btu/h capacities). The figure below shows the overall minimum clearances that must be observed for safe operation and adequate airflow around the outdoor unit.

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.

Note:

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

Figure 15: 18,000 to 24,000 Capacity Outdoor Unit Service Access and Allowable Clearances Diagram.



Note:

⃠ *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 26: 18,000 and 24,000 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	-	-	-

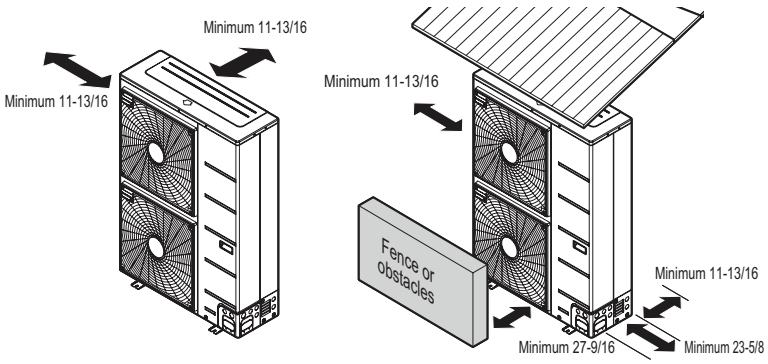
Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

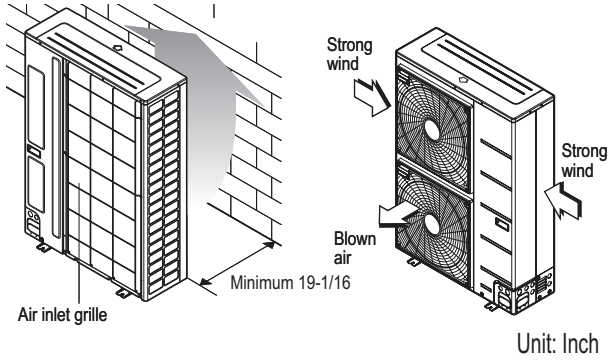
LG HEAT PUMP PLACEMENT CONSIDERATIONS

Outdoor Unit (36,000 to 48,000 Btu/h Capacity) Service Access and Allowable Clearances

When installing the outdoor unit, consider service, inlet, and outlet, and minimum allowable space requirements as illustrated in the following diagrams.



Ensure that the space at the back of the outdoor unit is a minimum of 11-13/16 inches, and include a minimum of 23-5/8 inches at the right side of the unit for service.

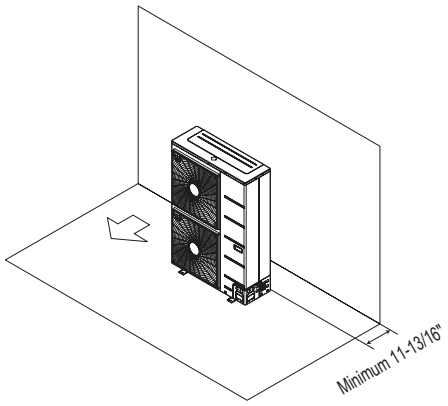


Unit: Inch

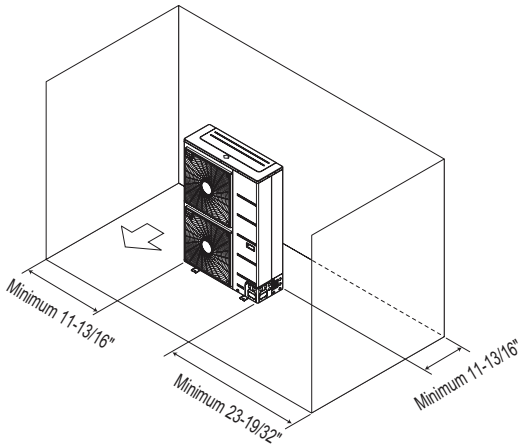
If the outdoor unit discharge side faces a wall, include a minimum of 19-11/16 inches between the outdoor unit and the wall. Install the outdoor unit so that the discharge port is set at a right angle to the wind direction.

