

LG HVAC SOLUTION

MULTI V™ 5 575V



AHU COMMUNICATION KIT



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Regional Sales Manager

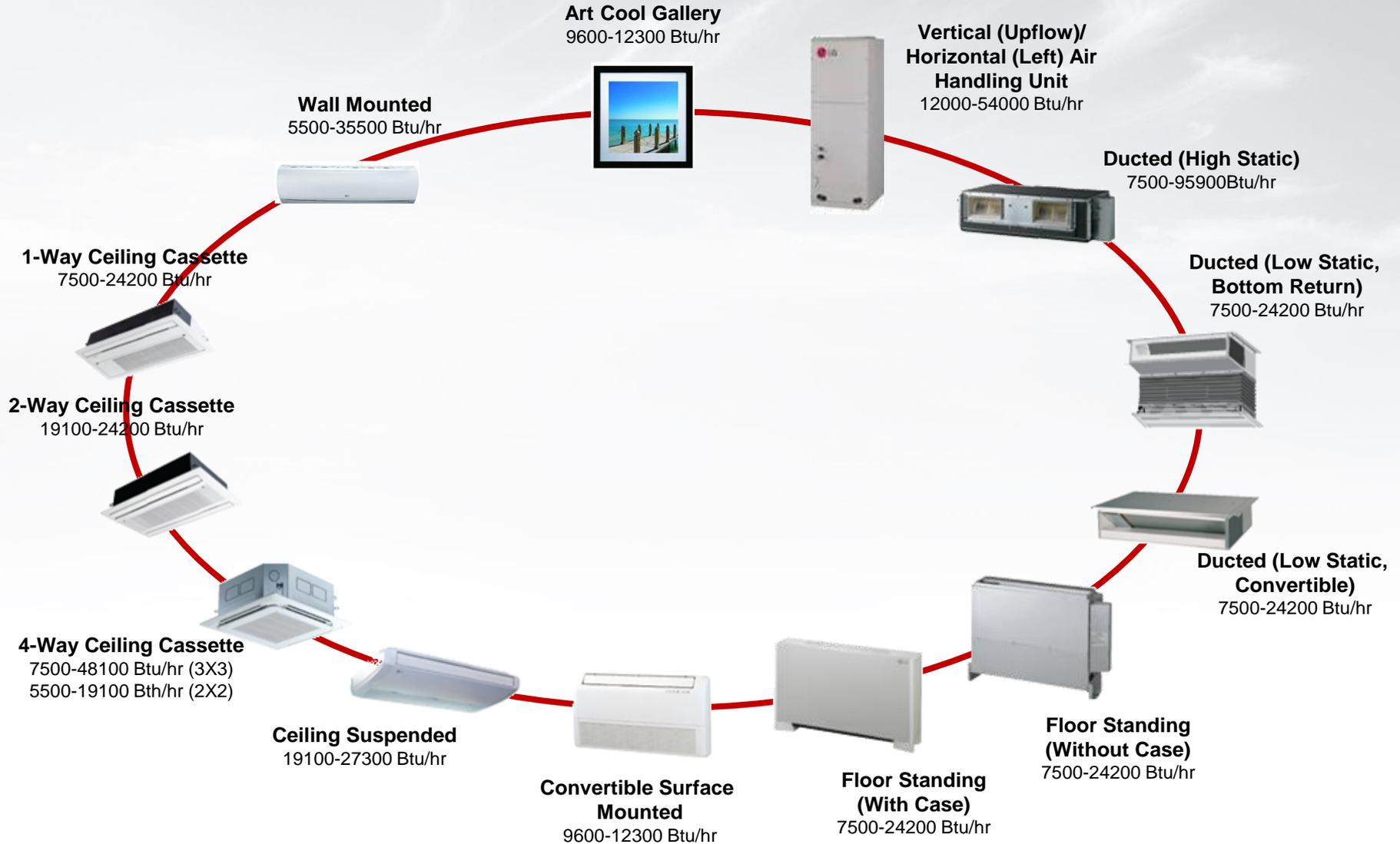
AHU Communication Kit

- 1 VRF Indoor Units
- 2 AHU Comm. Kit
- 3 Options
 - 1 **PAHCMR000** Return Control
 - 2 **PAHCMR000** Supply Control
 - 3 **EEV kits** 048A0,090A0, 0396A0 0594A0
- 4 Configurations
- 5 Applications



