



MULTI V™

FLOOR STANDING INDOOR UNIT ENGINEERING MANUAL



Cased



Uncased

7,500 to 24,200 Btu/h

PROPRIETARY DATA NOTICE

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This document is for design purposes only.**

A summary list of safety precautions is on page 3.

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

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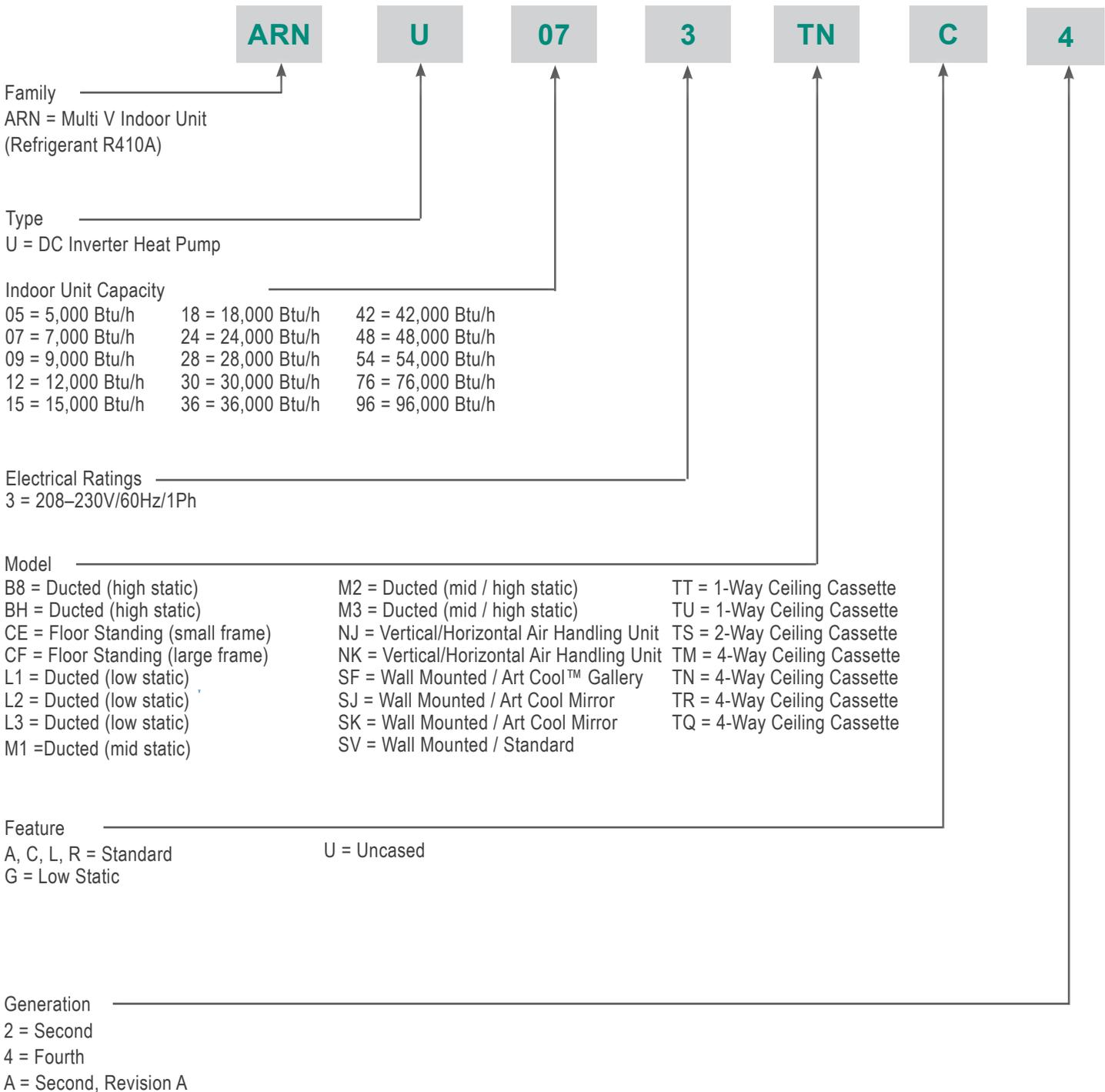
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TABLE OF SYMBOLS

 DANGER	<i>This symbol indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</i>
 WARNING	<i>This symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</i>
 CAUTION	<i>This symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</i>
Note	<i>This symbol indicates situations that may result in equipment or property damage accidents only.</i>
	<i>This symbol indicates an action should not be completed.</i>

UNIT NOMENCLATURE



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.

Note:

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.

Formats

LATS is available to LG customers in three user interfaces: LATS HVAC, LATS CAD2, and LATS REVIT. All three 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, and Energy Recovery Ventilator (ERV) systems.

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

LATS CAD2 combines the LG LATS program with AutoCAD® software**. It permits engineers to layout and validate LG Multi V Variable Refrigerant Flow (VRF), Multi F / Multi F MAX, Single-Zone, and Energy Recovery Ventilator (ERV) systems directly into CAD drawings.

LATS Revit integrates the LG LATS program with Revit® software**. It permits engineers to layout and validate Multi V VRF systems directly into Revit drawings.

**AutoCAD® and Revit® are both registered marks 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.

Note:

Features depend on which LATS program is being used, and the type of system being designed.

Figure 1: Example of LATS CAD2.



LG AIR CONDITIONER TECHNICAL SOLUTION (LATS)



LATS Generates a Complete Project Report

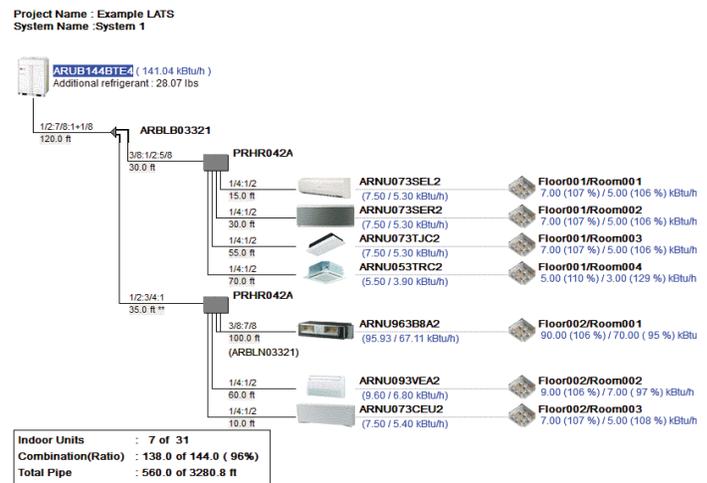
LATS software also generates a report containing project design parameters, cooling and heating design data, system component performance, and capacity data. The report includes system combination ratio and refrigerant charge calculations; and provides detailed bill of material, including outdoor units, 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 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.).

Figure 2: Example of a LATS Tree Diagram.



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 to see 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.

Note:

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.





REFRIGERANT CHARGE WORKSHEET

Multi V 5 System R410A Refrigerant Charge Calculator (lbs.)

System Tag or ID:		Job Name: _____				
		Project Manager: _____			Date: _____	
Line #	Description	Chassis I.D.	Size	Quantity	CF (Ref.) ¹	Total (lbs.)
1	Linear feet of 1/4" liquid line tubing ²	—	—		0.015	
2	Linear feet of 3/8" liquid line tubing ²	—	—		0.041	
3	Linear feet of 1/2" liquid line tubing ²	—	—		0.079	
4	Linear feet of 5/8" liquid line tubing ²	—	—		0.116	
5	Linear feet of 3/4" liquid line tubing ²	—	—		0.179	
6	Linear feet of 7/8" liquid line tubing ²	—	—		0.238	
7	Linear feet of 1" liquid line tubing ²	—	—		0.323	
8	Standard + Art Cool Mirror	SJ, SK	5k to 15k		0.53	
9	Standard + Art Cool Mirror	SJ, SK	18k to 24k		0.62	
10	Standard	SV	30k to 36k		1.01	
11	Art Cool Gallery	SF	9k to 12k		0.22	
12	1-Way Cassette	TU	7k to 12k		0.44	
13	1-Way Cassette	TT	18k to 24k		0.64	
14	2-Way Cassette	TS	18k to 24k		0.75	
15	4-Way 2' x 2' Cassette	TR	5k to 7k		0.40	
16	4-Way 2' x 2' Cassette	TR	9k to 12k		0.55	
17	4-Way 2' x 2' Cassette	TQ	15k to 18k		0.71	
18	4-Way 3' x 3' Cassette	TN	7k to 24k		0.88	
19	4-Way 3' x 3' Cassette	TM	28k to 36k		1.08	
20	4-Way 3' x 3' Cassette	TM	42k to 48k		1.41	
21	Mid Static Ducted	M1	7k to 24k		0.57	
22	High Static Ducted	M2	7k to 24k		0.77	
23	Mid Static Ducted	M2	28k to 42k		1.15	
24	Mid / High Static Ducted	M3	28k to 54k		1.35	
25	High Static Ducted	B8	36k to 96k		2.20	
26	Low Static Ducted, Low Static Ducted Bottom Return	L1	5k to 9k		0.31	
27	Low Static Ducted, Low Static Ducted Bottom Return	L2	12k to 18k		0.42	
28	Low Static Ducted, Low Static Ducted Bottom Return	L3	21k to 24k		0.55	
29	Vertical / Horizontal Air Handling Unit	NJ	12k to 30k		1.04	
30	Vertical / Horizontal Air Handling Unit	NJ	36k		1.57	
31	Vertical / Horizontal Air Handling Unit	NK	42k to 54k		2.00	
32	Floor Standing	CE (U)	7k to 15k		0.37	
33	Floor Standing	CF (U)	18k to 24k		0.82	
34	HRU: PRHR022A/023A, 032A/033A, 042A/043A	—	—		1.1	
35	HRU: PRHR063A, 083A	—	—		2.2	
36	ADDITIONAL Refrigerant Charge Required (Sum of lines 1 – 35)					
37	Outdoor Unit Factory Refrigerant Charge	37A	ARUM072*TE5	72k		14.3
		37B	ARUM096*TE5	96k		23.2
		37C	ARUM121*TE5	121k		23.2
		37D	ARUM144*TE5	144k		26.5
		37E	ARUM168*TE5	168k		26.5
		37F	ARUM192*TE5	192k		30.9
		37G	ARUM216*TE5	216k		37.5
		37H	ARUM241*TE5	241k		37.5
38	Total ODU FACTORY Refrigerant Charge (Sum of factory refrigerant charges for all ODUs in the system, lines 37A -37H)					
39	TOTAL SYSTEM CHARGE					
Sum of Additional Refrigerant Charge Required (line 36) and Total ODU Factory Refrigerant Charge (line 38)						

¹CF (Ref.) = Correction Factor for Refrigerant Charge. ²For refrigerant charge purposes, consider only the liquid line; ignore the vapor line(s).

Introduction



REFRIGERANT CHARGE WORKSHEET



Water IV System R410A Refrigerant Charge Calculator (lbs.)

System Tag or ID:		Job Name: _____				
		Project Manager: _____			Date: _____	
Line #	Description	Chassis I.D.	Size	Quantity	CF (Ref.) ¹	Total (lbs.)
1	Linear feet of 1/4" liquid line tubing ²	—	—		0.015	
2	Linear feet of 3/8" liquid line tubing ²	—	—		0.041	
3	Linear feet of 1/2" liquid line tubing ²	—	—		0.079	
4	Linear feet of 5/8" liquid line tubing ²	—	—		0.116	
5	Linear feet of 3/4" liquid line tubing ²	—	—		0.179	
6	Linear feet of 7/8" liquid line tubing ²	—	—		0.238	
7	Linear feet of 1" liquid line tubing ²	—	—		0.323	
8	Standard + Art Cool Mirror	SJ, SK	5k to 15k		0.53	
9	Standard + Art Cool Mirror	SJ, SK	18k to 24k		0.62	
10	Standard	SV	30k to 36k		1.01	
11	Art Cool Gallery	SF	9k to 12k		0.22	
12	1-Way Cassette	TU	7k to 12k		0.44	
13	1-Way Cassette	TT	18k to 24k		0.64	
14	2-Way Cassette	TS	18k to 24k		0.75	
15	4-Way 2' x 2' Cassette	TR	5k to 7k		0.40	
16	4-Way 2' x 2' Cassette	TR	9k to 12k		0.55	
17	4-Way 2' x 2' Cassette	TQ	15k to 18k		0.71	
18	4-Way 3' x 3' Cassette	TN	7k to 24k		0.88	
19	4-Way 3' x 3' Cassette	TM	28k to 36k		1.08	
20	4-Way 3' x 3' Cassette	TM	42k to 48k		1.41	
21	Mid Static Ducted	M1	7k to 24k		0.57	
22	High Static Ducted	M2	7k to 24k		0.77	
23	Mid Static Ducted	M2	28k to 42k		1.15	
24	Mid / High Static Ducted	M3	28k to 54k		1.35	
25	High Static Ducted	B8	36k to 96k		2.20	
26	Low Static Ducted, Low Static Ducted Bottom Return	L1	5k to 9k		0.31	
27	Low Static Ducted, Low Static Ducted Bottom Return	L2	12k to 18k		0.42	
28	Low Static Ducted, Low Static Ducted Bottom Return	L3	21k to 24k		0.55	
29	Vertical / Horizontal Air Handling Unit	NJ	12k to 30k		1.04	
30	Vertical / Horizontal Air Handling Unit	NJ	36k		1.57	
31	Vertical / Horizontal Air Handling Unit	NK	42k to 54k		2.00	
32	Floor Standing	CE (U)	7k to 15k		0.37	
33	Floor Standing	CF (U)	18k to 24k		0.82	
34	HRU: PRHR022A/023A, 032A/033A, 042A/043A	—	—		1.1	
35	HRU: PRHR063A, 083A	—	—		2.2	
36	ADDITIONAL Refrigerant Charge Required (Sum of lines 1 – 35)					
37	Water-Source Unit Factory Refrigerant Charge	ARW*072BAS4, ARW*096BAS4, ARW*121BAS4, ARW*144BAS4			10.42	
		ARW*072DAS4, ARW*096DAS4, ARW*121DAS4			10.42	
		ARW*144DAS4, ARW*192DAS4			11.66	
38	Total WSU FACTORY Refrigerant Charge (Sum of factory refrigerant charges for all WSUs in the system)					
39	TOTAL SYSTEM CHARGE					
	Sum of Additional Refrigerant Charge Required (line 36) and Total WSU Factory Refrigerant Charge (line 38)					

¹CF (Ref.) = Correction Factor for Refrigerant Charge. ²For refrigerant charge purposes, consider only the liquid line; ignore the vapor line(s).



REFRIGERANT CHARGE WORKSHEET

Multi V S System R410A Refrigerant Charge Calculator (lbs.)

System Tag or ID:		Job Name: _____				
		Project Manager: _____			Date: _____	
Line #	Description	Chassis I.D.	Size	Quantity	CF (Ref.) ¹	Total (lbs.)
1	Linear feet of 1/4" liquid line tubing ²	—	—		0.015	
2	Linear feet of 3/8" liquid line tubing ²	—	—		0.041	
3	Linear feet of 1/2" liquid line tubing ²	—	—		0.079	
4	Linear feet of 5/8" liquid line tubing ²	—	—		0.116	
5	Linear feet of 3/4" liquid line tubing ²	—	—		0.179	
6	Linear feet of 7/8" liquid line tubing ²	—	—		0.238	
7	Linear feet of 1" liquid line tubing ²	—	—		0.323	
8	Standard + Art Cool Mirror	SJ, SK	5k to 15k		0.53	
9	Standard + Art Cool Mirror	SJ, SK	18k to 24k		0.62	
10	Standard	SV	30k to 36k		1.01	
11	Art Cool Gallery	SF	9k to 12k		0.22	
12	1-Way Cassette	TU	7k to 12k		0.44	
13	1-Way Cassette	TT	18k to 24k		0.64	
14	2-Way Cassette	TS	18k to 24k		0.75	
15	4-Way 2' x 2' Cassette	TR	5k to 7k		0.40	
16	4-Way 2' x 2' Cassette	TR	9k to 12k		0.55	
17	4-Way 2' x 2' Cassette	TQ	15k to 18k		0.71	
18	4-Way 3' x 3' Cassette	TN	7k to 24k		0.88	
19	4-Way 3' x 3' Cassette	TM	28k to 36k		1.08	
20	4-Way 3' x 3' Cassette	TM	42k to 48k		1.41	
21	Mid Static Ducted	M1	7k to 24k		0.57	
22	High Static Ducted	M2	7k to 24k		0.77	
23	Mid Static Ducted	M2	28k to 42k		1.15	
24	Mid / High Static Ducted	M3	28k to 54k		1.35	
25	High Static Ducted	B8	36k to 96k		2.20	
26	Low Static Ducted, Low Static Ducted Bottom Return	L1	5k to 9k		0.31	
27	Low Static Ducted, Low Static Ducted Bottom Return	L2	12k to 18k		0.42	
28	Low Static Ducted, Low Static Ducted Bottom Return	L3	21k to 24k		0.55	
29	Vertical / Horizontal Air Handling Unit	NJ	12k to 30k		1.04	
30	Vertical / Horizontal Air Handling Unit	NJ	36k		1.57	
31	Vertical / Horizontal Air Handling Unit	NK	42k to 54k		2.00	
32	Floor Standing	CE (U)	7k to 15k		0.37	
33	Floor Standing	CF (U)	18k to 24k		0.82	
34	HRU: PRHR022A/023A, 032A/ 033A, 042A/ 043A	—	—		1.1	
35	HRU: PRHR063A, 083A	—	—		2.2	
36	ADDITIONAL Refrigerant Charge Required (Sum of lines 1 – 35)					
37	Total ODU FACTORY Refrigerant Charge (Choose One)	37A	ARUN024GSS4		0	
		37B	ARUN038GSS4		0	
		37C	ARUN048GSS4		0	
		37D	ARUN053GSS4		0	
		37F	ARUN060GSS4		0	
		37G	ARUB060GSS4		0	
38	TOTAL SYSTEM CHARGE Sum of Additional Refrigerant Charge Required (line 36) and ODU Factory Refrigerant Charge (from lines 37A through 37G)					

¹CF (Ref.) = Correction Factor for Refrigerant Charge. ²For refrigerant charge purposes, consider only the liquid line; ignore the vapor line(s).

