

# HOT WATER SOLUTION

190 ~ 199

HYDRO KIT





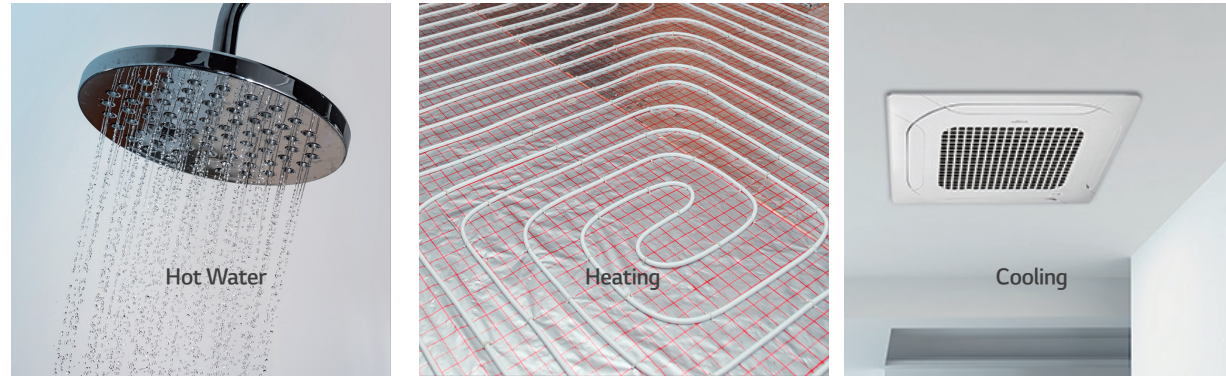
# HYDRO KIT

## Features & Benefits

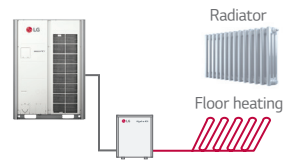
- Lower operation cost compared to fossil fuel-based systems such as boilers.
- More energy saving through MULTI V heat recovery system.

## Key Applications

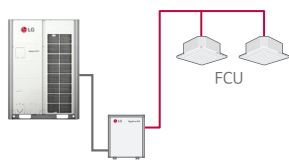
- Where Hot Water is needed such as domestic Hot Water, underfloor heating, or radiator. Where cold water is needed such as Fan coil unit and chilled beam.



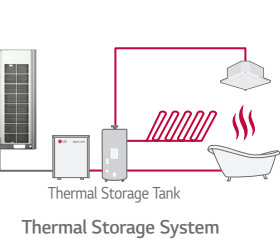
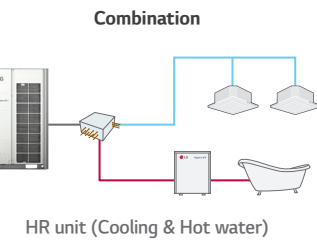
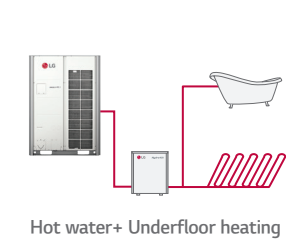
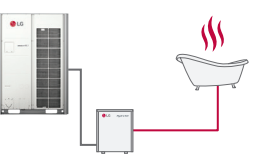
Radiant Heating / Cooling