Indoor Unit Line Up

LGE offers the best combination with a good level of flexible project design



Solution Line Up

Energy Recovery Ventilator
Capacity (CFM): 880 – 1180
Static pressure (in-wg): 0.24 to 0.80



Energy Recovery Ventilator
Capacity (CFM): 470-590
Static pressure (in-wg): 0.24 to 0.80



High Temp Hydro Kit

LWT(H): Max 176°F
LWT(C): N/A
CC: N/A
HC: 86MBh

Dedicated Outside Air Unit With Preheat
400-2000 CFM
Static Pressure (in-wg): 1.65



Medium Temp Hydro Kit

LWT(H) : Max 122°F
LWT(C) :43°F
CC: 96MBh
HC: 108MBh

Dedicated Outside Air Unit NO Preheat
400-2000 CFM
Static Pressure (in-wg): 1.65



Outside Air Unit
519-664 CFM
Static Pressure (in-wg): 0.19-0.79



Outside Air Unit
446-837 CFM
Static Pressure (in-wg): 0.23-0.98



Outside Air Unit
837-1261 CFM
Static Pressure (in-wg): 0.23-0.98



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Control Option(①) *Diverse options for control*

<p>Option 1</p> <p>LGE's Wired Remote Controller</p>	<p>Option 2</p> <p>OR</p> <p>DDC (Field Supply)</p> <ul style="list-style-type: none"> - . Hardware Input - . Modbus - . BACnet Protocol 	<p>Option 3</p> <p>LGE's Central Controller</p>
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Communication Kit(②)

<p>Return Air (PAHCMR000)</p>	<p>Supply Air (PAHCMS000)</p>
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Outdoor Unit(③)

<p>MULTI V S</p>	<p>MULTI V WATER IV</p>	<p>MULTI V S</p>
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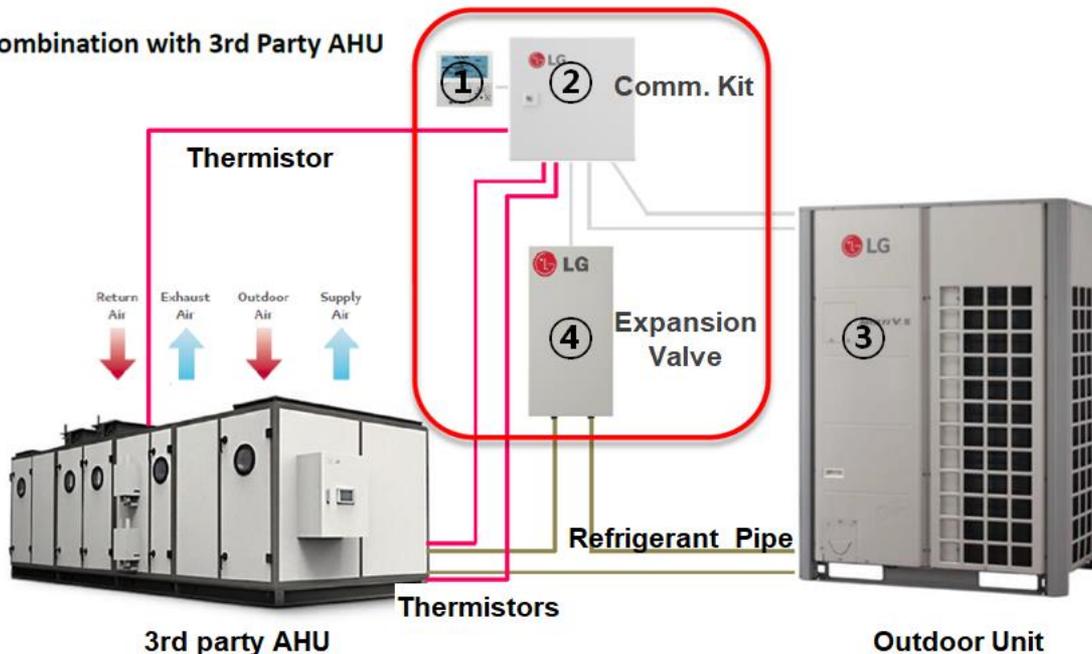
High energy efficiency with inverter