Clearance Requirements when Different Obstacles are Present (Unit: Inch).

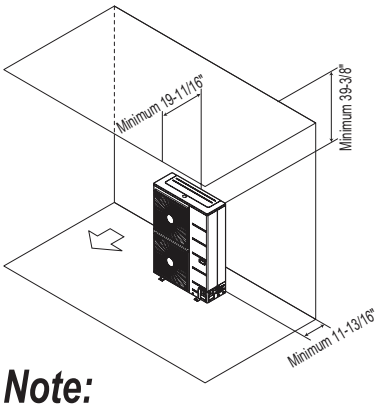
Obstacle on the suction side only.



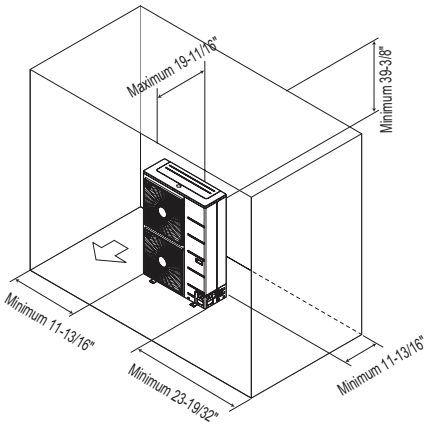
Obstacles on the suction side and on both left and right sides.



Obstacles above and on the air intake side.



Obstacles above, on the air intake side, and on both left and right sides

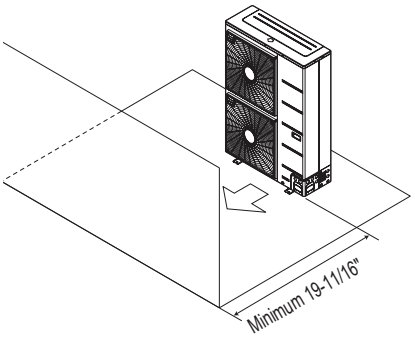


Note:

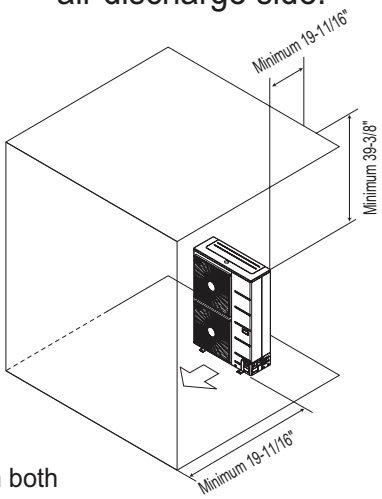
For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

LG HEAT PUMP PLACEMENT CONSIDERATIONS

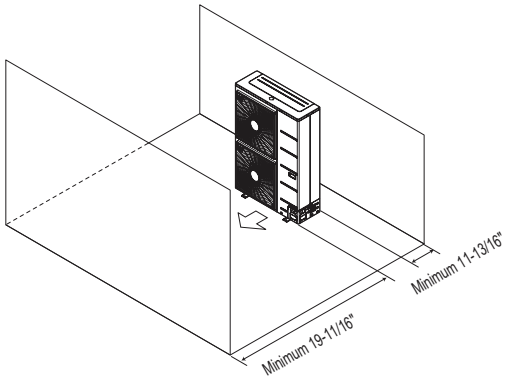
Obstacle just on the air discharge side.



Obstacles above and on the air discharge side.



Where there are obstacles on both suction and discharge sides (discharge side obstacle is higher than the outdoor unit).



Where there are obstacles above, and on both suction and discharge sides (discharge side obstacle is higher than the outdoor unit).