Fan Coil Unit Heating / Cooling

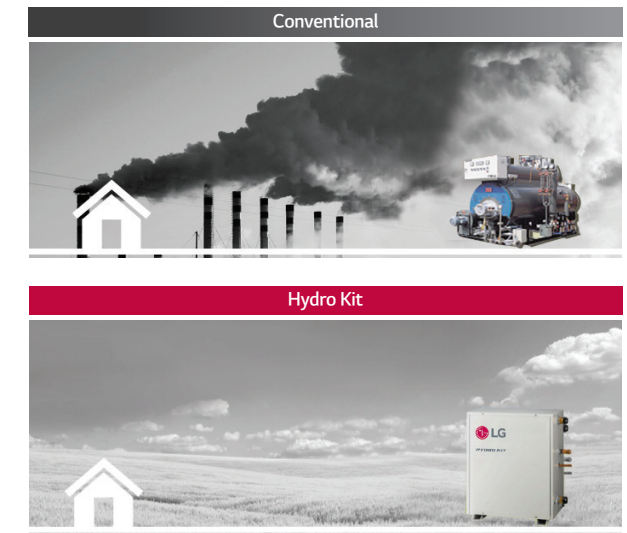
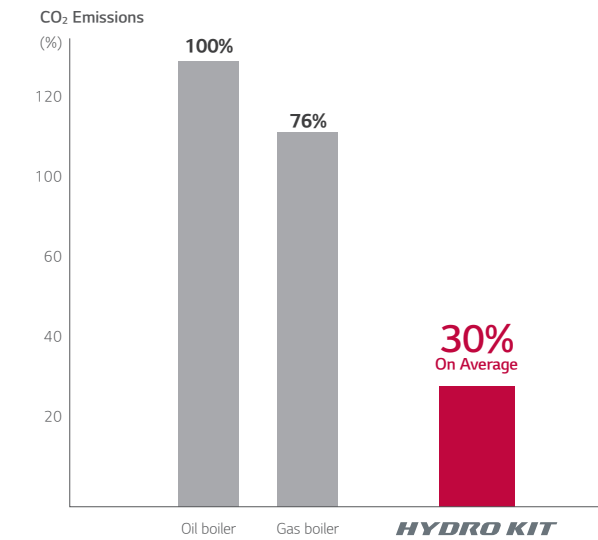


Hot Water / Cold Water



## Eco-conscious Solution

Green energy solution through the reduction of CO<sub>2</sub> emissions.



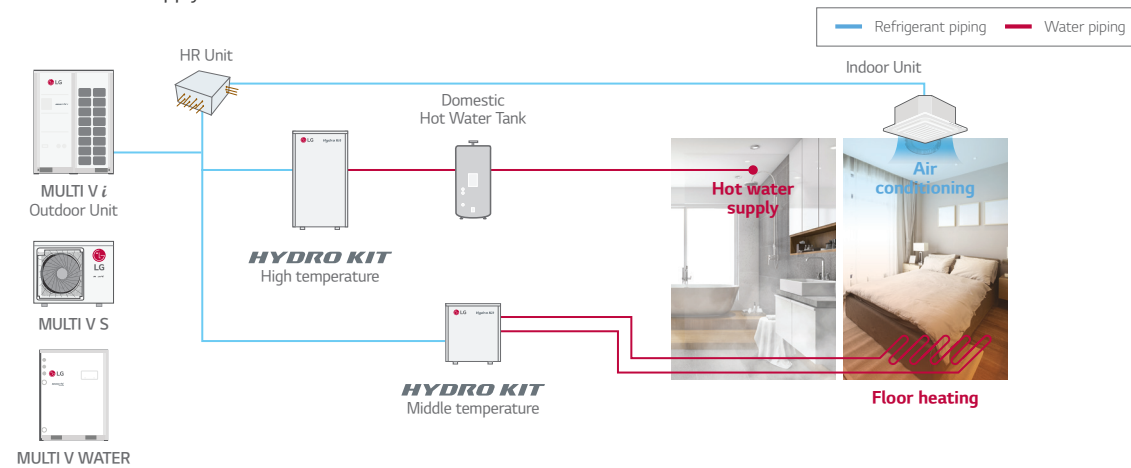
## Space Saving

Wall mounted hydro kit with Multi V S outdoor is suitable for residential application with its compact size and design.