Introduction



PRODUCT DATA

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**Casing
Cased**

The case is designed to be free standing on the floor against a vertical surface. The backplane of the unit allows secure attachment of the unit to a vertical surface. Supply air is vertical from the top of the unit with a bottom front return through a toe slot at floor level. The supply air opening is covered with an architectural grille. The unit is manufactured using coated metal with an off-white ABS architectural polymeric resin exterior case. Cold surfaces are covered with a coated polystyrene insulating material. Flip open controller access doors cover the controller mounting bays located on both ends of the top panel. A polymeric resin coated metal safety grille is provided behind the removable filters located in the toe space to prevent reach access to the fan wheel.

Uncased

The unit case is designed to be concealed in a field-provided architectural enclosure. The unit case is manufactured using coated metal. Cold surfaces are covered with a coated polystyrene insulating material. The back plane of the unit has two side mounting flanges with bolt holes for hanging the unit on a vertical wall near the floor. Airflow is vertical from the bottom to the top. A polymeric resin coated metal safety grille is provided behind the removable filters located at the return air opening to prevent reach access to the fan wheels.

Fan Assembly and Control

7–15 MBh

The unit has three Sirocco fans mounted on a common shaft and made of high strength ABS HT-700 polymeric resin. The fan shaft is directly driven by a single digitally-controlled inverter fan motor.

18–24 MBh

The unit has two independent fan assemblies consisting of two motors and four fans. Each assembly consists of two Sirocco fans made of high strength ABS HT-700 polymeric resin. Each pair of fans are mounted on a common shaft and driven directly by a single digitally controlled inverter motor.

Fan Motors

The fan motors are a Brushless Digitally Controlled (BLDC) design with permanently lubricated and sealed ball bearings. The fan motor includes thermal, overcurrent and low RPM protection. The fan/motor assembly is mounted in vibration attenuating rubber grommets. The fan impeller is statically and dynamically balanced. The fan speed is controlled using a microprocessor-based direct digital control algorithm that provides a high fan speed in cooling thermal ON and low fan speed in cooling thermal OFF, high fan speed in heating thermal ON and fan off in heating thermal OFF. The fan speeds can be field adjusted between low, medium, and high speeds. The fan speed algorithm provides a field-selectable fixed or auto-speed setting that adjusts fan speed to simulate natural airflow.



Cased



Uncased

Air Filter

Return air is filtered using two (2) removable, washable filters with anti-fungal treatment on the 7-15 MBh models and three (3) removable, washable filters with anti-fungal treatment on the 18-24 MBh models. Access to the filter media is from the return air toe slot located on the front of the unit without removing unit panels.

Microprocessor Control

The unit is provided with an integrated microprocessor-based controller. A temperature thermistor is factory-mounted in the return air stream. The controller is capable of performing functions necessary to operate the system without the use of a separate unit or wall-mounted controller. All unit operation parameters, excluding the operation schedule, are stored in non-volatile memory resident on the unit microprocessor. Operating schedules are stored in select models of the optional unit or wall-mounted, local or central controller. The field-supplied communication cable between the indoor unit(s) and outdoor unit is to be a minimum of 18 AWG, 2 conductor, stranded, and shielded cable (RS-485), terminated via screw terminals on the control boards. The microprocessor control provides the following functions: auto addressing, self-diagnostics, auto restart following power restoration, test run, and will operate the indoor unit using one of five operating modes:

1. Auto Changeover (Heat Recovery only)
2. Heating
3. Cooling
4. Dry
5. Fan Only

For Heat Recovery systems the Auto Changeover setting automatically switches between cooling and heating modes based on room temperature conditions.

For Heat Pump systems, heated or cooled air delivery is dependent upon outdoor unit operating mode.

In Heating mode, the microprocessor control will activate the indoor unit when indoor room temperature falls below set-point temperature and signals the outdoor unit to begin the heating cycle. The indoor unit fan operation is delayed until coil pipe temperature reaches 76°F. Significant airflow is generated when pipe temperature reaches 80°F. In lieu of factory return air thermistor, screw terminals on the microprocessor circuit board accommodate various models of wall

or unit-mounted local controllers and/or a wall-mounted remote temperature sensor. The unit microprocessor is capable of accepting space temperature readings concurrently or individually from either:

1. Wall or unit mounted wired controller(s)
2. Factory mounted return air thermistor or the optional wall-mounted wired remote temperature sensor

The microprocessor controls space temperature using the value provided by the temperature sensor sensing a space temperature that is farthest away from the temperature set-point. The microprocessor control provides a cooling or heating mode test cycle that operates the unit for 18 minutes without regard to the space temperature. If the system is provided with an optional local or central controller, displayed diagnostic codes are specific, alpha numeric, and provide the service technician with the reason for the code displayed.

Handling Condensate

The unit is designed to provide gravity draining of condensate. LG provides a factory insulated flexible drain hose. If condensate lifts/pumps are needed for the application, they are to be field-provided. Condensate float safety switch connections are available on the main control board for connection of a field supplied float safety switch.

Condensate Drain Pan

The condensate drain pan is constructed of expandable polystyrene resin (EPS).

Coil

The indoor unit coil is constructed with grooved design copper tubes with slit coil fins, two (2) rows, nineteen (19) fins per inch

Controls Features

- Auto changeover (Heat Recovery only)
- Auto operation
- Auto restart
- External on/off control
- Dual thermistor control
- Dual set-point control
- Filter life display
- Multiple auxiliary heater applications
- Fan speed control
- Group control
- Hot start
- Self diagnostics
- Timer (on / off)
- Weekly schedule

**To enable Generation 4 features, outdoor unit DIP Switch No. 3 must be set to ON. Please refer to the Multi V IV, Multi V Water IV, Multi V S Engineering Manual for additional information.*

Table 1: Cased Floor Standing (CEA, CFA) Indoor Unit General Data.

Model No.	ARNU073CEA4	ARNU093CEA4	ARNU123CEA4	ARNU153CEA4	ARNU183CFA4	ARNU243CFA4
<i>Cooling Mode Performance</i>						
Capacity (Btu/h)	7,500	9,600	12,300	15,400	19,100	24,200
Max Power Input ¹ (W)	85	85	85	85	115	115
L/M/H Power Input at Factory Default (W)	14 / 17 / 24	17 / 24 / 30	24 / 30 / 36	28 / 35 / 44	29 / 41 / 54	41 / 54 / 84
<i>Heating Mode Performance</i>						
Capacity (Btu/h)	8,500	10,900	13,600	17,100	21,500	27,300
Max Power Input ¹ (W)	85	85	85	85	115	115
L/M/H Power Input at Factory Default (W)	14 / 17 / 24	17 / 24 / 30	24 / 30 / 36	28 / 35 / 44	29 / 41 / 54	41 / 54 / 84
<i>Entering Mixed Air</i>						
Cooling Max. (°F WB)	76	76	76	76	76	76
Heating Min. (°F DB) ²	59	59	59	59	59	59
<i>Unit Data</i>						
Refrigerant Type ³	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant Control	EEV	EEV	EEV	EEV	EEV	EEV
Sound Pressure ⁴ dB(A) (H/M/L)	35 / 33 / 31	36 / 34 / 32	37 / 35 / 33	38 / 37 / 35	40 / 37 / 34	43 / 40 / 37
Net Unit Weight (lbs.)	59.5	59.5	59.5	59.5	75.0	75.0
Shipping Weight (lbs.)	68.3	68.3	68.3	68.3	86.0	86.0
Communication Cable ⁵ (No. x AWG)	2 x 18	2 x 18	2 x 18	2 x 18	2 x 18	2 x 18
<i>Fan</i>						
Type	Sirocco	Sirocco	Sirocco	Sirocco	Sirocco	Sirocco
Motor	2	2	2	2	2	2
Housing	3	3	3	3	4	4
Motor/Drive	Brushless Digitally Controlled / Direct					
Airflow Rate H/M/L (CFM) High Mode (Factory Set)	300 / 265 / 229	335 / 300 / 265	371 / 335 / 300	406 / 353 / 335	565 / 494 / 424	635 / 565 / 494
External Static Pressure (in. wg) High Mode (Factory Set)	0	0	0	0	0	0
<i>Piping</i>						
Liquid Line (in., O.D.)	1/4 Flare	1/4 Flare	1/4 Flare	1/4 Flare	1/4 Flare	3/8 Flare
Vapor Line (in., O.D.)	1/2 Flare	1/2 Flare	1/2 Flare	1/2 Flare	1/2 Flare	5/8 Flare
Condensate Line (in., I.D.)	1	1	1	1	1	1

EEV: Electronic Expansion Valve

Power wiring is field supplied and must comply with the applicable local and national codes.

This unit comes with a dry nitrogen charge.

All capacities are net with a combination ratio between 95-105%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

¹Max power input is rated at maximum setting value.

²Low ambient performance with LGRED[®] heat technology is included in Multi V 5 Air Source Units produced after February 2019.

³Take appropriate actions at the end of HVAC equipment life to recover, recycle, reclaim or destroy R410A refrigerant according to applicable regulations (40 CFR Part 82, Subpart F) under section 608 of CAA.

⁴Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

⁵All communication cable to be minimum 18 AWG, 2-conductor, twisted, stranded, shielded and must comply with applicable local and national codes. Ensure the communication cable is properly grounded at the master outdoor unit only. ⓧ Do not ground the ODU-IDU communication cable at any other point.

PRODUCT DATA



General Data

CEU, CFU Uncased Units

Table 2: Uncased Floor Standing (CEU, CFU) Indoor Unit General Data.

Model No.	ARNU073CEU4	ARNU093CEU4	ARNU123CEU4	ARNU153CEU4	ARNU183CFU4	ARNU243CFU4
Cooling Mode Performance						
Capacity (Btu/h)	7,500	9,600	12,300	15,400	19,100	24,200
Max Power Input ¹ (W)	85	85	85	85	115	115
L/M/H Power Input at Factory Default (W)	14 / 17 / 24	17 / 24 / 30	24 / 30 / 36	28 / 35 / 44	29 / 41 / 54	41 / 54 / 84
Heating Mode Performance						
Capacity (Btu/h)	8,500	10,900	13,600	17,100	21,500	27,300
Max Power Input ¹ (W)	85	85	85	85	115	115
L/M/H Power Input at Factory Default (W)	14 / 17 / 24	17 / 24 / 30	24 / 30 / 36	28 / 35 / 44	29 / 41 / 54	41 / 54 / 84
Entering Mixed Air						
Cooling Max. (°F WB)	76	76	76	76	76	76
Heating Min. (°F DB) ²	59	59	59	59	59	59
Unit Data						
Refrigerant Type ³	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant Control	EEV	EEV	EEV	EEV	EEV	EEV
Sound Pressure ⁴ dB(A) (H/M/L)	35 / 33 / 31	36 / 34 / 32	37 / 35 / 33	38 / 37 / 35	40 / 37 / 34	43 / 40 / 37
Net Unit Weight (lbs.)	46.3	46.3	46.3	46.3	58.4	58.4
Shipping Weight (lbs.)	56.2	56.2	56.2	56.2	68.3	68.3
Communication Cable ⁵ (No. x AWG)	2 x 18	2 x 18	2 x 18	2 x 18	2 x 18	2 x 18
Fan						
Type	Sirocco	Sirocco	Sirocco	Sirocco	Sirocco	Sirocco
Motor	2	2	2	2	2	2
Housing	3	3	3	3	4	4
Motor/Drive	Brushless Digitally Controlled / Direct					
Airflow Rate H/M/L (CFM) High Mode (Factory Set)	300 / 265 / 229	335 / 300 / 265	371 / 335 / 300	406 / 353 / 335	565 / 494 / 424	635 / 565 / 494
External Static Pressure (in. wg) High Mode (Factory Set)	0	0	0	0	0	0
Piping						
Liquid Line (in., O.D.)	1/4 Flare	1/4 Flare	1/4 Flare	1/4 Flare	1/4 Flare	3/8 Flare
Vapor Line (in., O.D.)	1/2 Flare	1/2 Flare	1/2 Flare	1/2 Flare	1/2 Flare	5/8 Flare
Condensate Line (in., I.D.)	1	1	1	1	1	1

EEV: Electronic Expansion Valve

Power wiring is field supplied and must comply with the applicable local and national codes.

This unit comes with a dry nitrogen charge.

All capacities are net with a combination ratio between 95-105%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

¹Max power input is rated at maximum setting value.

²Low ambient performance with LGRED[®] heat technology is included in Multi V 5 Air Source Units produced after February 2019.

³Take appropriate actions at the end of HVAC equipment life to recover, recycle, reclaim or destroy R410A refrigerant according to applicable regulations (40 CFR Part 82, Subpart F) under section 608 of CAA.

⁴Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.

⁵All communication cable to be minimum 18 AWG, 2-conductor, twisted, stranded, shielded and must comply with applicable local and national codes. Ensure the communication cable is properly grounded at the master outdoor unit only. Ⓞ Do not ground the ODU-IDU communication cable at any other point.

Table 3: Floor Standing (CEA, CFA [Cased]; CEU, CFU [Uncased]) Indoor Unit Electrical Data.

Model	Voltage Range	MCA	MOP	Rated Amps (A)	Power Supply			Power Input ¹ (W)		
					Hz	Volts	Phase	Max. Cooling	Max. Heating	L / M / H at Factory Default
<i>CEA / CFA (Cased) Units</i>										
ARNU073CEA4	208-230	1.0	15	0.76	60	208-230	1	85	85	14 / 17 / 24
ARNU093CEA4		1.0		0.76				85	85	17 / 24 / 30
ARNU123CEA4		1.0		0.76				85	85	24 / 30 / 36
ARNU153CEA4		1.0		0.76				85	85	28 / 35 / 44
ARNU183CFA4		1.2	15	0.97				115	115	29 / 41 / 54
ARNU243CFA4		1.2		0.97				115	115	41 / 54 / 84
<i>CEU / CFU (Uncased) Units</i>										
ARNU073CEU4	208-230	1.0	15	0.76	60	208-230	1	85	85	14 / 17 / 24
ARNU093CEU4		1.0		0.76				85	85	17 / 24 / 30
ARNU123CEU4		1.0		0.76				85	85	24 / 30 / 36
ARNU153CEU4		1.0		0.76				85	85	28 / 35 / 44
ARNU183CFU4		1.2	15	0.97				115	115	29 / 41 / 54
ARNU243CFU4		1.2		0.97				115	115	41 / 54 / 84

MCA : Minimum Circuit Ampacity.

MOP : Maximum Overcurrent Protection.

Units are suitable for use on an electrical system where voltage supplied to unit terminals is within the listed range limits.

Select wire size based on the larger MCA value.

Instead of fuse, use the circuit breaker.

¹Max power input is rated at maximum setting value.