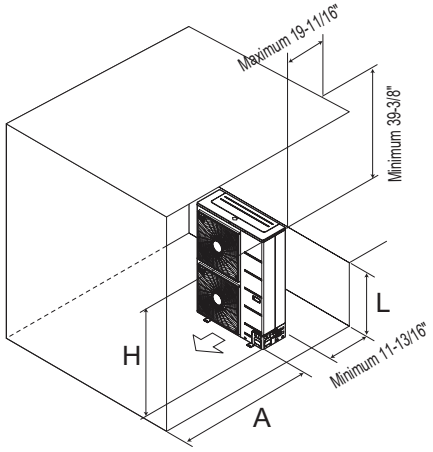
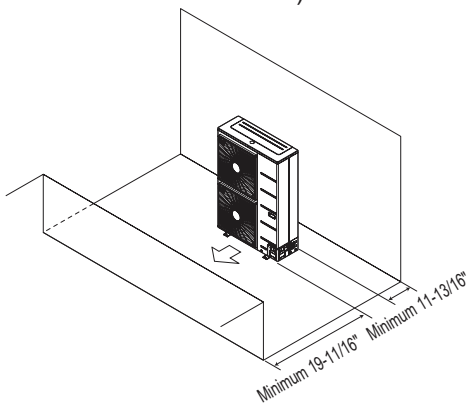


Table 27: Ratio among H, A, and L.

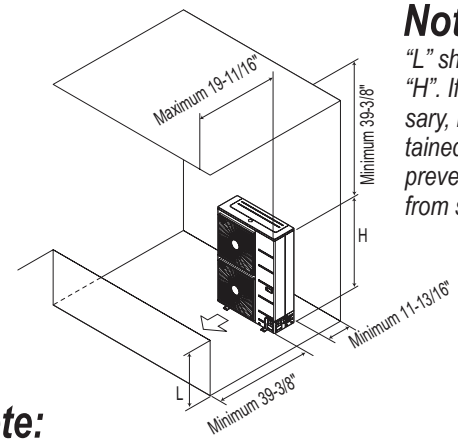
	L	A
L ≤ H	0 < L ≤ 1/2 H	29-1/32 inches
	1/2 H < L	39-3/8 inches
H < L	Set Stand as: L ≤ H	

If a stand is necessary, it should be contained (not open frame) to prevent the discharge air from short cycling.

Where there are obstacles on both suction and discharge sides (discharge side obstacle is lower than the outdoor unit).



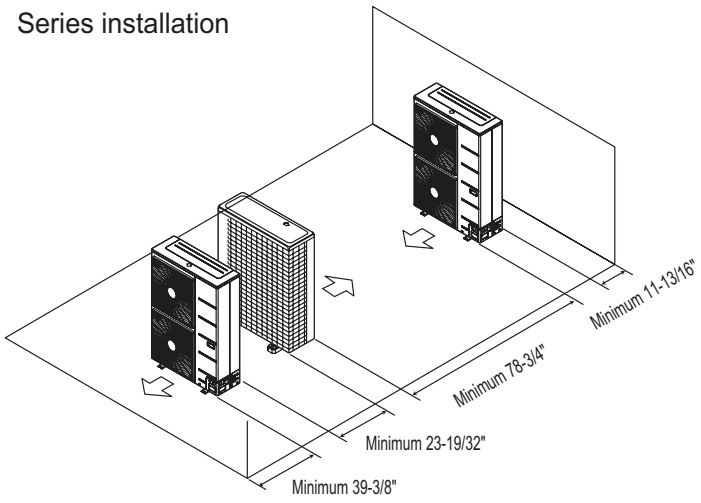
Where there are obstacles above, and on both suction and discharge sides (discharge side obstacle is lower than the outdoor unit).



Note:

"L" should be lower than "H". If a stand is necessary, it should be contained (not open frame) to prevent the discharge air from short cycling.

Series installation



Note:

For Nortek A-Coil and gas furnace specifications, see Nortek technical materials at www.nortekhvac.com.

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