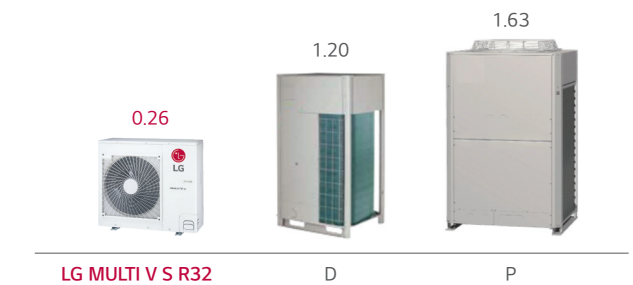
## Total Solution

Total solution provided with heat pump, air conditioning (Cooling by refrigerant and cold water / heating by refrigerant hot water) and domestic hot water supply.



## Compatible with compact R32 Multi V S

Product Volume (m<sup>3</sup>)





# Cost Savings with High Efficiency

Equivalent installation cost of traditional boiler with reduced operational costs.

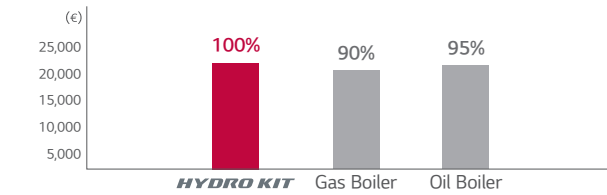
## 1st Proposal MULTI V i HYDRO KIT

- (Air Conditioning + Hot Water Supply + Floor Heating)
- 2nd Proposal MULTI V i Air-Conditioning + Gas Boiler (Hot Water Supply + Floor Heating)
- 3rd Proposal MULTI V i Air-Conditioning + Oil Boiler (Hot Water Supply + Floor Heating)

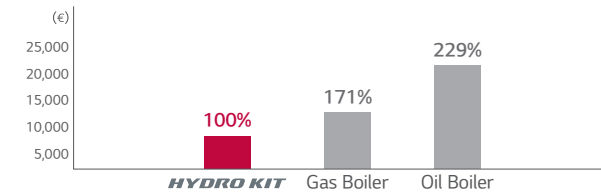
### Analysis Conditions

- Building Type : Dormitory, Flats
- Cooling / Floor Heating / Sanitary Hot Water for 10 years
- Cooling : MULTI V IV Indoor Unit
- Floor Heating : Medium Temp. HYDRO KIT (1ea)
- Sanitary Hot Water : High Temp. HYDRO KIT (2ea), Sanitary Hot Water Tanks
- Electricity Cost : Average Cost in EU
- Gas Cost : Average Cost in EU
- Oil Cost : Average Cost in EU