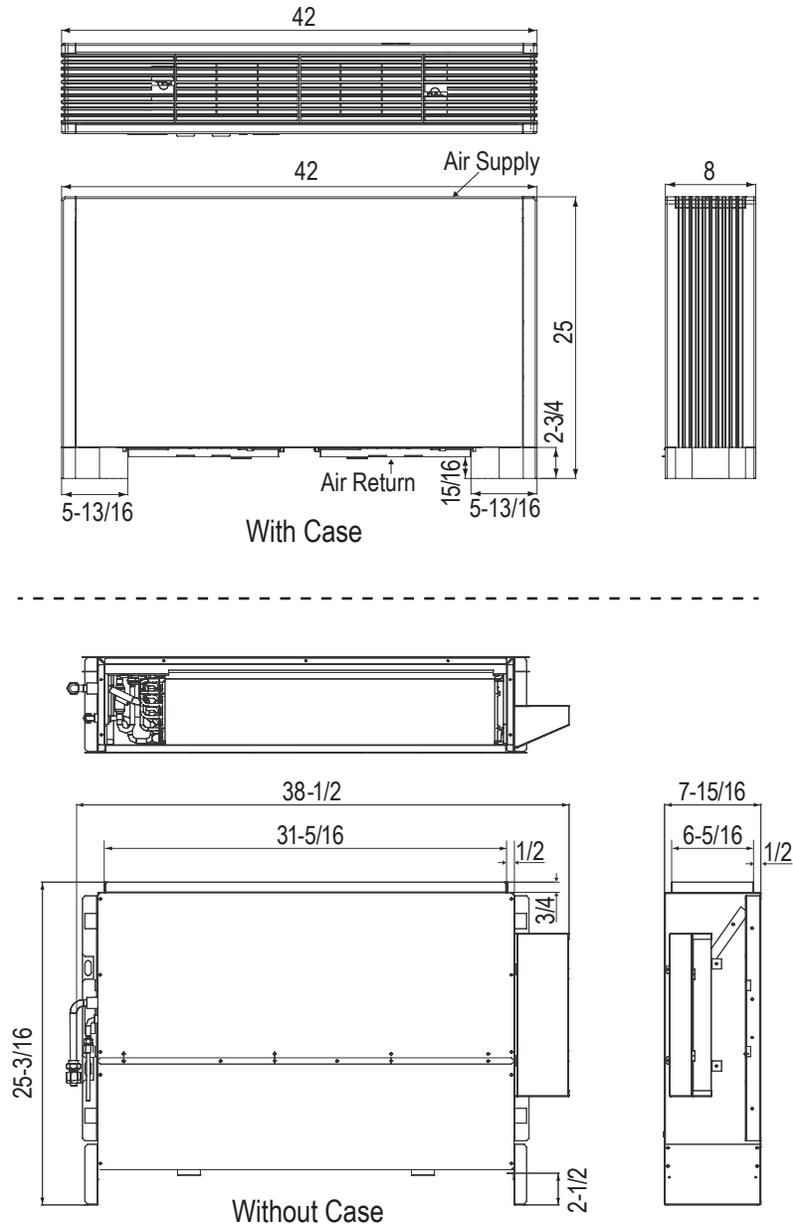
PRODUCT DATA



External Dimensions

CEA Cased, CEU Uncased Units

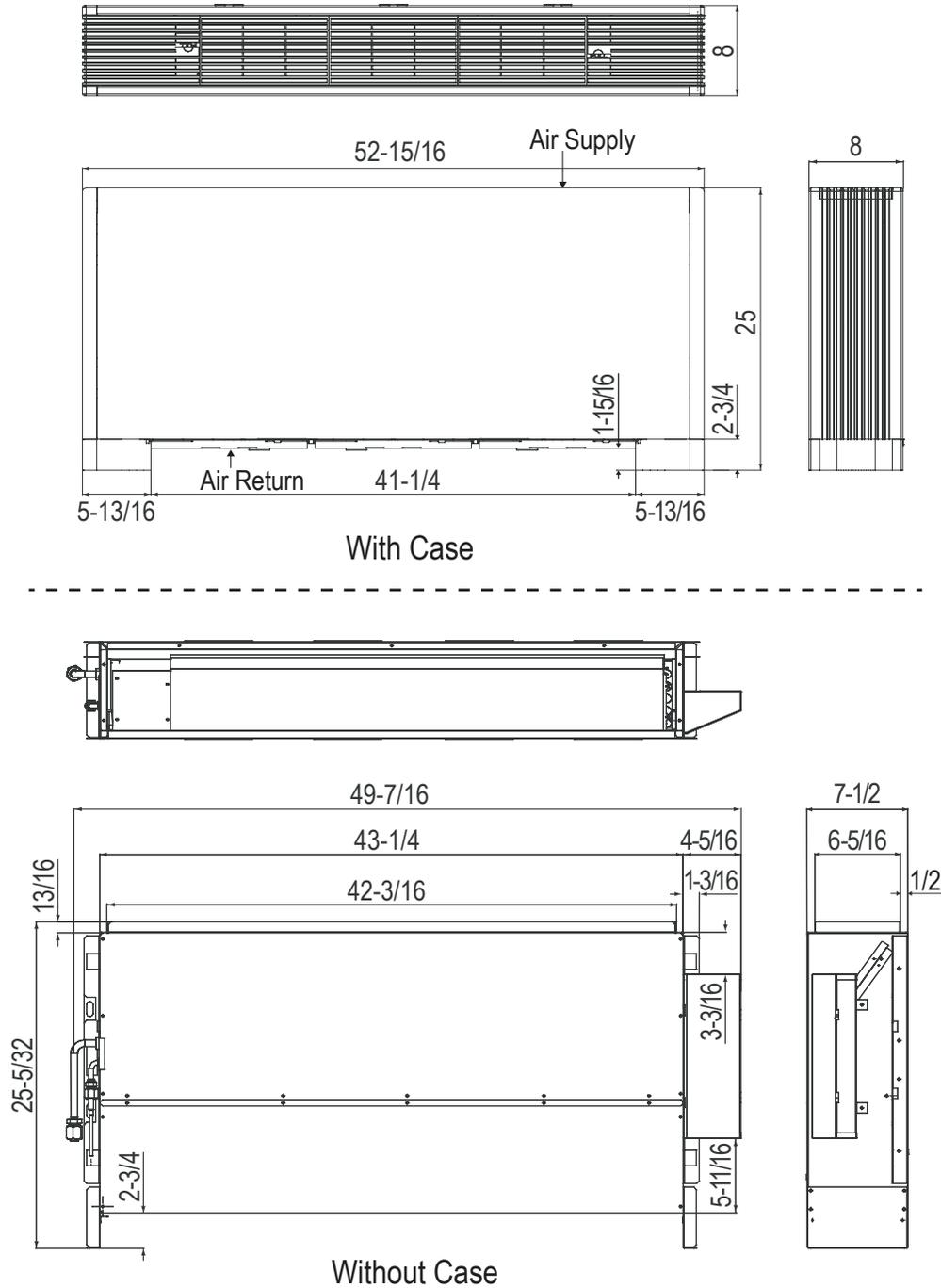
Figure 3: ARNU073~153CEA4, ARNU073~153CEU4 Dimensions.



Unit: inches
 Note: All measurements have a tolerance of $\pm 1/4$ in.

Model	W	H	D
ARNU073CEA4	42	25	8
ARNU093CEA4			
ARNU123CEA4			
ARNU153CEA4			
ARNU073CEU4	38-1/2	25-3/16	7-15/16
ARNU093CEU4			
ARNU123CEU4			
ARNU153CEU4			

Figure 4: ARNU183-243CFA4, ARNU183-243CFU4 Dimensions.



Unit: inches

Note: All measurements have a tolerance of $\pm 1/4$ in.

Model	W	H	D
ARNU183CFA4 ARNU243CFA4	52-15/16	25	8
ARNU183CFU4 ARNU243CFU4	49-7/16	25-3/16	7-1/2

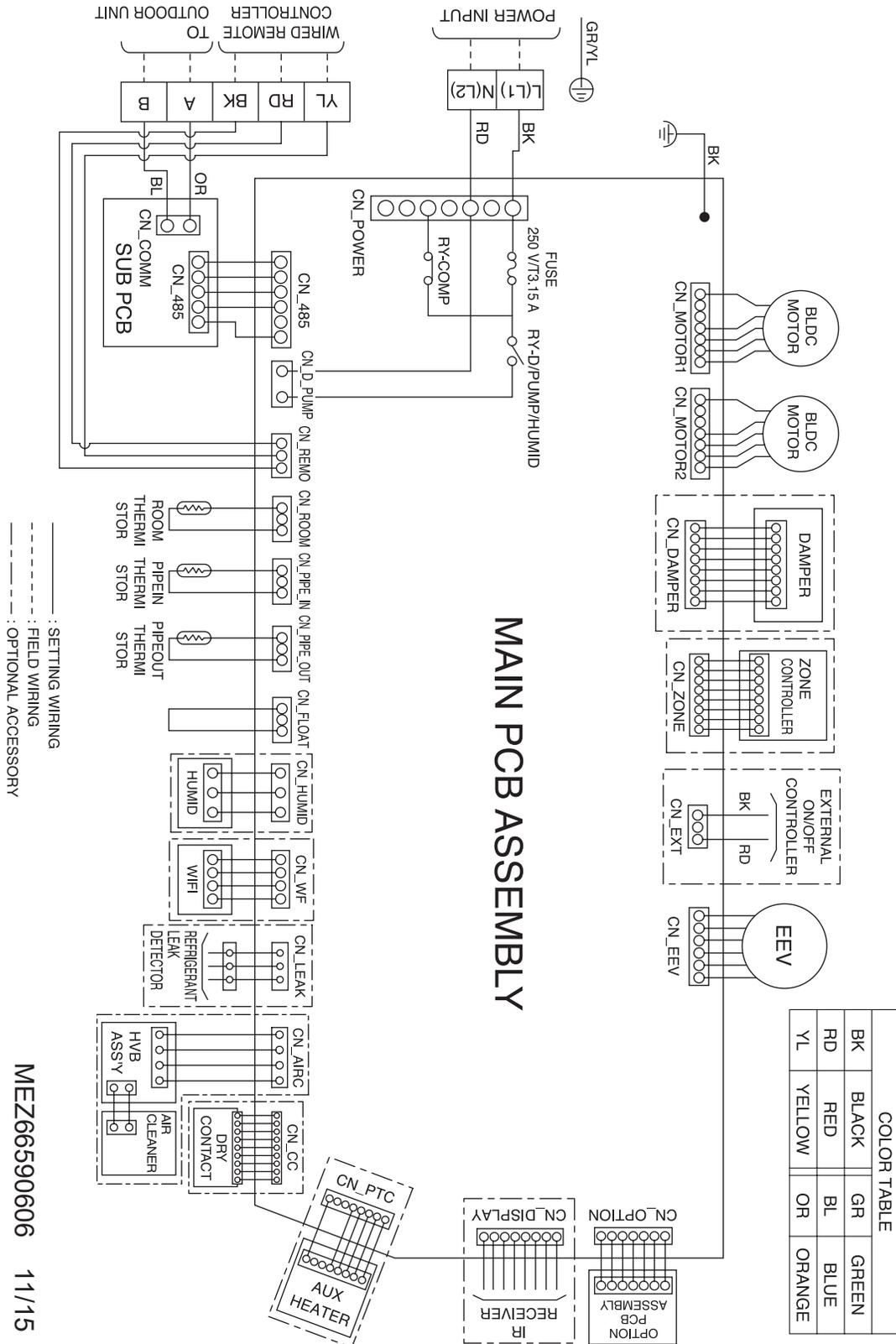
PRODUCT DATA



Electrical Wiring Diagram

CEA and CFA Cased, CEU and CFU Uncased Units

Figure 5: ARNU073~153CEA4, ARNU183-243CFA4, ARNU073~153CEU4, ARNU183-243CFU4 Wiring Diagram.



Electrical Wiring Diagram CEA and CFA Cased, CEU and CFU Uncased Units

Table 4: CEA and CFA Cased, CEU and CFU Uncased Indoor Unit Wiring Diagram Legend.

Terminal	Purpose	Function
CN-POWER	AC Power supply	AC Power line
CN-MOTOR1	Fan motor output	Motor output of BLDC
CN-MOTOR2	Fan motor output	Motor output of BLDC
CN-DAMPER	N / A	N / A
CN-ZONE	Zone controller	Zone controller connection
CN-EXT	External on / off controller	External on / off Controller connection
CN-EEV	EEV Output	EEV control output
CN-OPTION	Optional PCB EEPROM	Option PCB connection
CN-DISPLAY	Display	Display of indoor status
CN-PTC	Auxiliary heater	Connection for Auxiliary Heater
CN-CC	Dry contact	Dry Contact connection
CN-AIRC	N / A	N / A
CN-LEAK	Refrigerant leak detector	Refrigerant leak detector connection
CN-WF	Wi-Fi	Wi-Fi Module connection
CN-HUMID	N / A	N / A
CN-FLOAT	Float switch input	Float switch sensing
CN-PIPE/OUT	Discharge pipe sensor	Pipe out thermistor
CN-PIPE/IN	Suction pipe sensor	Pipe in thermistor
CN-ROOM	Room sensor	Room air thermistor
CN-REMO	Wired remote controller	Wired remote control connection
CN-D/PUMP	Drain pump output	AC output for drain pump
CN-485	Communication	Connection between indoor and outdoor units

Table 5: CEA and CFA Cased, CEU and CFU Uncased Indoor Unit DIP Switch Settings.

DIP Switch Setting		Off	On	Remarks
SW3	GROUP CONTROL	Master	Slave	Group control setting using 7-Day Programmable Controller; selects Master / Slave on each indoor unit
SW4	DRY CONTACT MODE	Variable	Auto	Sets operation mode for optional Dry Contact accessory 1. Variable: Auto or Manual Mode can be set through 7-Day Programmable Controller or Wireless Remote Controller (factory default setting is Auto if there is no setting) 2. Auto: For Dry Contact, it is always Auto mode
SW5	CONTINUOUS FAN	Off	On	Selects continuous fan for floor standing indoor units. 1. On: Indoor unit fan will always operate at a set fan speed, except when the system is off, or the outdoor unit is in defrost mode (when the outdoor unit is in defrost mode, the fan will operate at super low fan speed) 2. Off: Indoor unit fan speed can be changed by on / off

***For Gen 4 Multi V floor standing indoor units, DIP switches 1, 2, 6 through 8 must be set to OFF. These DIP switches are used for other models.**

****To enable Generation 4 features, outdoor unit DIP Switch No. 3 must be set to ON. Please refer to the Multi V IV, Multi V Water IV, Multi V S Engineering Manual for additional information.**

PRODUCT DATA



Refrigerant Flow Diagram

CEA and CFA Cased, CEU and CFU Uncased Units

Figure 6: CEA and CFA Cased, CEU and CFU Uncased Indoor Unit Refrigerant Flow Diagram.

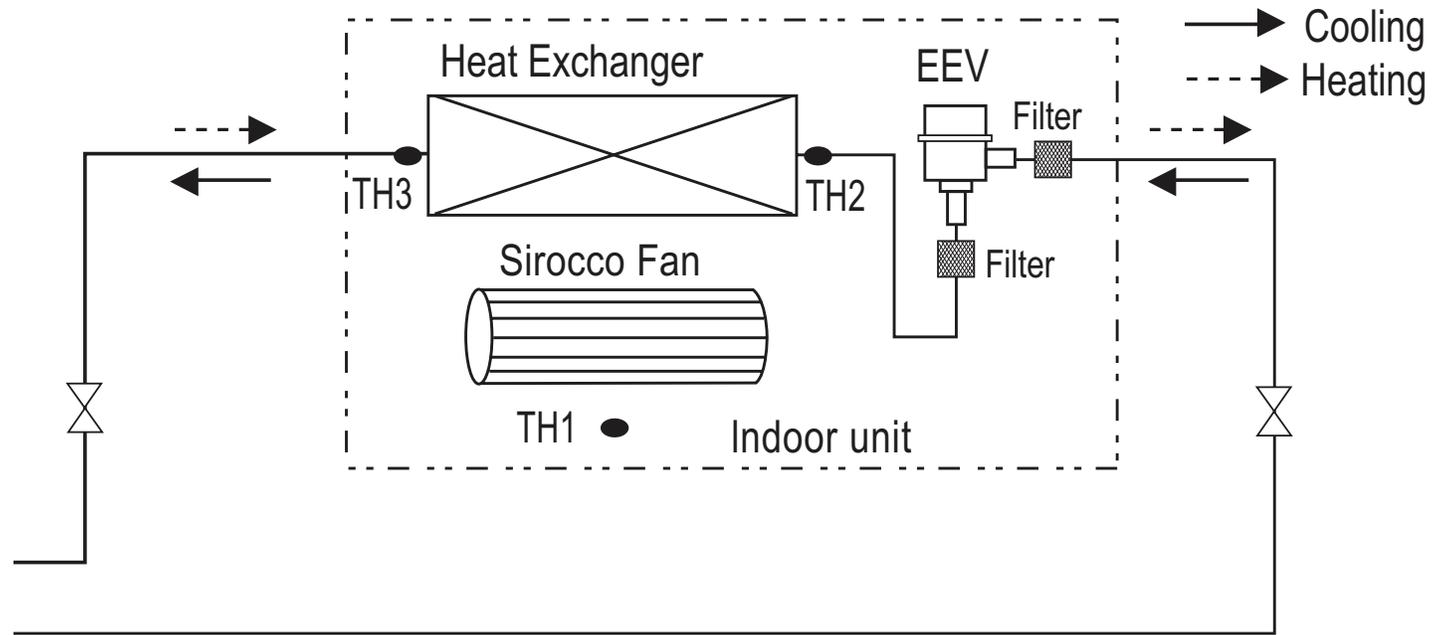


Table 6: CEA and CFA Cased, CEU and CFU Uncased Indoor Unit Refrigerant Pipe Connection Port Diameters.

Model	Liquid (inch)	Vapor (inch)
<i>CEA / CFA (Cased) Units</i>		
ARNU073CEA4	1/4 Flare	1/2 Flare
ARNU093CEA4		
ARNU123CEA4		
ARNU153CEA4		
ARNU183CFA4		
ARNU243CFA4	3/8 Flare	5/8 Flare
<i>CEU / CFU (Uncased) Units</i>		
ARNU073CEU4	1/4 Flare	1/2 Flare
ARNU093CEU4		
ARNU123CEU4		
ARNU153CEU4		
ARNU183CFU4		
ARNU243CFU4	3/8 Flare	5/8 Flare

Table 7: CEA and CFA Cased, CEU and CFU Uncased Indoor Unit Thermistors.

Thermistor	Description
TH1	Return air thermistor
TH2	Pipe in thermistor
TH3	Pipe out thermistor

External Static Pressure and Air Flow Chart
CEU, CFU Uncased Units

Figure 7: CEU Uncased Unit External Static Pressure and Air Flow Chart.