Expansion Valves(④)

<p>EEV Kit(~48RT) *</p>

Large range of expansion valves

Combination with 3rd Party AHU



New AHU Comm. Kit

PAHCMR000



PAHCMS000



EEV Kit
(~ 16 Ton)



EEV Kit
(~ 48 Ton)



3rd Party AHU



Outdoor Units



MULTI V 5



MULTI V WATER IV



MULTI V S



Single Split

Note : Some information may be changed due to improve product quality. Please contact LG HQ engineer to get more information

AHU Communication Kit



Communication Kit

PAHCMR000

PAHCMS000

Specifications

Type	Model Name	Combination				Description	Dimensions (in)			
		Outdoor unit	EEV Kit	Expansion Kit	Central controller		W	H	D	Weight
Communication Kit	PAHCMR000	MULTI V, Single Split	●	●	●	Return/room air by remote controller or dry contact control	11-13/16	11-13/16	6-1/8	13.7 lb
	PAHCMS000	MULTI V, Single Split	●	●	●	Discharge air or supply air (capacity) control by DDC	14-3/4	11-13/16	6-1/8	16.4 lb

NOTE: Available functions/features may differ based on the connected system. Due to our commitment to continued innovation, some specifications may be changed without notification.

EEV Kits

The expansion valves(including EEV Kit) in air conditioning system controls amount of refrigerant released into the heat exchanger thereby controlling superheat.

4 models of EEV Kit applicable from 12.0 ~ 595 MBH

Models	Capacity (MBH)		Compatibility	
	Min	Max	PAHCMR000	PAHCMS000
PRLK048A0	12.0	96	HP/HR	HP
PRLK096A0	96.1	192	HP/HR	HP
PRLK396A0	192.1	396	HP	HP
PRLK594A0 <i>Without IDU</i>	396.1	594	NA	HP (with PAEEVA020)



PRLK048A0 12.0 ~ 96 MBH
PRLK096A0 96.1 ~ 192 MBH



PRLK396A0 192.1 ~ 396 MBH (2 EEVs)
PRLK594A0 396.1 ~ 594 MBH (3 EEVs)



PAEEV020
(only for PRLK594A0)



EEV Kit

- PRLK048A0
- PRLK096A0
- PRLK396A0
- PRLK594A0

Specifications

Type	Model Name	Capacity Range	Dimensions (in)		
			W	H	D
EEV Kit	PRLK048A0	8 tons maximum	8-5/8	15-15/16	3-5/16
	PRLK096A0	16 tons maximum	8-5/8	15-15/16	3-5/16
	PRLK396A0	32 tons maximum	8-1/2	13-1/2	7-1/8
	PRLK594A0*	48 tons maximum	11	13-1/2	7-1/8

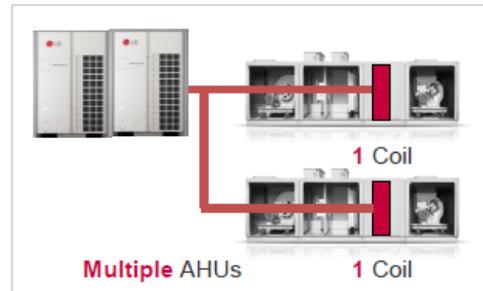
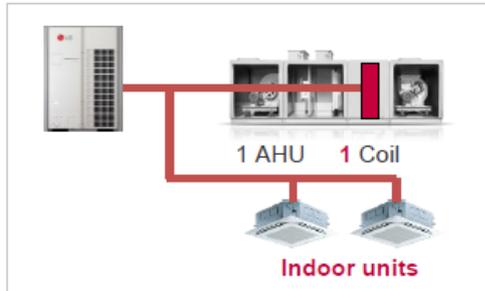
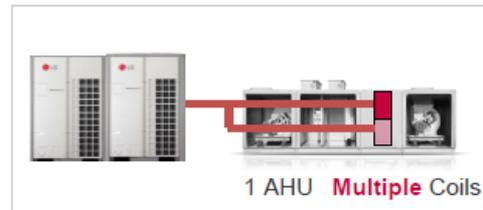
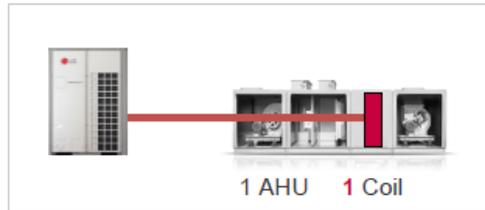
Can be used in combination with or without indoor units. Several EEV kits can be connected to a single outdoor unit.