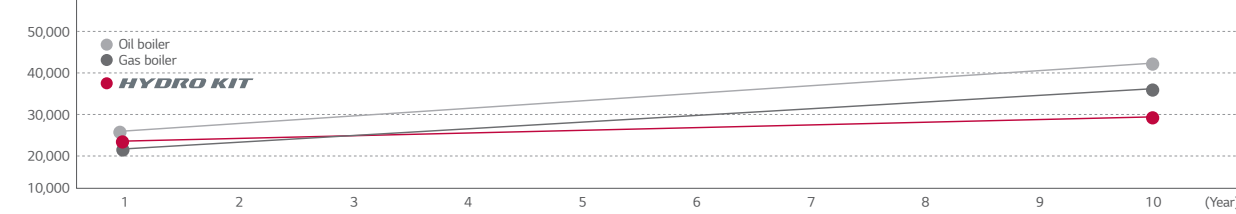
### Initial Costs



### Annual Operating Costs



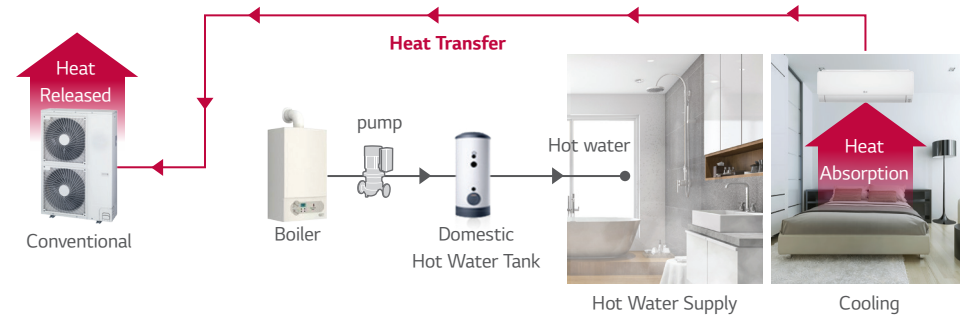
### LCC



# Energy Savings through Heat Recovery

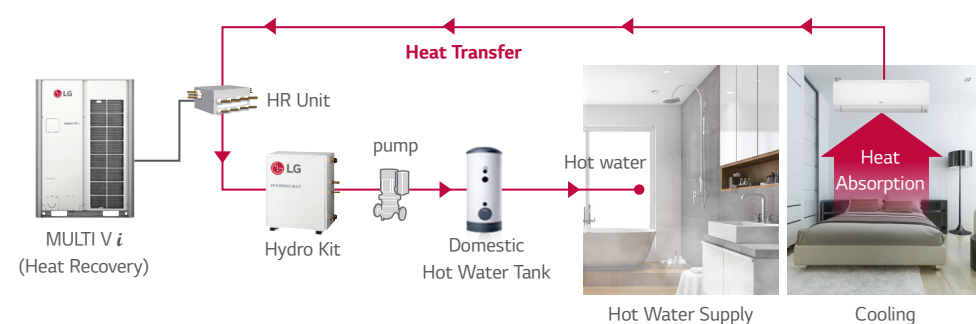
## Conventional

Absorbed heat is released to outdoor air.

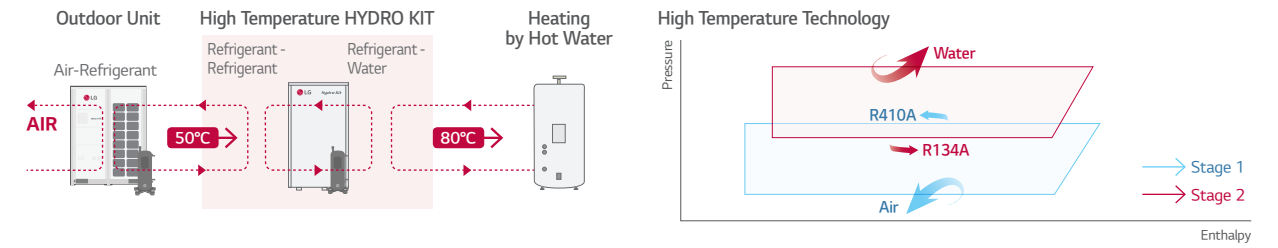


## HYDRO KIT

Absorbed heat from indoor space is used for making hot water.



# High Temperature HYDRO KIT Cycle Diagram



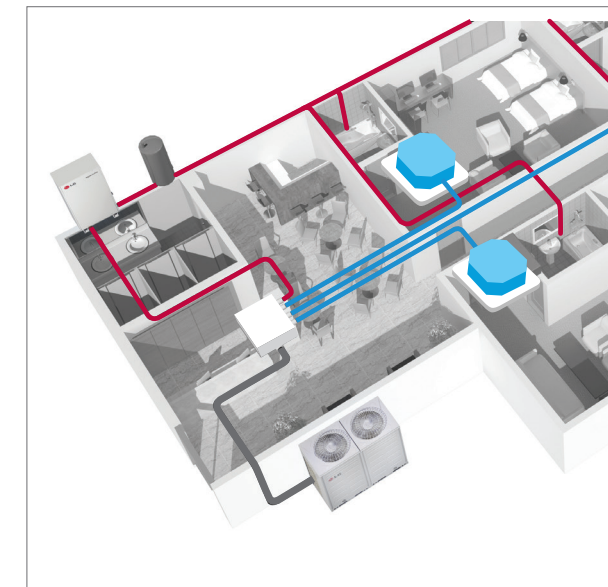
# Various Applications

Applicable to a variety of facilities including hospitals, residences and resorts that need heating and domestic hot water supply.