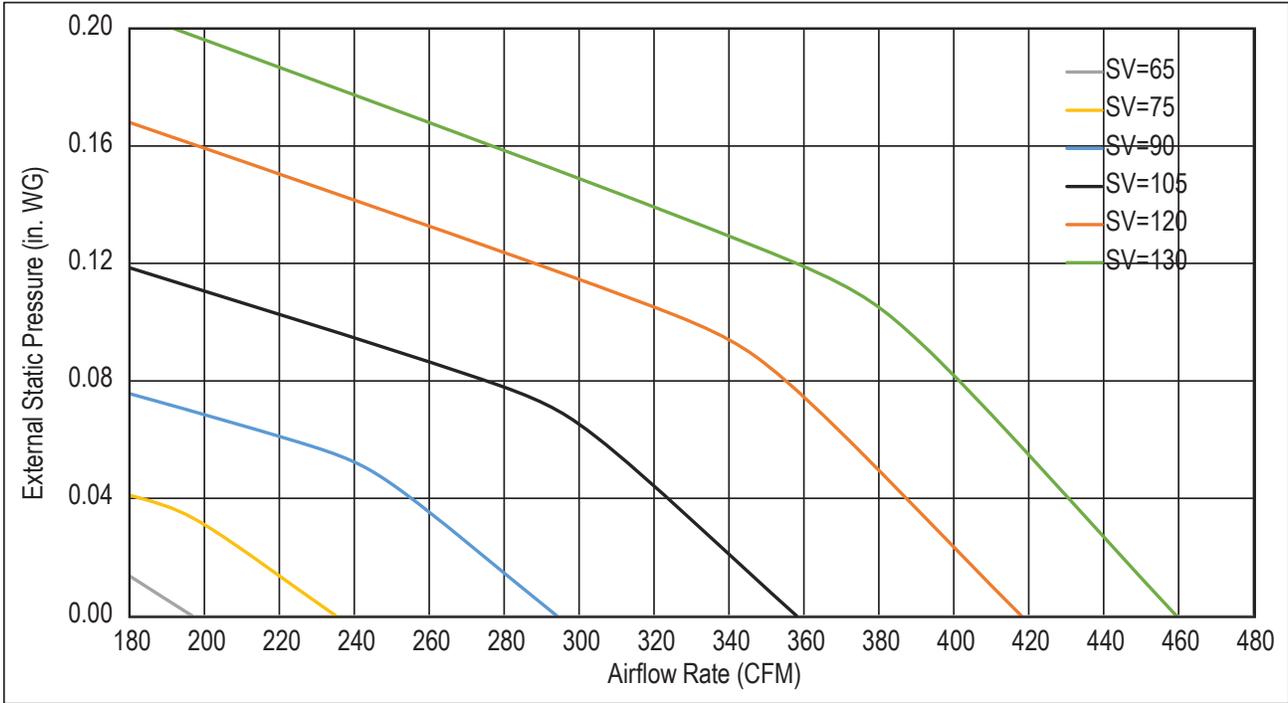
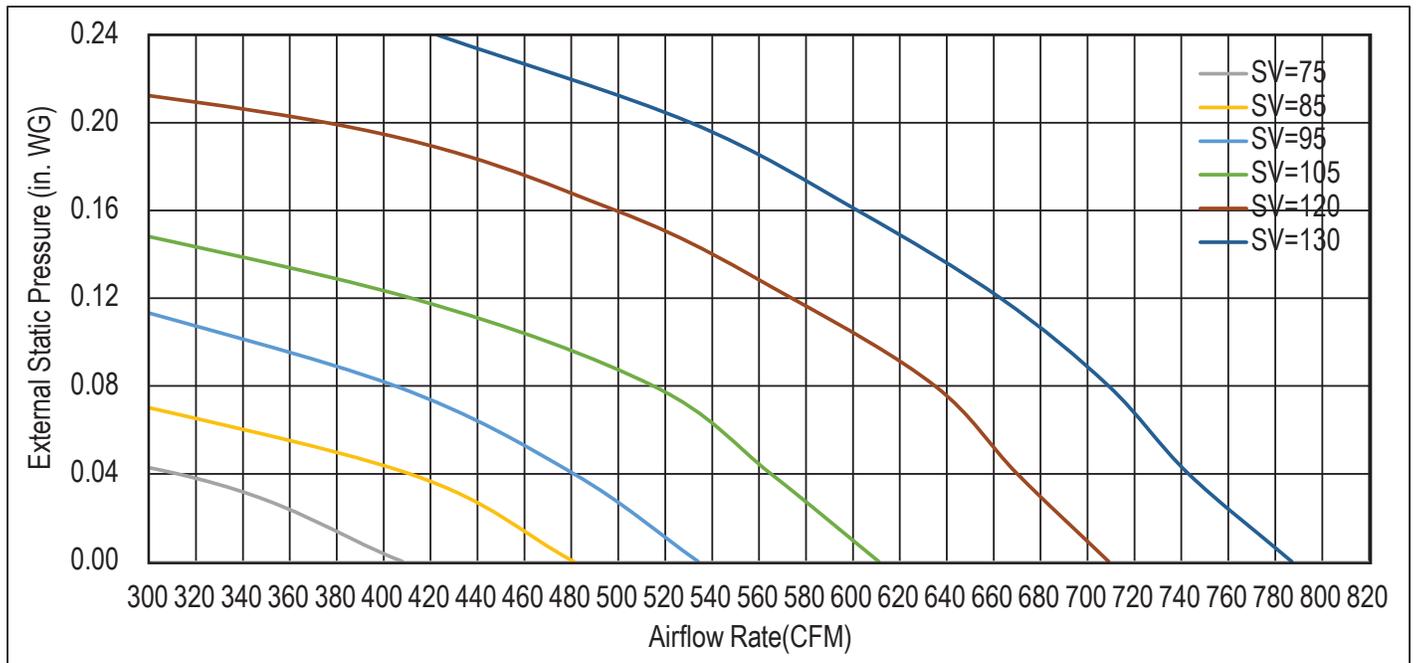


Figure 8: CFU Uncased Unit External Static Pressure and Air Flow Chart.



1. All static pressure air flow rates are listed in CFM.
2. The charts above show the correlation between air flow rates and external static pressure.
3. The charts above show the available external static pressure range.

Note:

If the external static pressure of the installed indoor unit is less than the lowest value (as mentioned in the table), the indoor unit components can fail.

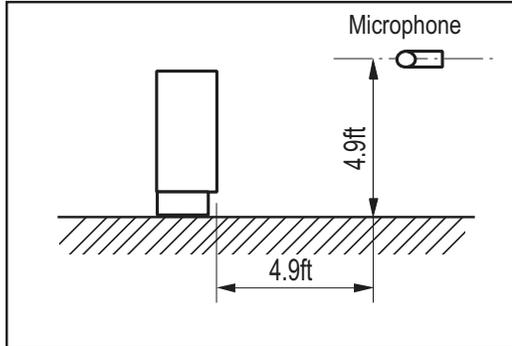
PRODUCT DATA



Acoustic Data

Sound Pressure Levels

Figure 9: Sound Pressure Measurement Location.



- Measurements are taken 4.9 ft away from the front of the unit.
 - Sound pressure levels are measured in dB(A) with a tolerance of ± 3 .
 - Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745.
- Operating Conditions:
- Power source: 220V/60 Hz
 - Sound level will vary depending on a range of factors including the construction (acoustic absorption coefficient) of a particular room in which the unit was installed.

Table 8: Floor Standing Sound Indoor Unit Pressure Levels.

Model	Sound Pressure Levels dB(A)		
	High Fan Speed	Medium Fan Speed	Low Fan Speed
<i>CEA, CFA (Cased) Units</i>			
ARNU073CEA4	35	33	31
ARNU093CEA4	36	34	32
ARNU123CEA4	37	35	33
ARNU153CEA4	38	37	35
ARNU183CFA4	40	37	34
ARNU243CFA4	43	40	37
<i>CEU, CFU (Uncased) Units</i>			
ARNU073CEU4	35	33	31
ARNU093CEU4	36	34	32
ARNU123CEU4	37	35	33
ARNU153CEU4	38	37	35
ARNU183CFU4	40	37	34
ARNU243CFU4	43	40	37

Figure 10: ARNU073CEA4 / CEU4, ARNU093CEA4 / CEU4, and ARNU123CEA4 / CEU4 Sound Pressure Level Diagrams.

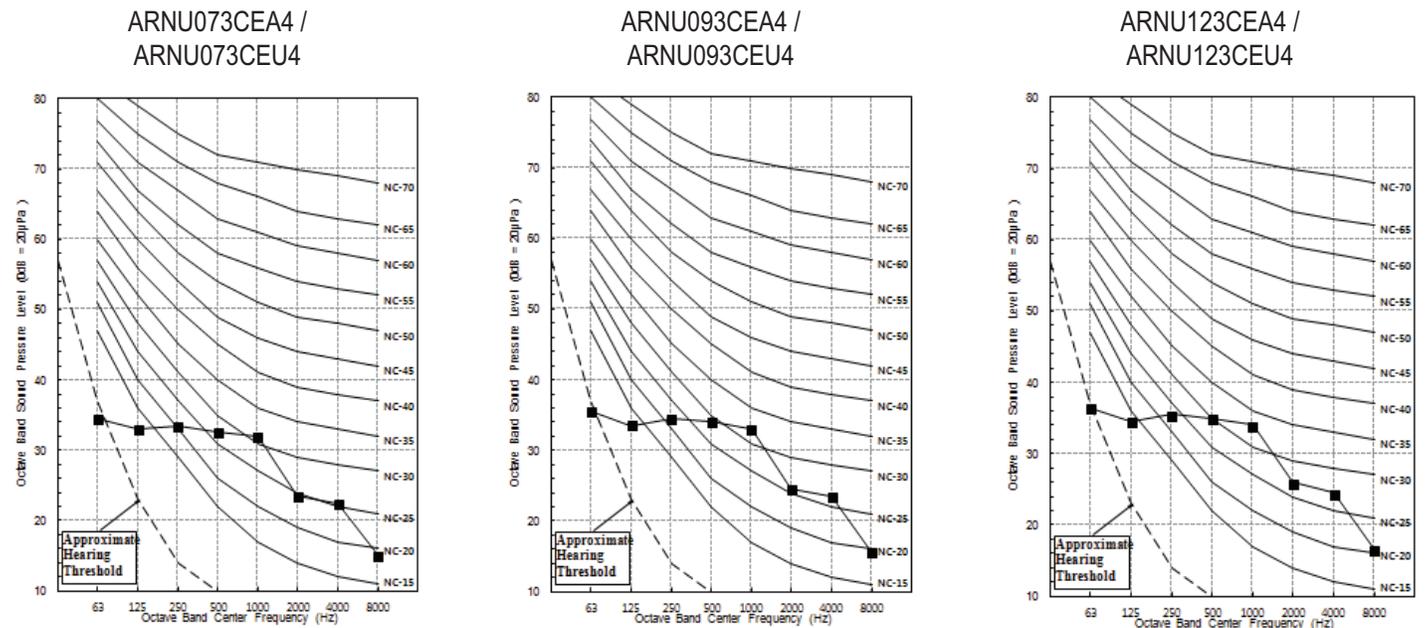
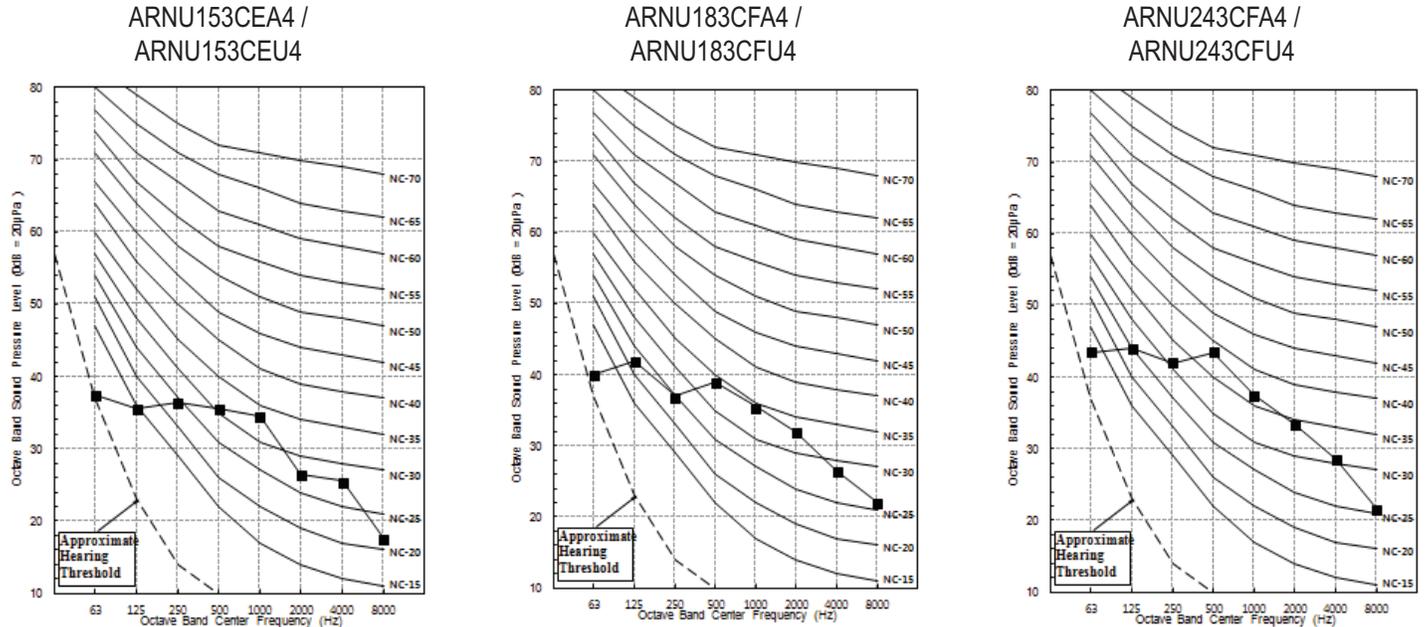


Figure 11: ARNU153CEA4 / CEU4, ARNU183CFA4 / CFU4, and ARNU243CFA4 / CFU4 Sound Pressure Level Diagrams.



Sound Power Levels

Table 9: Floor Standing Indoor Unit Sound Power Levels.

Model	Sound Power Levels dB(A)
<i>CEA / CFA (Cased) Units</i>	
ARNU073CEA4	54
ARNU093CEA4	55
ARNU123CEA4	57
ARNU153CEA4	59
ARNU183CFA4	60
ARNU243CFA4	61
<i>CEU / CFU (Uncased) Units</i>	
ARNU073CEU4	54
ARNU093CEU4	55
ARNU123CEU4	57
ARNU153CEU4	59
ARNU183CFU4	60
ARNU243CFU4	61

- 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 room per ISO 3741 standards.
- 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

Acoustic Data

Sound Power Levels

Figure 12: ARNU073CEA4 / CEU4, ARNU093CEA4 / CEU4, and ARNU123CEA4 / CEU4 Sound Power Level Diagrams.