*In order for the PRLK594A0 to work with the PAHCMS000 the EV Control Module is required - PAEEVA020. This module will come in the box with the PRLK594A0.

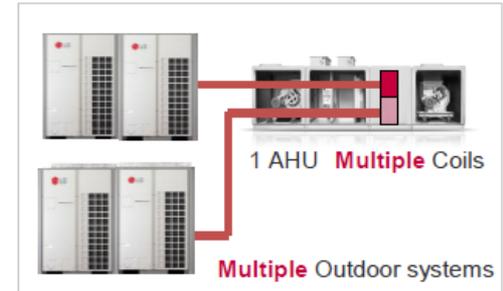
Application Cases of AHU Kits

Return Air (room) Temp. control

1-set Outdoor system



Multiple Outdoor systems



Animation is included this page.

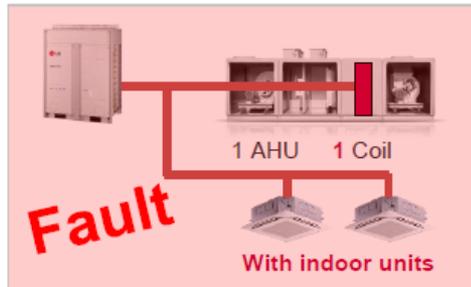
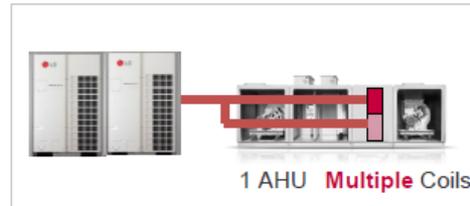
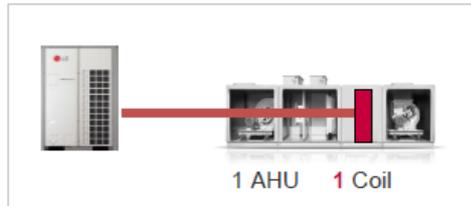
Click images for more detail.

- Each DX coil requires a pair of Comm. Kit & EEV kit
- Maximum applicable EEV Kit capacity is 24 Ton (PRLK396A0), PRLK594A0 model is not applicable with PAHCMR000
- 1 set point control
- AC SMART IV, ACP IV, ACP BACnet, ACP Lonworks, PDI are compatible
- In case of 'DDC-Contact Control', LG controllers is used for monitoring only
- LG dry contact is not compatible