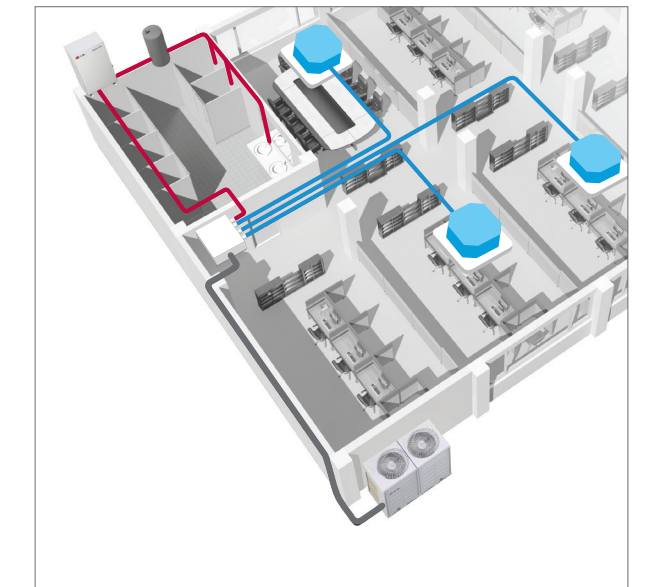
# Hotel Application

Simultaneous cooling and heating operation during summer to produce hot water by using heat energy recovered from indoor cooling process.



# Office Application

The energy recovered from office cooling can be used to generate hot water for use in the offices.



**ARNH18GK1A4 / ARNH24GK1A4  
ARNH30GK1A4**


MODEL		UNIT	ARNH18GK1A4	ARNH24GK1A4	ARNH30GK1A4	
Power Supply		V, Ø, Hz	220-230-240, 1, 50/60	220-230-240, 1, 50/60	220-230-240, 1, 50/60	
Capacity (Rated)	Cooling	kW	5.6	7.1	9.0	
		kcal/h	4,800	6,100	7,700	
		Btu/h	19,100	24,200	30,700	
	Heating	kW	5.6	7.1	9.0	
		kcal/h	4,800	6,100	7,700	
		Btu/h	19,100	24,200	30,700	
Input (Rated)	Cooling	W	75	75	75	
	Heating	W	75	75	75	
Running Current (220 - 230 - 240V)		A	0.70 - 0.67 - 0.64	0.70 - 0.67 - 0.64	0.70 - 0.67 - 0.64	
Casing	Material	-	Painted Steel Plate	Painted Steel Plate	Painted Steel Plate	
	RAL (Classic)	-	RAL 9003	RAL 9003	RAL 9003	
Dimensions	Net(W x H x D)	mm	490 x 850 x 315	490 x 850 x 315	490 x 850 x 315	
	Shipping(W x H x D)	mm	1,082 x 563 x 375	1,082 x 563 x 375	1,082 x 563 x 375	
Weight	Net	kg	42.0	42.0	42.0	
	Shipping	kg	47.0	42.0	42.0	
Heat Exchanger	Refrigerant to Water	Type	-	Brazed Plate HEX	Brazed Plate HEX	Brazed Plate HEX
		Quantity	EA	1	1	1
		Number of Plate	EA	54	54	54
		Water Volume	ℓ	0.7	0.7	0.7
		Rated Water Flow	ℓ/min	15.8	20.1	25.9
Head Loss		m	0.22	0.30	0.40	
Water Pump	Type	-	Canned type for hot water circulation	Canned type for hot water circulation	Canned type for hot water circulation	
	Model	-	GRUNDFOS UPM3K 20-75 CHBL	GRUNDFOS UPM3K 20-75 CHBL	GRUNDFOS UPM3K 20-75 CHBL	
	Motor Type	-	AC Motor	AC Motor	AC Motor	
	Steps of Pump Performance	-	Variable capacity 10% to 100%	Variable capacity 10% to 100%	Variable capacity 10% to 100%	
	Power input Min. - Max.	W	3 - 60	3 - 60	3 - 60	
Expansion Vessel	Volume Max.	ℓ	8.0	8.0	8.0	
	Water pressure Max.	bar	3.0	3.0	3.0	
	Water pressure Pre-charged	bar	1.0	1.0	1.0	
Strainer	Mesh size	-	28 mesh	28 mesh	28 mesh	
	Material	-	Stainless Steel	Stainless Steel	Stainless Steel	
Relief valve	Pressure Limit	Upper Limit	bar	3.0	3.0	3.0