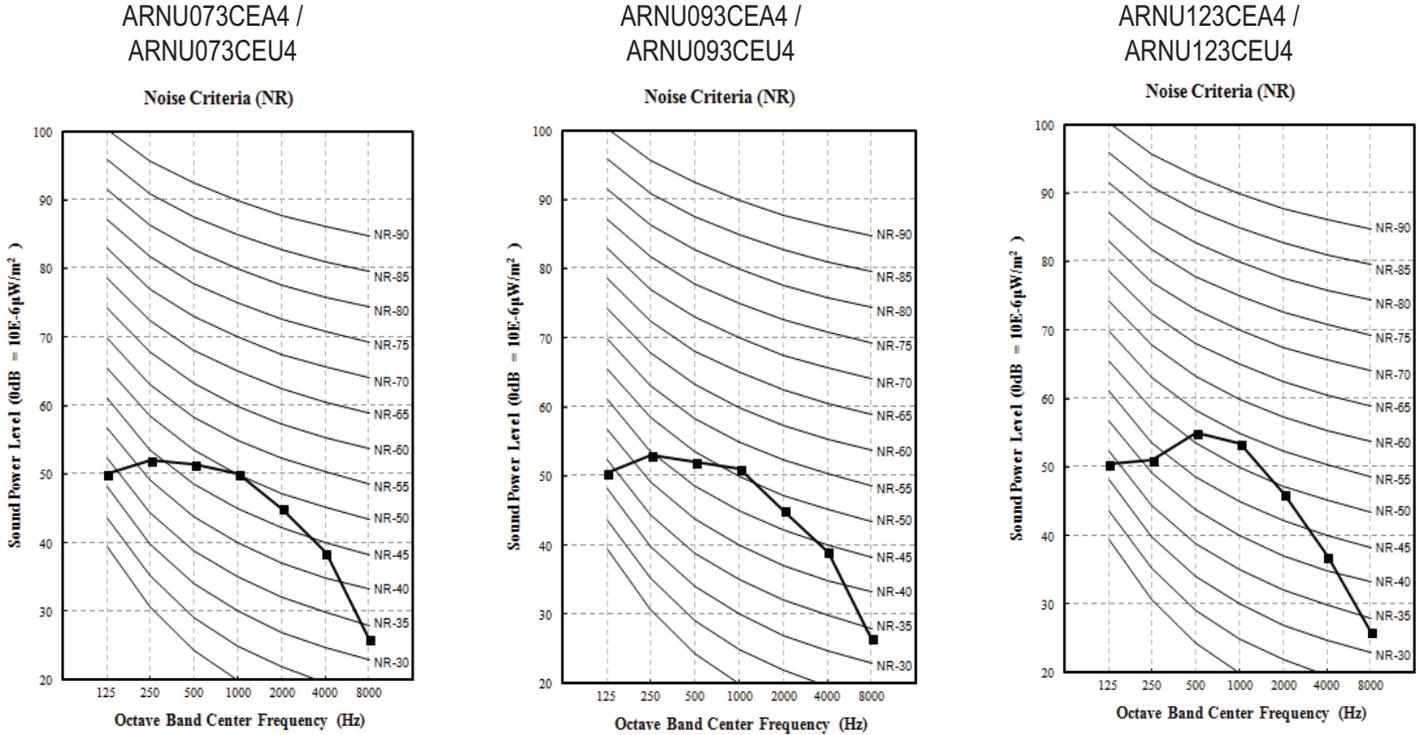
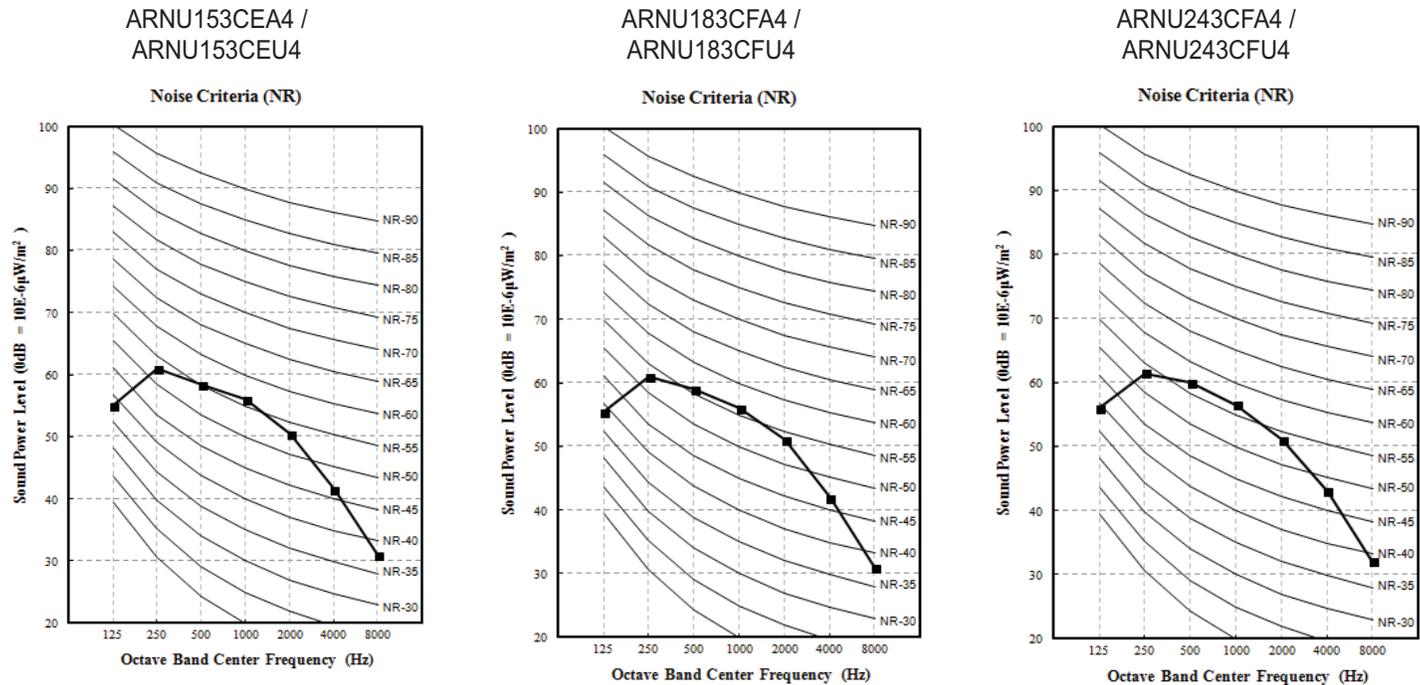


Figure 13: ARNU153CEA4 / CEU4, ARNU183CFA4 / CFU4, and ARNU243CFA4 / CFU4 Sound Pressure Level Diagrams.



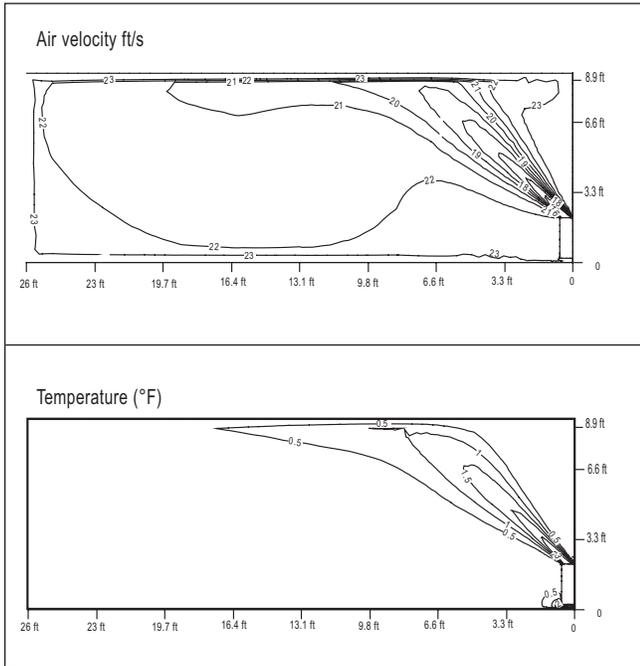
Air Velocity / Temperature Distribution

ARNU073CEA4 / CEU4, ARNU093CEA4 / CEU4

Figure 14: ARNU073CEA4 / ARNU073CEU4.

Cooling

Discharge angle: 45°



Heating

Discharge angle: 60°

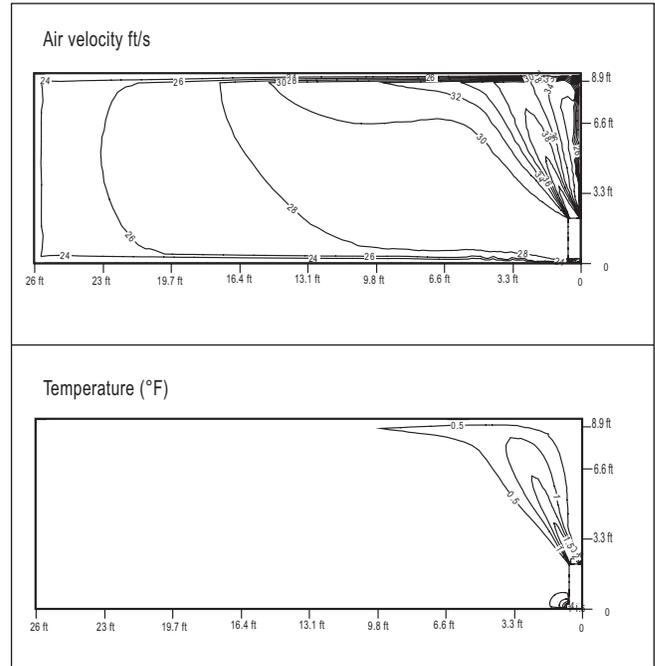
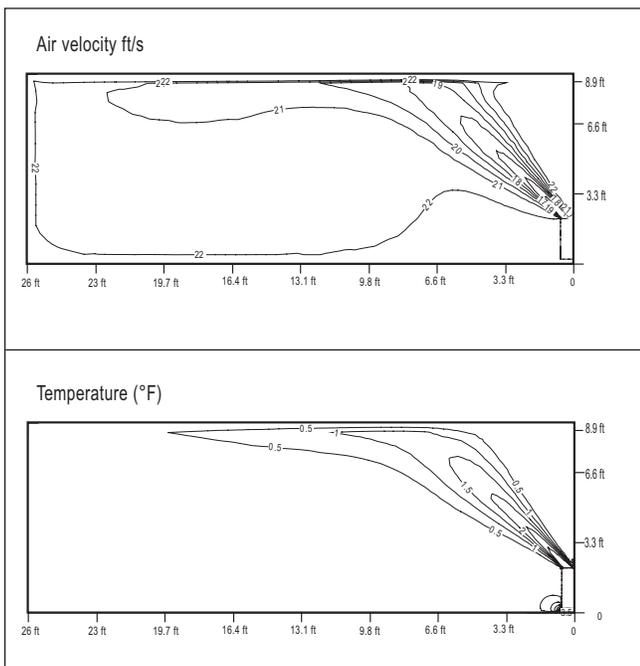


Figure 15: ARNU093CEA4 / ARNU093CEU4.

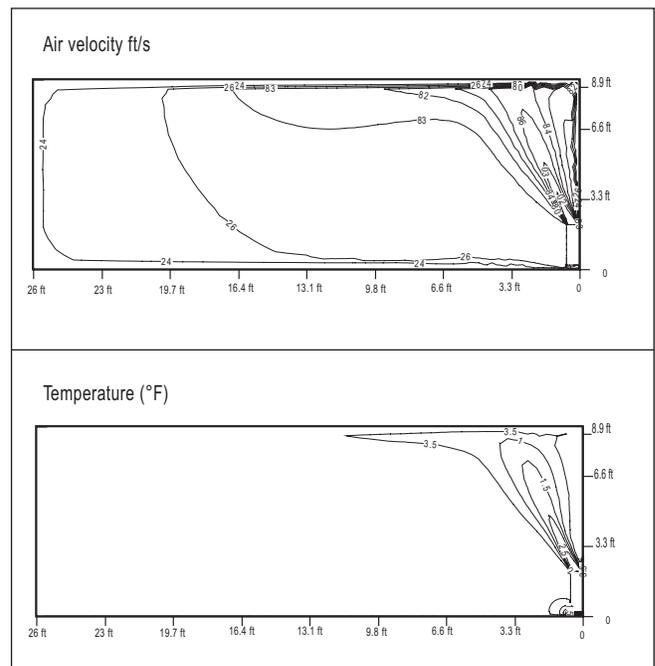
Cooling

Discharge angle: 45°



Heating

Discharge angle: 60°



PRODUCT DATA



Air Velocity / Temperature Distribution

ARNU123CEA4 / CEU4, ARNU153CEA4 / CEU4

Figure 16: ARNU123CEA4 / ARNU123CEU4.

Cooling

Discharge angle: 45°

Heating

Discharge angle: 60°

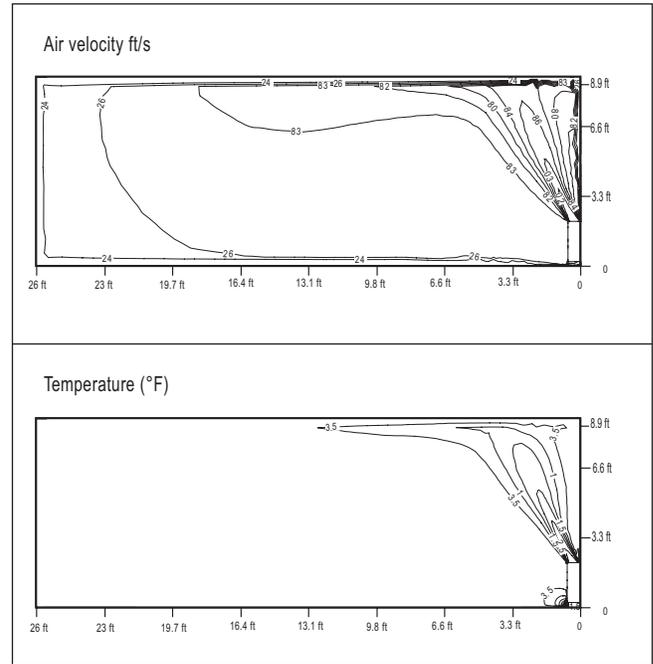
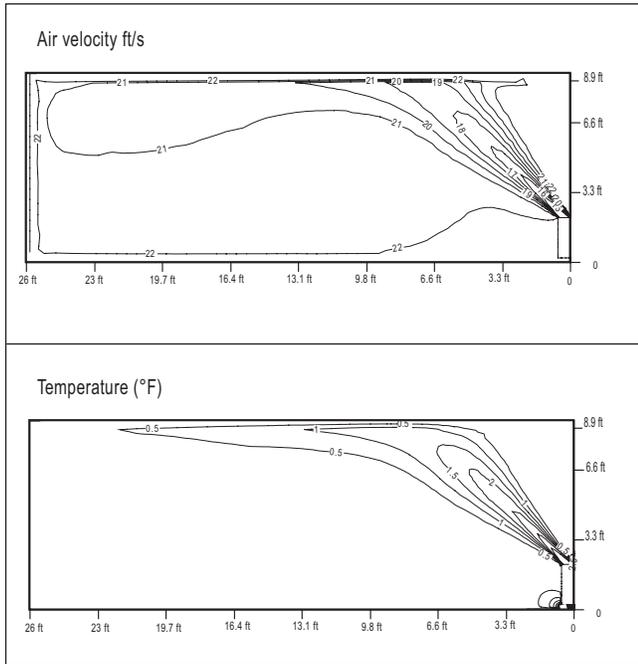


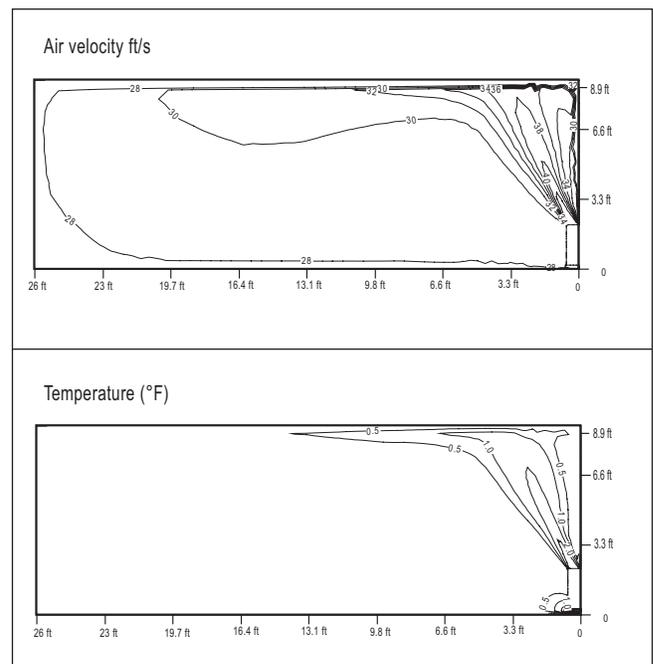
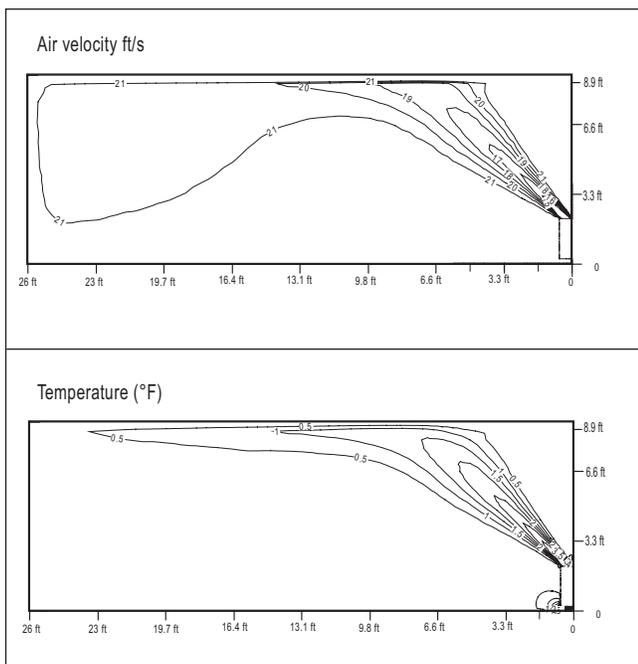
Figure 17: ARNU153CEA4 / ARNU153CEU4.

Cooling

Discharge angle: 45°

Heating

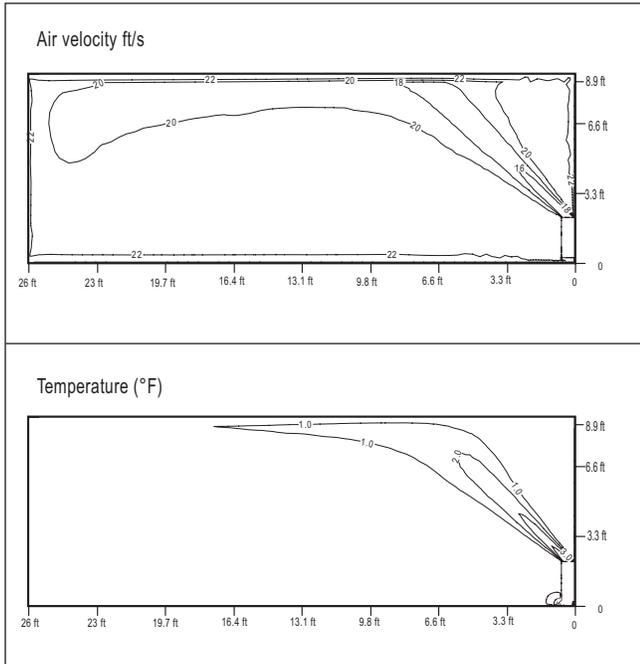
Discharge angle: 60°



Air Velocity / Temperature Distribution
 ARNU183CFA4 / CFU4, ARNU243CFA4 / CFU4

Figure 18: ARNU183CFA4 / ARNU183CFU4.