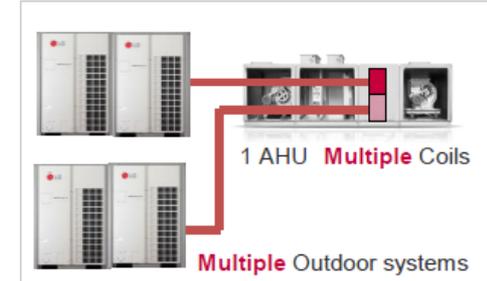
Application Cases of AHU Kits

Supply Air (capacity) Temp. control

1-set Outdoor system



Multiple Outdoor systems



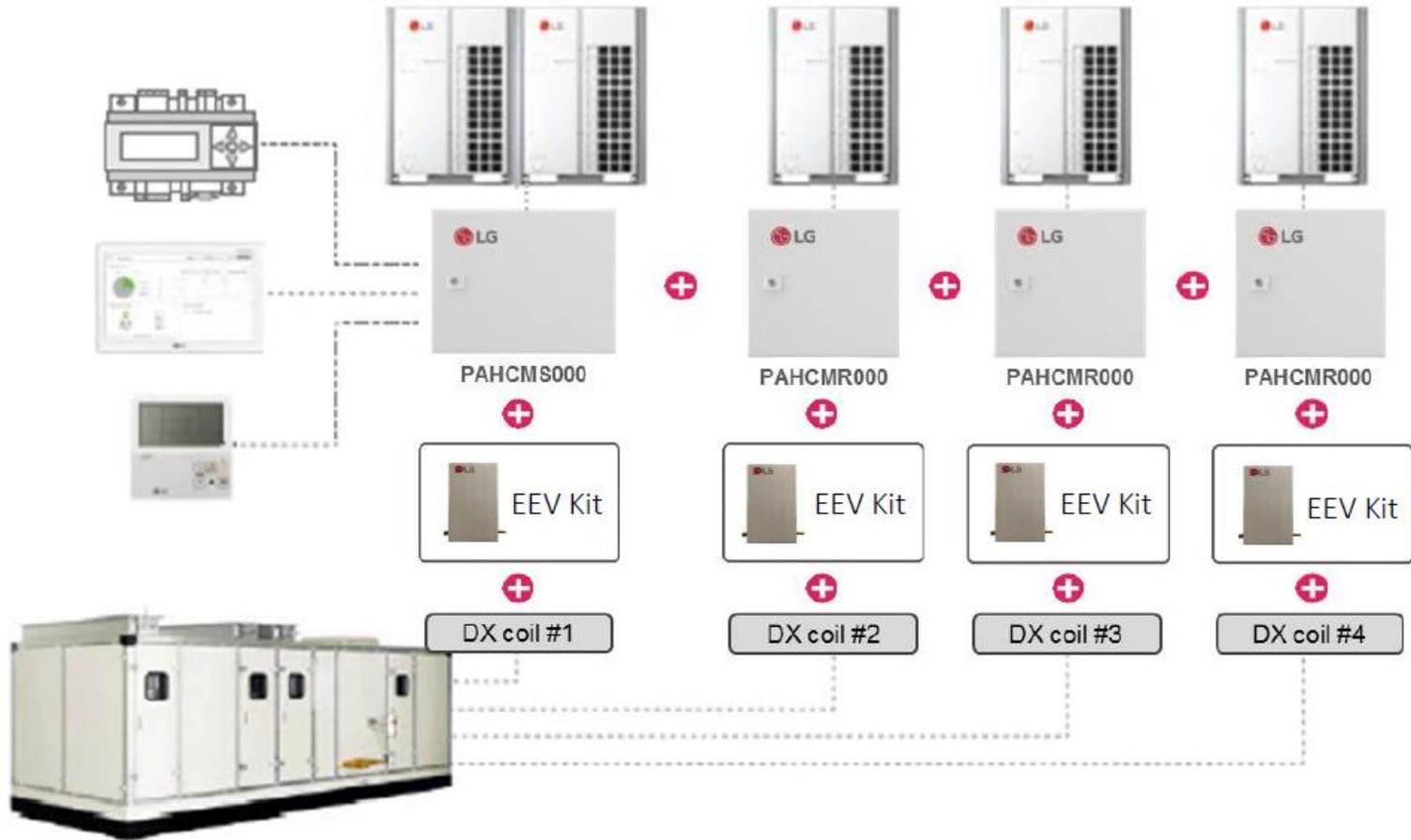
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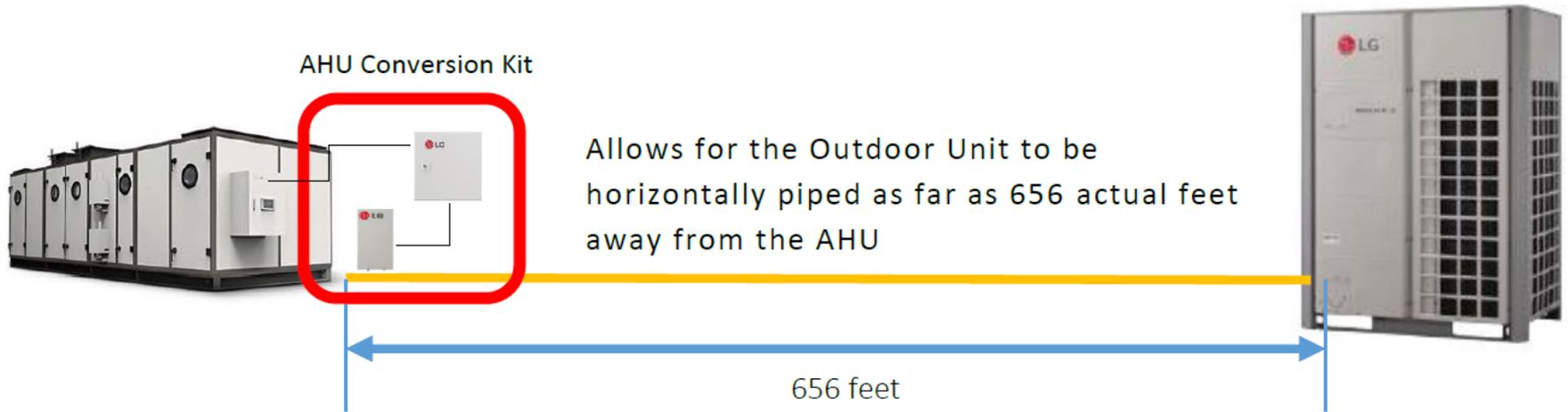
- Each DX coil requires a pair of Comm. Kit & EEV kit. Maximum applicable PAHCMRS00 is 3, it means maximum applicable DX coil for 1 ODU system is 4
- For Multiple DX coil application, additional PAHCMR000 can be installed.
- Maximum applicable EEV Kit capacity is 32 Ton (PRLK594A0 + PAEEV020)
- 1 set point control
- AC SMART IV, ACP IV are compatible, but ACP BACnet, ACP Lonworks, PDI are NOT compatible
- LG Central Controller is connected to directly Comm. Kit (Main Module 'CH3' of PAHCMRS000), not to ODU
- In case of 'DDC-Contact Control', LG controllers is used for monitoring only
- LG dry contact is not compatible