Cooling
 Discharge angle: 45°



Heating
 Discharge angle: 60°

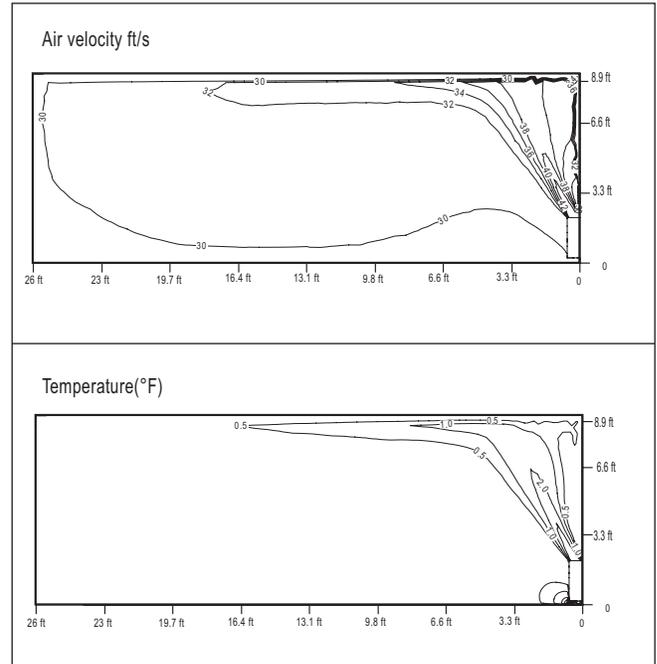
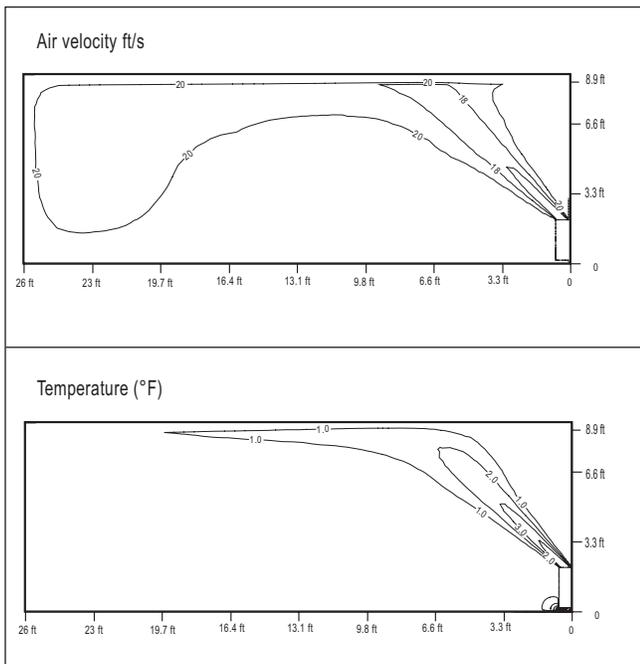
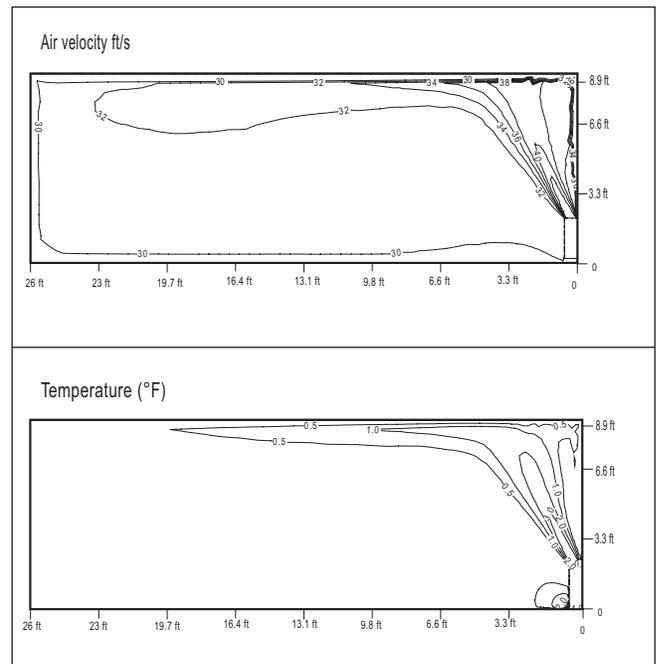


Figure 19: ARNU243CFA4 / ARNU243CFU4.

Cooling
 Discharge angle: 45°



Heating
 Discharge angle: 60°



PRODUCT DATA



Cooling Capacity Tables

ARNU073CEA4 / ARNU073CEU4

Table 10: ARNU073CEA4 / ARNU073CEU4 Cooling Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / WB)													
		68 / 57		73 / 61		79 / 64		80 / 67		85 / 70		88 / 73		91 / 76	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
		MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	
ARNU073CEA4 - ARNU073CEU4 / 7.5	-9.9	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	-5	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	0	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	5	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	10	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	14	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	20	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	23	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	25	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	30	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	35	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	40	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	45	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	50	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	55	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.7	5.7
	60	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.6	5.7
	65	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.4	5.6
	70	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.3	5.5
	75	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.9	5.7	9.1	5.4
	80	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.4	5.8	8.7	5.7	8.8	5.4
85	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.3	5.7	8.4	5.5	8.6	5.2	
90	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.2	5.6	8.3	5.4	8.4	5.1	
95	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	8.0	5.6	8.2	5.3	8.3	5.0	
100	4.9	4.1	6.0	4.8	6.8	5.1	7.5	5.4	7.9	5.5	8.0	5.3	8.2	5.0	
105	4.9	4.1	5.7	4.5	6.4	4.9	7.2	5.2	7.5	5.2	7.7	5.1	7.9	4.9	
110	4.8	4.0	5.4	4.3	6.0	4.5	6.8	4.9	7.1	4.9	7.3	4.9	7.7	4.7	
115	4.7	3.9	5.1	4.1	5.6	4.2	6.3	4.6	6.6	4.6	7.0	4.6	7.4	4.5	
118	4.6	3.8	4.9	3.9	5.4	4.0	6.1	4.4	6.3	4.4	6.7	4.4	7.1	4.4	
122	4.5	3.7	4.6	3.7	5.1	3.8	5.8	4.2	6.0	4.2	6.3	4.2	6.8	4.2	

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
 Cooling range with the Low Ambient Baffle Kit (sold separately) installed on the outdoor unit(s) is -9.9°F to +122°F and is achieved only when all indoor units are operating in cooling mode. Does not impact heat recovery system synchronous operating range.
 The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.
 For outdoor unit performance data, see the respective outdoor unit performance data manuals on <https://lghvac.com/commercial>.

Note:

Low ambient performance with LGRED° heat technology is included in Multi V 5 Air-Source Units produced after February 2019.



Table 11: ARNU093CEA4 / ARNU093CEU Cooling Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / WB)													
		68 / 57		73 / 61		79 / 64		80 / 67		85 / 70		88 / 73		91 / 76	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
		MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	
ARNU093CEA4 - ARNU093CEU4 / 9.6	-9.9	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	-5	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	0	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	5	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	10	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	14	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	20	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	23	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	25	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	30	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	35	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	40	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	45	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	50	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	55	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.4	7.3
	60	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.3	7.3
	65	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	12.1	7.2
	70	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	11.9	7.1
	75	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.4	7.3	11.6	6.9
	80	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.8	7.4	11.1	7.3	11.3	6.9
85	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.6	7.3	10.8	7.0	11.0	6.6	
90	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.5	7.2	10.6	6.9	10.8	6.5	
95	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.3	7.2	10.5	6.8	10.6	6.4	
100	6.3	5.3	7.7	6.1	8.6	6.5	9.6	6.9	10.1	7.1	10.3	6.7	10.5	6.4	
105	6.3	5.3	7.3	5.8	8.2	6.2	9.2	6.6	9.6	6.6	9.9	6.5	10.2	6.2	
110	6.2	5.1	6.9	5.5	7.7	5.8	8.6	6.2	9.0	6.2	9.4	6.2	9.8	6.0	
115	6.0	5.0	6.6	5.2	7.2	5.4	8.1	5.9	8.5	5.9	8.9	5.9	9.4	5.8	
118	5.9	4.8	6.2	4.9	6.9	5.1	7.8	5.6	8.1	5.6	8.5	5.6	9.0	5.6	
122	5.7	4.7	5.9	4.7	6.5	4.8	7.4	5.3	7.7	5.3	8.1	5.3	8.7	5.3	

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
 Cooling range with the Low Ambient Baffle Kit (sold separately) installed on the outdoor unit(s) is -9.9°F to +122°F and is achieved only when all indoor units are operating in cooling mode. Does not impact heat recovery system synchronous operating range.
 The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.
 For outdoor unit performance data, see the respective outdoor unit performance data manuals on <https://lghvac.com/commercial>.

Note:

Low ambient performance with LGRED° heat technology is included in Multi V 5 Air-Source Units produced after February 2019.

PRODUCT DATA



Cooling Capacity Tables

ARNU123CEA4 / ARNU123CEU4

Table 12: ARNU123CEA4 / ARNU123CEU4 Cooling Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / WB)													
		68 / 57		73 / 61		79 / 64		80 / 67		85 / 70		88 / 73		91 / 76	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
ARNU123CEA4 - ARNU123CEU4 / 12.3	-9.9	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	-5	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	0	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	5	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	10	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	14	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	20	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	23	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	25	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	30	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	35	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	40	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	45	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	50	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	55	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.9	9.5
	60	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.7	9.4
	65	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.5	9.3
	70	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	15.3	9.1
	75	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.7	9.5	14.9	8.9
	80	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.8	9.6	14.2	9.4	14.5	8.9
85	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.6	9.5	13.8	9.0	14.0	8.5	
90	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.4	9.3	13.5	8.9	13.8	8.4	
95	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	13.2	9.3	13.4	8.8	13.6	8.3	
100	8.1	6.8	9.8	7.9	11.1	8.4	12.3	8.9	12.9	9.1	13.2	8.7	13.4	8.3	
105	8.1	6.8	9.3	7.5	10.6	8.0	11.8	8.5	12.3	8.5	12.7	8.4	13.0	8.1	
110	7.9	6.6	8.9	7.1	9.8	7.5	11.1	8.0	11.6	8.0	12.0	8.0	12.6	7.8	
115	7.7	6.4	8.4	6.7	9.2	7.0	10.4	7.6	10.9	7.6	11.4	7.6	12.1	7.5	
118	7.5	6.2	8.0	6.4	8.8	6.6	10.0	7.2	10.4	7.2	10.9	7.2	11.6	7.2	
122	7.3	6.0	7.6	6.0	8.3	6.2	9.4	6.9	9.8	6.9	10.3	6.9	11.1	6.9	

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
 Cooling range with the Low Ambient Baffle Kit (sold separately) installed on the outdoor unit(s) is -9.9°F to +122°F and is achieved only when all indoor units are operating in cooling mode. Does not impact heat recovery system synchronous operating range.
 The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.
 For outdoor unit performance data, see the respective outdoor unit performance data manuals on <https://lghvac.com/commercial>.

Note:

Low ambient performance with LGRED° heat technology is included in Multi V 5 Air-Source Units produced after February 2019.



Table 13: ARNU153CEA4 / ARNU153CEU4 Cooling Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / WB)													
		68 / 57		73 / 61		79 / 64		80 / 67		85 / 70		88 / 73		91 / 76	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
		MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh
ARNU153CEA4 - ARNU153CEU4 / 15.4	-9.9	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	-5	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	0	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	5	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	10	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	14	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	20	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	23	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	25	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	30	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	35	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	40	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	45	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	50	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	55	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.9	11.8
	60	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.7	11.7
	65	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.4	11.5
	70	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	19.1	11.4
	75	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	18.4	11.8	18.6	11.1
	80	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.3	11.9	17.8	11.7	18.2	11.0
85	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	17.1	11.8	17.3	11.2	17.6	10.6	
90	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	16.8	11.6	16.9	11.0	17.3	10.5	
95	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	16.5	11.5	16.8	11.0	17.1	10.4	
100	10.1	8.5	12.3	9.8	13.9	10.4	15.4	11.1	16.2	11.4	16.5	10.9	16.8	10.3	
105	10.1	8.5	11.7	9.3	13.2	10.0	14.8	10.6	15.4	10.6	15.8	10.5	16.3	10.0	
110	9.9	8.2	11.1	8.8	12.3	9.3	13.9	10.0	14.5	10.0	15.1	10.0	15.7	9.7	
115	9.6	8.0	10.5	8.3	11.6	8.7	13.0	9.5	13.6	9.5	14.3	9.5	15.1	9.3	
118	9.4	7.8	10.0	7.9	11.0	8.2	12.5	9.0	13.0	9.0	13.7	9.0	14.5	9.0	
122	9.1	7.5	9.5	7.5	10.4	7.7	11.8	8.5	12.3	8.5	12.9	8.5	13.9	8.5	

Product Data

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
 Cooling range with the Low Ambient Baffle Kit (sold separately) installed on the outdoor unit(s) is -9.9°F to +122°F and is achieved only when all indoor units are operating in cooling mode. Does not impact heat recovery system synchronous operating range.
 The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.
 For outdoor unit performance data, see the respective outdoor unit performance data manuals on <https://lghvac.com/commercial>.

Note:

Low ambient performance with LGRED° heat technology is included in Multi V 5 Air-Source Units produced after February 2019.

PRODUCT DATA



Cooling Capacity Tables

ARNU183CFA4 / ARNU183CFU4

Table 14: ARNU183CFA4 / ARNU183CFU4 Cooling Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / WB)													
		68 / 57		73 / 61		79 / 64		80 / 67		85 / 70		88 / 73		91 / 76	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
ARNU183CEA4 - ARNU183CEU4 / 19.1	-9.9	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	-5	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	0	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	5	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	10	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	14	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	20	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	23	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	25	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	30	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	35	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	40	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	45	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	50	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	55	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.7	14.4
	60	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.4	14.4
	65	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	24.0	14.1
	70	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	23.7	13.9
	75	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.8	14.4	23.1	13.6
	80	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.4	14.6	22.1	14.4	22.5	13.5
85	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	21.2	14.4	21.4	13.8	21.8	13.0	
90	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	20.9	14.2	21.0	13.5	21.4	12.8	
95	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	20.5	14.1	20.9	13.5	21.2	12.7	
100	12.6	10.4	15.3	12.0	17.2	12.8	19.1	13.6	20.1	13.9	20.5	13.3	20.9	12.6	
105	12.6	10.4	14.5	11.4	16.4	12.2	18.3	13.0	19.0	13.0	19.7	12.8	20.2	12.3	
110	12.3	10.1	13.8	10.8	15.3	11.4	17.2	12.2	18.0	12.2	18.7	12.2	19.5	11.9	
115	12.0	9.8	13.1	10.2	14.4	10.7	16.2	11.6	16.9	11.6	17.8	11.6	18.7	11.4	
118	11.7	9.5	12.4	9.7	13.6	10.1	15.5	11.0	16.1	11.0	17.0	11.0	18.0	11.0	
122	11.3	9.2	11.8	9.2	12.9	9.5	14.7	10.5	15.3	10.5	16.0	10.5	17.2	10.5	

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
 Cooling range with the Low Ambient Baffle Kit (sold separately) installed on the outdoor unit(s) is -9.9°F to +122°F and is achieved only when all indoor units are operating in cooling mode. Does not impact heat recovery system synchronous operating range.
 The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.
 For outdoor unit performance data, see the respective outdoor unit performance data manuals on <https://lghvac.com/commercial>.

Note:

Low ambient performance with LGRED° heat technology is included in Multi V 5 Air-Source Units produced after February 2019.



Table 15: ARNU243CFA4 / ARNU243CFU4 Cooling Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp. (°F DB)	Indoor Air Temperature (°F DB / WB)													
		68 / 57		73 / 61		79 / 64		80 / 67		85 / 70		88 / 73		91 / 76	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
		MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh
ARNU243CEA4 - ARNU243CEU4 / 24.2	-9.9	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	-5	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	0	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	5	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	10	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	14	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	20	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	23	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	25	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	30	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	35	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	40	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	45	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	50	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	55	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.3	18.3
	60	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	31.0	18.2
	65	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	30.5	17.9
	70	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	30.0	17.6
	75	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.8	18.3	29.2	17.2
	80	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	27.1	18.5	28.0	18.2	28.5	17.1
85	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	26.8	18.3	27.1	17.4	27.6	16.4	
90	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	26.4	18.0	26.6	17.1	27.1	16.2	
95	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	25.9	17.9	26.4	17.0	26.8	16.0	
100	15.9	13.1	19.4	15.2	21.8	16.1	24.2	17.2	25.4	17.6	25.9	16.8	26.4	15.9	
105	15.9	13.1	18.4	14.4	20.8	15.5	23.2	16.4	24.1	16.4	24.9	16.2	25.6	15.6	
110	15.5	12.8	17.4	13.6	19.4	14.4	21.8	15.5	22.8	15.5	23.7	15.5	24.7	15.1	
115	15.1	12.4	16.6	12.9	18.2	13.5	20.5	14.7	21.4	14.7	22.5	14.7	23.7	14.5	
118	14.8	12.0	15.7	12.3	17.3	12.7	19.7	14.0	20.4	14.0	21.5	14.0	22.8	13.9	
122	14.4	11.6	15.0	11.7	16.3	12.0	18.6	13.2	19.4	13.2	20.3	13.2	21.9	13.2	

Product Data

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
 Cooling range with the Low Ambient Baffle Kit (sold separately) installed on the outdoor unit(s) is -9.9°F to +122°F and is achieved only when all indoor units are operating in cooling mode. Does not impact heat recovery system synchronous operating range.
 The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.
 For outdoor unit performance data, see the respective outdoor unit performance data manuals on <https://lghvac.com/commercial>.

Note:

Low ambient performance with LGRED® heat technology is included in Multi V 5 Air-Source Units produced after February 2019.

PRODUCT DATA



Heating Capacity Tables

ARNU073CEA4 / ARNU073CEU4, ARNU093CEA4 / ARNU093CEU4

Table 16: ARNU073CEA4 / ARNU073CEU4, ARNU093CEA4 / ARNU093CEU4 Heating Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp.		Indoor Air Temperature (°F DB)							
	°F DB	°F WB	59	61	64	67	70	73	76	80
			TC	TC	TC	TC	TC	TC	TC	TC
			MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh
ARNU073CEA4 - ARNU073CEU4 / 7.5	-21.6	-22.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	-17.1	-17.5	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	-12.6	-13	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3
	-7	-7.6	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4
	-4	-4.4	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.6
	0	-0.4	5.9	5.9	5.9	5.9	5.9	5.8	5.8	5.8
	5	4.5	6.6	6.6	6.5	6.5	6.5	6.5	6.5	6.5
	10	9	6.9	6.9	6.9	6.8	6.8	6.8	6.8	6.8
	15	14	7.3	7.3	7.3	7.3	7.3	7.3	7.2	7.1
	20	19	7.7	7.7	7.7	7.7	7.6	7.6	7.4	7.4
	25	23	8.1	8.1	8.1	8.1	8.1	7.9	7.8	7.4
	30	28	8.3	8.3	8.3	8.3	8.3	8.1	7.8	7.4
	35	32	8.5	8.5	8.5	8.5	8.4	8.3	7.8	7.4
	40	36	8.8	8.8	8.8	8.8	8.5	8.3	7.8	7.4
	45	41	9.2	9.2	9.2	8.9	8.5	8.3	7.8	7.4
	47	43	9.5	9.4	9.4	8.9	8.5	8.3	7.8	7.4
50	46	10.2	9.8	9.4	8.9	8.5	8.3	7.8	7.4	
55	51	10.4	9.9	9.4	8.9	8.5	8.3	7.8	7.4	
60	56	10.4	9.9	9.4	8.9	8.5	8.3	7.8	7.4	
ARNU093CEA4 - ARNU093CEU4 / 9.6	-21.6	-22.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	-17.1	-17.5	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1
	-12.6	-13	6.9	6.9	6.9	6.9	6.8	6.8	6.8	6.8
	-7	-7.6	7.1	7.1	7.1	7.1	7.0	7.0	7.0	7.0
	-4	-4.4	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.2
	0	-0.4	7.5	7.5	7.5	7.5	7.5	7.4	7.4	7.4
	5	4.5	8.5	8.4	8.3	8.3	8.3	8.3	8.3	8.3
	10	9	8.8	8.8	8.8	8.7	8.7	8.7	8.7	8.7
	15	14	9.4	9.4	9.4	9.4	9.4	9.4	9.3	9.2
	20	19	9.9	9.9	9.9	9.9	9.7	9.7	9.5	9.4
	25	23	10.4	10.4	10.4	10.4	10.4	10.1	10.0	9.5
	30	28	10.6	10.6	10.6	10.6	10.6	10.4	10.0	9.5
	35	32	10.9	10.9	10.9	10.9	10.8	10.6	10.0	9.5
	40	36	11.3	11.3	11.3	11.3	10.9	10.6	10.0	9.5
	45	41	11.8	11.8	11.8	11.5	10.9	10.6	10.0	9.5
	47	43	12.2	12.1	12.0	11.5	10.9	10.6	10.0	9.5
50	46	13.1	12.5	12.0	11.5	10.9	10.6	10.0	9.5	
55	51	13.4	12.6	12.0	11.5	10.9	10.6	10.0	9.5	
60	56	13.4	12.6	12.0	11.5	10.9	10.6	10.0	9.5	

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
The System Combination Ratio must be between 50-130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice.
Current certified ratings are available at www.ahridirectory.org.

Note:

Low ambient performance with LGRED° heat technology is included in Multi V 5 Air-Source Units produced after February 2019.



MULTI V Floor Standing Indoor Unit Engineering Manual

ARNU123CEA4 / ARNU123CEU4, ARNU153CEA4 / ARNU153CEU4

Table 17: ARNU123CEA4 / ARNU123CEU4, ARNU153CEA4 / ARNU153CEU4 Heating Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp.		Indoor Air Temperature (°F DB)							
			59	61	64	67	70	73	76	80
	°F DB	°F WB	TC	TC	TC	TC	TC	TC	TC	TC
			MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh
ARNU123CEA4 - ARNU123CEU / 12.3	-21.6	-22.0	6.9	6.9	6.9	6.9	6.8	6.8	6.8	6.8
	-17.1	-17.5	7.7	7.7	7.7	7.7	7.6	7.6	7.6	7.6
	-12.6	-13	8.6	8.6	8.6	8.6	8.5	8.5	8.5	8.5
	-7	-7.6	8.8	8.8	8.8	8.8	8.7	8.7	8.7	8.7
	-4	-4.4	9.1	9.1	9.1	9.1	9.0	9.0	9.0	9.0
	0	-0.4	9.4	9.4	9.4	9.4	9.4	9.3	9.3	9.3
	5	4.5	10.6	10.5	10.3	10.3	10.3	10.3	10.3	10.3
	10	9	11.0	11.0	11.0	10.9	10.9	10.9	10.9	10.9
	15	14	11.7	11.7	11.7	11.7	11.7	11.7	11.6	11.4
	20	19	12.4	12.4	12.4	12.4	12.1	12.1	11.9	11.8
	25	23	12.9	12.9	12.9	12.9	12.9	12.7	12.5	11.9
	30	28	13.2	13.2	13.2	13.2	13.2	12.9	12.5	11.9
	35	32	13.6	13.6	13.6	13.6	13.5	13.2	12.5	11.9
	40	36	14.1	14.1	14.1	14.1	13.6	13.2	12.5	11.9
	45	41	14.7	14.7	14.7	14.3	13.6	13.2	12.5	11.9
	47	43	15.2	15.1	15.0	14.3	13.6	13.2	12.5	11.9
50	46	16.3	15.6	15.0	14.3	13.6	13.2	12.5	11.9	
55	51	16.7	15.8	15.0	14.3	13.6	13.2	12.5	11.9	
60	56	16.7	15.8	15.0	14.3	13.6	13.2	12.5	11.9	
ARNU153CEA4 - ARNU153CEU / 15.4	-21.6	-22.0	8.7	8.7	8.7	8.7	8.6	8.6	8.6	8.6
	-17.1	-17.5	9.7	9.7	9.7	9.7	9.6	9.6	9.6	9.6
	-12.6	-13	10.8	10.8	10.8	10.8	10.6	10.6	10.6	10.6
	-7	-7.6	11.1	11.1	11.1	11.1	10.9	10.9	10.9	10.9
	-4	-4.4	11.5	11.5	11.5	11.5	11.3	11.3	11.3	11.3
	0	-0.4	11.8	11.8	11.8	11.8	11.8	11.6	11.6	11.6
	5	4.5	13.3	13.2	13.0	13.0	13.0	13.0	13.0	13.0
	10	9	13.9	13.9	13.9	13.7	13.7	13.7	13.7	13.7
	15	14	14.7	14.7	14.7	14.7	14.7	14.7	14.5	14.4
	20	19	15.6	15.6	15.6	15.6	15.2	15.2	15.0	14.8
	25	23	16.3	16.3	16.3	16.3	16.3	15.9	15.7	15.0
	30	28	16.6	16.6	16.6	16.6	16.6	16.3	15.7	15.0
	35	32	17.1	17.1	17.1	17.1	16.9	16.6	15.7	15.0
	40	36	17.8	17.8	17.8	17.8	17.1	16.6	15.7	15.0
	45	41	18.5	18.5	18.5	18.0	17.1	16.6	15.7	15.0
	47	43	19.2	19.0	18.8	18.0	17.1	16.6	15.7	15.0
50	46	20.5	19.7	18.8	18.0	17.1	16.6	15.7	15.0	
55	51	21.0	19.8	18.8	18.0	17.1	16.6	15.7	15.0	
60	56	21.0	19.8	18.8	18.0	17.1	16.6	15.7	15.0	

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice.
Current certified ratings are available at www.ahridirectory.org.

Note:

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PRODUCT DATA



Heating Capacity Tables

ARNU183CFA4 / ARNU183CFU4, ARNU243CFA4 / ARNU243CFU4

Table 18: ARNU183CFA4 / ARNU183CFU4, ARNU243CFA4 / ARNU243CFU4 Heating Capacity Table.

Model No. / Capacity Index	Outdoor Air Temp.		Indoor Air Temperature (°F DB)							
			59	61	64	67	70	73	76	80
	°F DB	°F WB	TC	TC	TC	TC	TC	TC	TC	TC
		MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh	MBh
ARNU183CFA4 - ARNU183CFU / 19.1	-21.6	-22.0	10.9	10.9	10.9	10.9	10.8	10.8	10.8	10.8
	-17.1	-17.5	12.2	12.2	12.2	12.2	12.1	12.1	12.1	12.1
	-12.6	-13	13.6	13.6	13.6	13.6	13.4	13.4	13.4	13.4
	-7	-7.6	14.0	14.0	14.0	14.0	13.8	13.8	13.8	13.8
	-4	-4.4	14.4	14.4	14.4	14.4	14.2	14.2	14.2	14.2
	0	-0.4	14.8	14.8	14.8	14.8	14.8	14.6	14.6	14.6
	5	4.5	16.8	16.6	16.3	16.3	16.3	16.3	16.3	16.3
	10	9	17.4	17.4	17.4	17.2	17.2	17.2	17.2	17.2
	15	14	18.5	18.5	18.5	18.5	18.5	18.5	18.3	18.1
	20	19	19.6	19.6	19.6	19.6	19.1	19.1	18.8	18.6
	25	23	20.4	20.4	20.4	20.4	20.4	20.0	19.8	18.8
	30	28	20.9	20.9	20.9	20.9	20.9	20.4	19.8	18.8
	35	32	21.5	21.5	21.5	21.5	21.3	20.9	19.8	18.8
	40	36	22.4	22.4	22.4	22.4	21.5	20.9	19.8	18.8
	45	41	23.2	23.2	23.2	22.6	21.5	20.9	19.8	18.8
	47	43	24.1	23.9	23.7	22.6	21.5	20.9	19.8	18.8
50	46	25.8	24.7	23.7	22.6	21.5	20.9	19.8	18.8	
55	51	26.3	24.9	23.7	22.6	21.5	20.9	19.8	18.8	
60	56	26.3	24.9	23.7	22.6	21.5	20.9	19.8	18.8	
ARNU243CFA4 - ARNU243CFU / 24.2	-21.6	-22.0	13.9	13.9	13.9	13.9	13.7	13.7	13.7	13.7
	-17.1	-17.5	15.5	15.5	15.5	15.5	15.3	15.3	15.3	15.3
	-12.6	-13	17.2	17.2	17.2	17.2	17.0	17.0	17.0	17.0
	-7	-7.6	17.8	17.8	17.8	17.8	17.5	17.5	17.5	17.5
	-4	-4.4	18.3	18.3	18.3	18.3	18.0	18.0	18.0	18.0
	0	-0.4	18.8	18.8	18.8	18.8	18.8	18.6	18.6	18.6
	5	4.5	21.3	21.0	20.8	20.8	20.8	20.8	20.8	20.8
	10	9	22.1	22.1	22.1	21.8	21.8	21.8	21.8	21.8
	15	14	23.5	23.5	23.5	23.5	23.5	23.5	23.2	22.9
	20	19	24.8	24.8	24.8	24.8	24.3	24.3	23.9	23.6
	25	23	25.9	25.9	25.9	25.9	25.9	25.4	25.1	23.9
	30	28	26.5	26.5	26.5	26.5	26.5	25.9	25.1	23.9
	35	32	27.3	27.3	27.3	27.3	27.0	26.5	25.1	23.9
	40	36	28.4	28.4	28.4	28.4	27.3	26.5	25.1	23.9
	45	41	29.5	29.5	29.5	28.7	27.3	26.5	25.1	23.9
	47	43	30.6	30.3	30.0	28.7	27.3	26.5	25.1	23.9
50	46	32.8	31.4	30.0	28.7	27.3	26.5	25.1	23.9	
55	51	33.4	31.7	30.0	28.7	27.3	26.5	25.1	23.9	
60	56	33.4	31.7	30.0	28.7	27.3	26.5	25.1	23.9	

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).
The System Combination Ratio must be between 50–130%.

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice.
Current certified ratings are available at www.ahridirectory.org.

Note:

Low ambient performance with LGRED® heat technology is included in Multi V 5 Air-Source Units produced after February 2019.



APPLICATION GUIDELINES

Selecting the Best Location on page 38

General Mounting on page 39

General Drain Piping Information on page 39

Wiring Guidelines on page 41

Wired Remote Controller Location on page 42

Acronyms on page 43

Selecting the Best Location

Selecting the Best Location

Do's

- Place the unit where air circulation will not be blocked.
- Place the unit where drainage can be obtained easily and to minimize the length of the condensate drain piping.
- Place the unit where noise prevention is taken into consideration.
- Ensure there is sufficient supply air and maintenance space.
- Locate the indoor unit in a location where it can be easily connected to the outdoor unit / heat recovery unit.
- Place the unit in a location that can easily bear a load exceeding four times the weight of the floor standing unit.
- Place the unit where it will be level.

Do Not's

- Avoid installing the unit near high-frequency generators.
- Do not install the unit near a doorway.
- The unit must not be installed near a heat or steam source, or where considerable amounts of oil, iron powder, or flour are used. (These materials will 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.)

⚠ WARNING

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

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

Note:

- Indoor units (IDUs) must not be placed in an environment where the IDUs will 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 IDUs are installed, proper air make up or supply and/ or adequate ventilation must be provided. Additionally, in buildings where IDUs will be exposed to VOCs consider a factory-applied epoxy coating to the fan coils for each IDU.
- If the unit is installed near a body of water, the installation parts are at risk of corroding. Appropriate anti-corrosion methods must be taken for the unit and all installation parts.

Installing in an Area Exposed to Unconditioned Air

In some installation applications, areas (floors, walls) in some rooms will be exposed to unconditioned air (room will be above or next to an unheated garage or storeroom). To countermeasure:

- Verify that carpet is or will be installed (carpet will increase the temperature by three [3] degrees).
- Add insulation between the floor joists.
- Install radiant heat or another type of heating system to the floor.

Figure 20: Selecting the Best Location / Minimum Clearance Requirements.

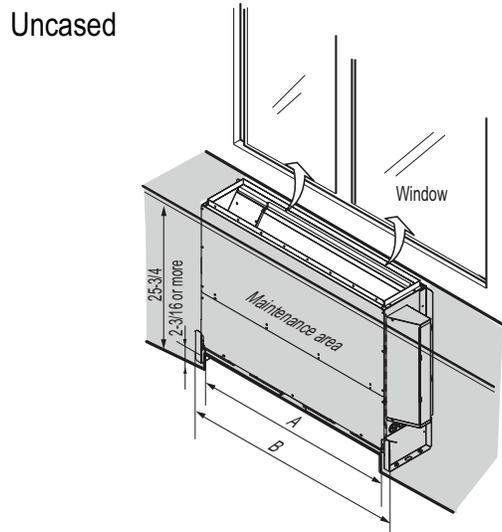
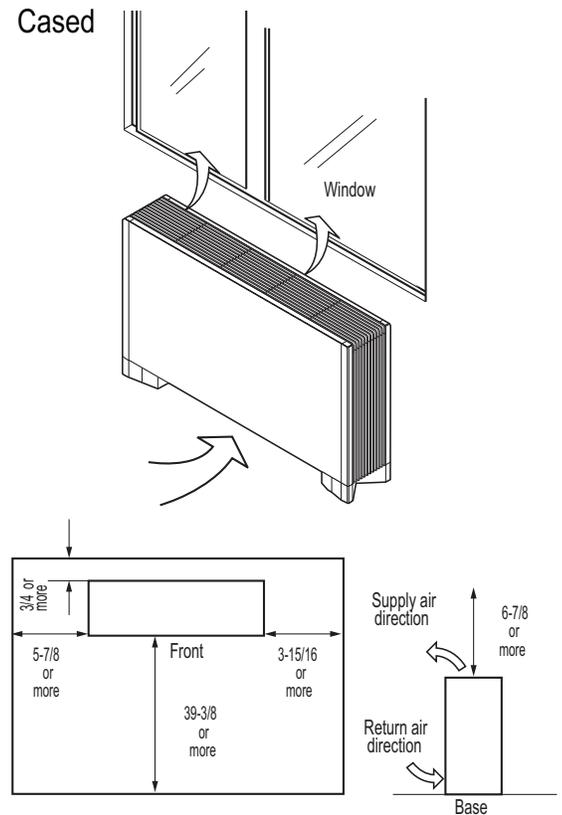


Table 19: Floor Standing Minimum Maintenance Requirements.

Indoor Unit	A (Inch)	B (Inch)
Floor Standing Cased and Uncased CEA / CEU Frames	≥31	≥42-1/2
Floor Standing Cased and Uncased CFA / CFU Frames	≥42	≥53-1/2

General Mounting - Floor Standing Indoor Units

1. To provide stabilization, floor standing indoor units need to be secured to a wall. Ensure the wall is strong enough to bear the weight of the unit. If necessary, reinforce the wall before installing the unit.
2. Mark the appropriate location on the wall for the holes, then drill the holes.

Table 20: Location of the Wall Bolts for Floor Standing Indoor Units.