AHU Communication Kit

- Multiple DX coil installation is possible for discharge air control



Large Piping Distance

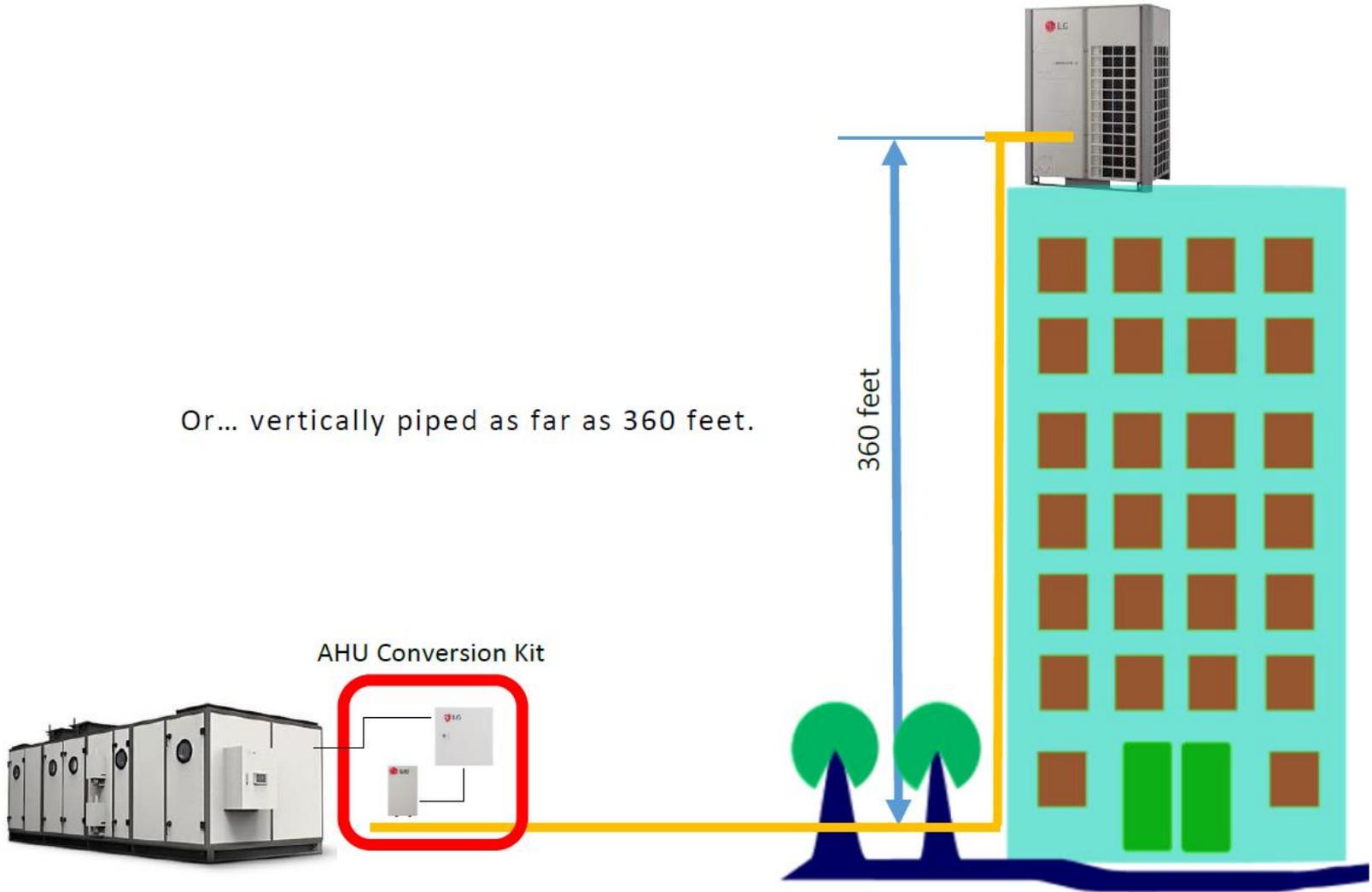


AHU Conversion Kit

Allows for the Outdoor Unit to be horizontally piped as far as 656 actual feet away from the AHU