Indoor Unit	A (Inch)
Floor Standing Cased and Uncased CEA / CEU Frames	33-3/4
Floor Standing Cased and Uncased CFA / CFU Frames	44-3/4

3. Apply the installation mount and install the Floor Standing indoor unit.

Note:

- The unit requires a minimum clearance of 3-15/16 below the unit for air intake.
- Verify that the floor standing indoor unit is level so that drainage flows smoothly. If there is an incline, water will leak.
- Depending on the shape and type of the wall surface, the indoor unit operating sound will be louder.

General Drain Piping Information

Indoor units generate water during cooling operation, therefore, how to properly handle this condensation must be considered. Floor standing indoor units apply the gravity drain method, but a field-supplied condensate pump can be installed (optional, sold separately).

Depending on the location of the indoor unit, condensation can be drained directly to the outside of the building, or a common indoor unit drainage piping system can be installed. When the bottom surface of the indoor unit is at an elevation below the receiving building drain line connection, install an inverted trap at the top of the condensate pump discharge riser before connection to the building drain pipe.

When the receiving drain line is mounted horizontal, connect the inverted trap to the top half of the pipe. The connection point of the inverted trap to the building drain pipe must always be to the top half of the pipe and must ⊗ never be over 45° either side of the upper most point of the horizontal building drain line.

If connecting to a vertical drain line or plumbing system vent line, connect the IDU condensate pump discharge line using a Y045 fitting with the double end of the Y045 fitting facing up. When connecting to a vertical drain line include an inverted trap at the top of the IDU condensate pump discharge riser before connection to the Y-45 fitting.

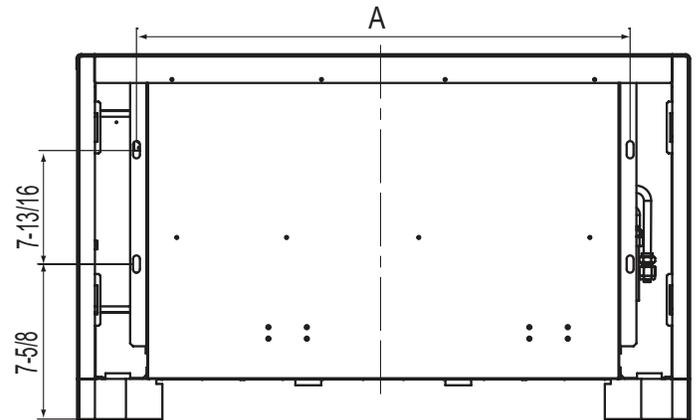
Drain Hose

Floor standing indoor units have a built in drain hose. If necessary, the drain hose can be extended.

Drain Piping

- Drain piping must have a down slope (1/50 to 1/100).
- Any holes through the ceilings, walls, etc., must be large enough to accommodate the drain piping and insulation.
- To prevent reversal flow, ⊗ do not provide up and down slope.
- ⊗ Do not exert extra force on the drain port on the indoor unit during drain piping connection.

Figure 21: Bolt Pitch for Floor Standing Indoor Units.



Note:

- ⊗ Do not damage power wiring during installation. There is a risk of equipment malfunction, which will result in property damage.

Figure 22: Floor Standing Indoor Unit with Gravity Drain and Down Slope.

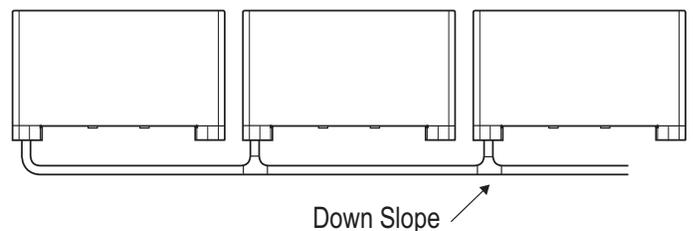


Table 21: Floor Standing Indoor Unit Drain Piping Specifications.

Indoor Unit	Drain Type	Drain Pipe Diameter (ID, in.)
Floor Standing	Gravity	Ø1

General Drain Piping Information

Drain Leak Test

A leak test must be performed 24 hours after the drainage system has been installed.

Note:

Ensure the indoor unit, refrigerant piping, drain piping, and power wiring / communication cables are properly supported with anchor bolts and clamp hangers positioned at 3.3 to 4.9 foot intervals. If not, the equipment and piping will sag, resulting in system malfunction and / or unit damage.

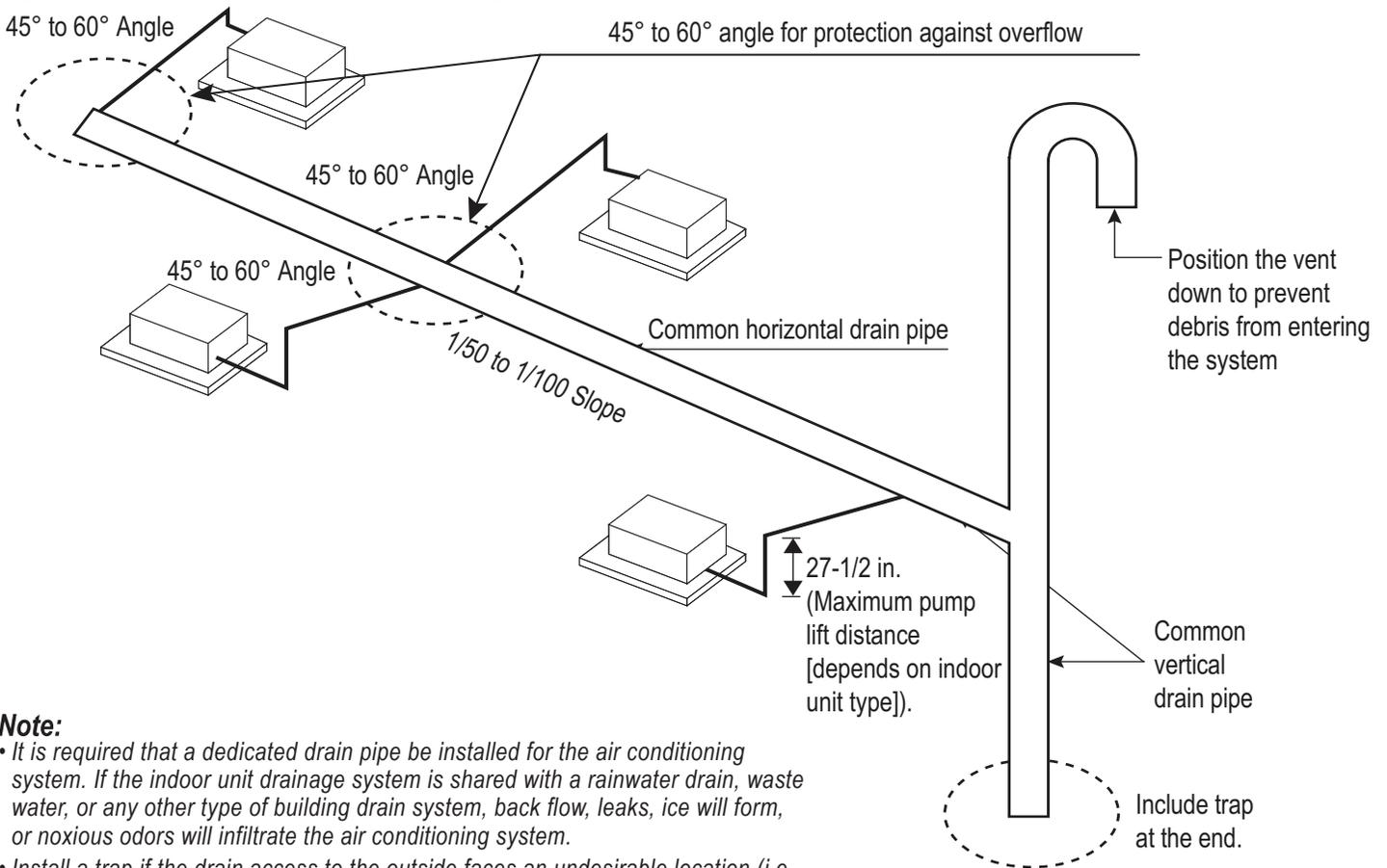
Drain Pipe Insulation

Install field-supplied polyethylene foam insulation 5/16 inch thick or greater on the flexible drain pipe and position snugly against indoor unit.

Common Indoor Unit Drainage System

It is usual work practice to connect individual indoor unit drain pipes to one common indoor unit drainage system. The diameter of the common vertical drain pipe must be as large as necessary. The diameter of the horizontal pipe must be the same or larger than the vertical drain pipe. To avoid property damage in the event of the primary drain becoming clogged, and to optimize drain system performance, it will be prudent to install a secondary drain line. Design the drain system to plan for winter operation (condensate line will freeze up if condensate does not properly drain away). Drain all generated condensate from the external condensate pan to an appropriate area. Install a trap in the condensate lines as near to the indoor unit coil as possible. To prevent overflow, the outlet of each trap must be positioned below its connection to the condensate pan. All traps must be primed, insulated, and leak tested.

Figure 23: Example of a Common Indoor Unit Drainage System.



Note:

- It is required that a dedicated drain pipe be installed for the air conditioning system. If the indoor unit drainage system is shared with a rainwater drain, waste water, or any other type of building drain system, back flow, leaks, ice will form, or noxious odors will infiltrate the air conditioning system.
- Install a trap if the drain access to the outside faces an undesirable location (i.e., sewer), otherwise, noxious odors will infiltrate the air conditioning system.

General Power Wiring / Communications Cable Guidelines

- Follow manufacturer’s circuit diagrams displayed on the inside of the control box cover.
- Have a separate power supply for the indoor units.
- Provide a circuit breaker switch between the power source and the indoor unit.
- Confirm power source specifications.
- Confirm that the electrical capacity is sufficient.
- Starting current must be maintained ± 10 percent of the rated current marked on the name plate.
- Confirm wiring / cable thickness specifications:
 - Power wiring is field supplied. Wire size is selected based on the larger MCA value, and must comply with the applicable local and national codes.
 - Communication cable must be a minimum of 18 AWG, two-conductor, twisted, stranded, shielded, and must comply with the applicable local and national codes. Ensure the communication cable is properly grounded at the master outdoor unit only. ⓧ Do not ground the ODU-IDU communications cable at any other point.
- It is required 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.
- Any openings where the field wiring enters the cabinet must be completely sealed.

⚠ WARNING

- Terminal screws will loosen during transport. Properly tighten the terminal connections during installation or risk electric shock, physical injury or death.
- Loose wiring will cause the wires to burnout or the terminal to overheat and catch fire. There is a risk of electric shock, physical injury or death.

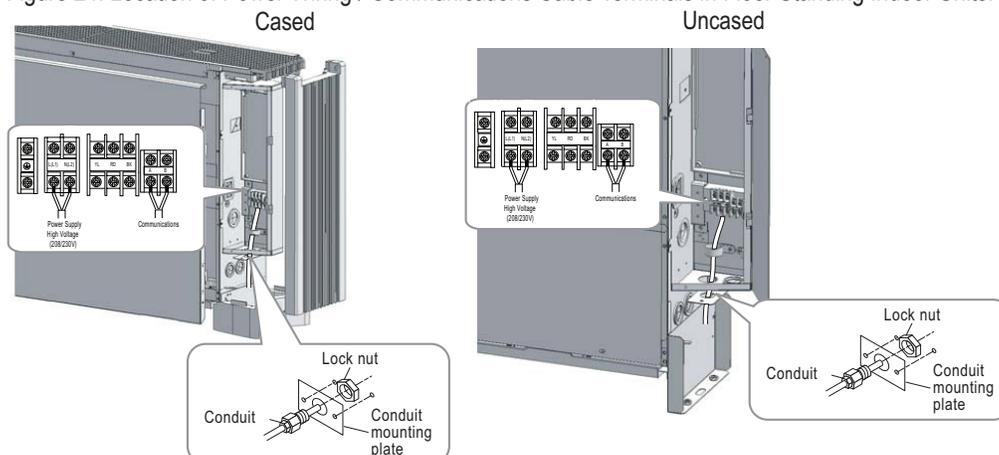
Note:

- Terminal screws will loosen during transport. Properly tighten the terminal connections during installation or risk equipment malfunction or property damage.
 - Loose wiring will 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.
- 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.

Power Wiring and Communications Cable Connections

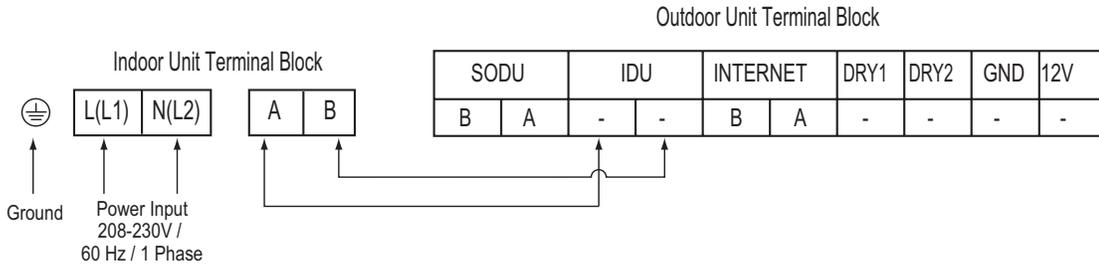
1. Insert the power wiring / communications cable from the outdoor unit or heat recovery unit (Heat Recovery systems only) using the designated path in the indoor unit.
2. Connect each wire to its appropriate terminal on the indoor unit control board. Verify that the color and terminal numbers from the outdoor unit or heat recovery unit (Heat Recovery systems only) wiring match the color and terminal numbers on the indoor unit.
3. Secure the power wiring / communications cable.

Figure 24: Location of Power Wiring / Communications Cable Terminals in Floor Standing Indoor Units.



Wiring Guidelines

Figure 25: Simplified View of Indoor Unit Terminal Connections--Floor Standing.



Wired Controller Placement

Floor standing indoor units can be used with various wired controllers (optional; sold separately). Wired controllers include a sensor to detect room temperature. To maintain comfort levels in the conditioned space, the wired controller must be installed in a location away from direct sunlight, high humidity, and where it could be directly exposed to cold air. Controller must be installed four (4) to five (5) feet above the floor where its LED display can be read easily, in an area with good air circulation, and where it can detect an average room temperature.

- ⊘ Do not install the wired controller near or in:
- Drafts or dead spots behind doors and in corners
 - Hot or cold air from ducts
 - Radiant heat from the sun or appliances
 - Concealed pipes and chimneys
 - An area where temperatures are uncontrolled, such as an outside wall

Figure 26: Proper Location for the Wired Controller.

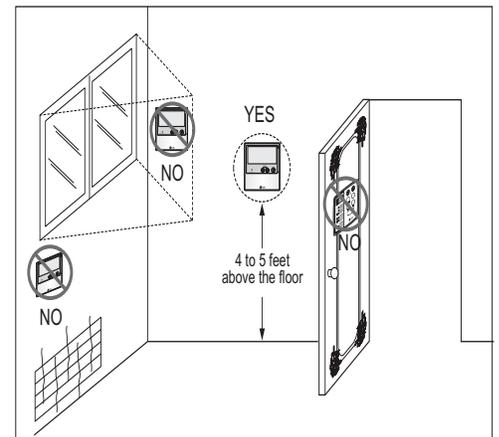


Table 22: Acronym Table.

ABS	Acrylonitrile Butadiene Styrene	IDU	Indoor Unit
AC	Air Conditioner/Alternate Current	kW	Kilowatts
ACP	Advanced Control Platform	in Aq	inches water
AHU	Air Handling Unit	ISO	International Standards Organization
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning	LATS	LG Air Conditioning Technical Solution software
ASTM	American Society for Testing and Materials	LED	Light Emitting Diode
AWG	American Wire Gauge	LEED	Leadership in Energy and Environmental Design
AWHP	Air-to-Air Water Heat Pump	MBh	Thousands BTUs per hour
BLDC	Brushless Digitally-Controlled	MCA	Minimum Circuit Ampacity
BTL	BACnet® Testing Laboratories	mm	Millimeter
Btu/h	British Thermal Unit per Hour	MOP	Maximum Overcurrent Protection
CAA	Clean Air Act	OD	Outside Diameter
CFM	Cubic Feet per Minute	ODU	Outdoor Unit
CFR	Code of Federal Regulations	PI	Power Input
DB	Dry Bulb	PTAC	Packaged Terminal Air Conditioner
dB(A)	Decibels with “A” frequency weighting	SHC	Sensible Heat Capacity
DPST	Double-Pole Single Throw	SMACNA	Sheet Metal & Air Conditioning Contractors’ National Association
DX	Direct expansion	RPM	Revolutions per Minute
EEV	Electric Expansion valve	TC	Total Capacity
EPDM	Ethylene Propylene Diene M-Class Rubber	USD	United States Dollar
EMF	Electromagnetic Field	UL	Underwriters Laboratories
ESP	External Static Pressure	V	Voltage
ETL	Electric Testing Laboratories	VAV	Variable Air Volume
GND	Ground	VRF	Variable Refrigerant Flow
H/M/L	High/Medium/Low	W	Watts
HVAC	Heating, Ventilating and Air Conditioning	WB	Wet Bulb
Hz	Hertz	wg	Water Gauge
ID	Inside Diameter		

Inverter



LG Electronics, U.S.A., Inc.
Air Conditioning Technologies
4300 North Point Parkway
Alpharetta, Georgia 30022
www.lghvac.com

EM_MultiV_FloorStanding_IndoorUnits_10_20
Supersedes: EM_MultiV_FloorStanding_IndoorUnits_11_19
EM_MultiV_FloorSuspendCovert_IndoorUnits_8_17