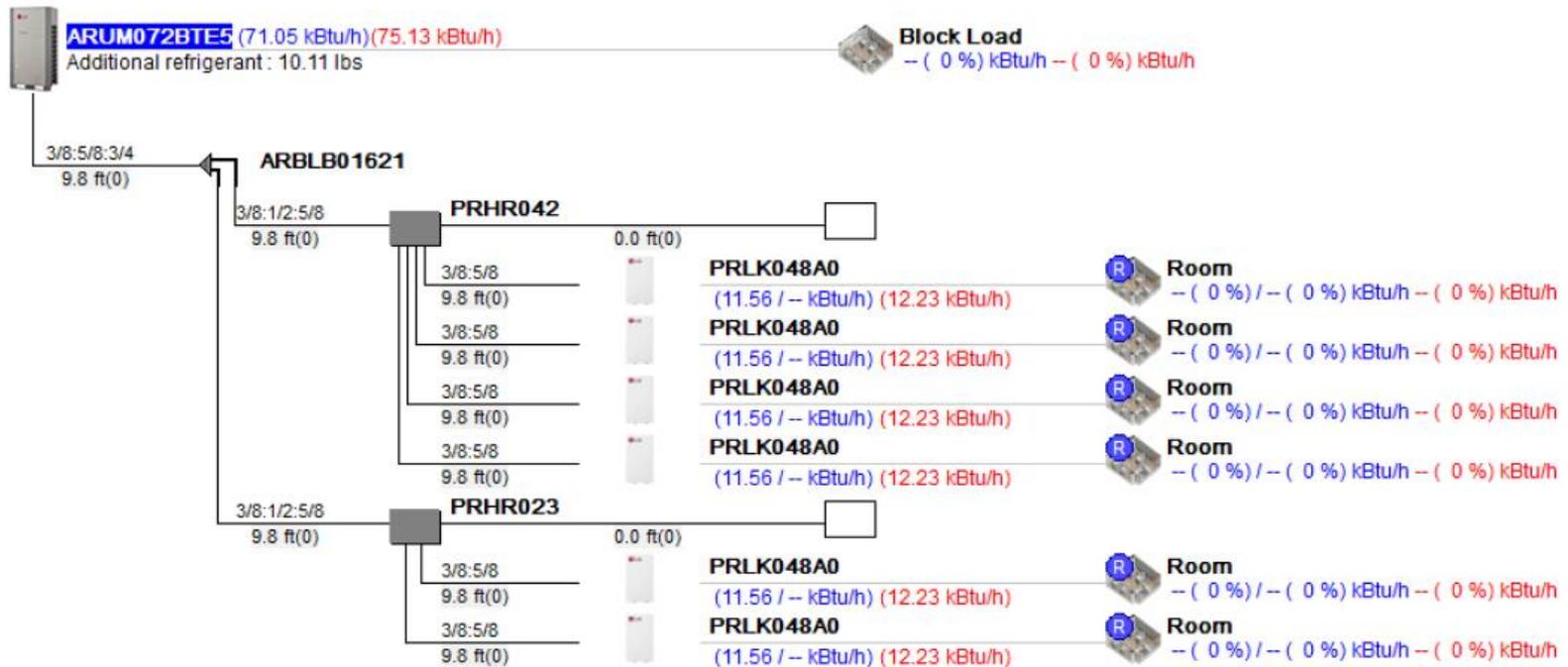
AHU Communication Kit

Or... vertically piped as far as 360 feet.



AHU Communication Kit

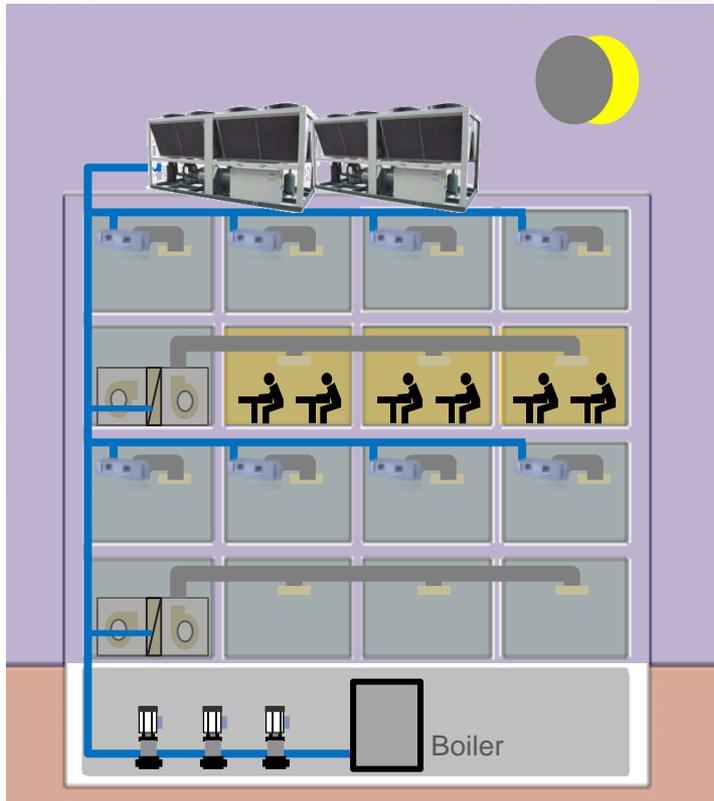
Multi V1



Here's an example of a Small AHU system in LATS-HVAC. The combination ratio should follow the rules in the combination ratio table (Table 6).

Chiller

Chiller system generally operates only for the pre-determined schedule for the entire building with no regard to user demands.



VRF

VRF system conditions only the necessary areas with regard to user's demands.



Application Types



Figure 18. High Filtration



Figure 19. Large Gym Area

Application Examples

Restaurant



Outdoor Unit	Indoor Units	Controller
MV 5 HR (28 Tons)	3700 CFM AHU x 1 Ducted x 9 High Wall x 3	AC Smart IV

- PAHCMR000 Comm. Kit for outside air pre-conditioning.
- Standard LG IDU used for space conditioning.
- AC Smart Central Controller schedules LG systems. 3rd Party BMS controls AHU fan speed.

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