MODEL		UNIT	ARNH18GK1A4	ARNH24GK1A4	ARNH30GK1A4	
Backup Heater	Type	-	Sheath	Sheath	Sheath	
	Number of Heating Coil	EA	2	2	2	
	Capacity Combination	kW	3.0 + 3.0	3.0 + 3.0	3.0 + 3.0	
	Operation	-	Automatic	Automatic	Automatic	
	Heating Steps	Step	2	2	2	
	Power Supply	V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	220-240, 1, 50	
	FLA	A	31.0	31.0	31.0	
Flow Sensor	Power Cable (H07RN-F) (Included Earth)	mm <sup>2</sup> x cores	4.0 x 3C	4.0 x 3C	4.0 x 3C	
	Type	-	Vortex	Vortex	Vortex	
	Model	-	SIKA VVX20	SIKA VVX20	SIKA VVX20	
Temperature Control	Measuring Range	Min. - Max.	ℓ/min	5 - 80	5 - 80	5 - 80
	Flow (Trigger Point)	Min.	ℓ/min	7.0	7.0	7.0
Water Tank Temperature Sensor	Type(Sensor Holder)	-	Male PT 1/2 inch	Male PT 1/2 inch	Male PT 1/2 inch	
Sound Absorbing Thermal Insulation Material	Length	m	12	12	12	
	Material	-	Foamed polystyrene	Foamed polystyrene	Foamed polystyrene	
Safety Device	Device	-	Fuse	Fuse	Fuse	
	Location	-	Male PT 1 inch	Male PT 1 inch	Male PT 1 inch	
Piping Connections	Water Side	Inlet	-	Male PT 1 inch	Male PT 1 inch	Male PT 1 inch
		Outlet	-	Male PT 1 inch	Male PT 1 inch	Male PT 1 inch
	Refrigerant Side	Liquid	mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
		Gas	mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
Power Cable Supply Cable (H07RN-F)	mm <sup>2</sup> x cores	-	2.5 x 3C	2.5 x 3C	2.5 x 3C	
Communication Cable (VCTF-SB)	mm <sup>2</sup> x cores	-	1.0-1.5 x 2C	1.0-1.5 x 2C	1.0-1.5 x 2C	
Sound Pressure Level	Cooling / Heating	Rated	dB(A)	35	35	35
Sound Power Level	Cooling / Heating	Rated	dB(A)	44	44	44



## ARNH04GK2A4 / ARNH10GK2A4



MODEL	UNIT	ARNH04GK2A4	ARNH10GK2A4
Cooling Capacity	kW	12.3	28.0
Heating Capacity	kW	13.8	31.5
Power Input Nominal <sup>1)</sup>	W	10	10
Exterior Color		Morning Gray	Morning Gray
RAL Code		RAL 7030	RAL 7030
Dimensions (W x H x D)	Body	520 x 631 x 330	520 x 631 x 330
	Shipping	677 x 687 x 418	677 x 687 x 418
Pipe Connections	Liquid Side	Ø9.52 (3/8)	Ø9.52 (3/8)
	Gas Side	Ø15.88 (5/8)	Ø22.2 (7/8)
	Drain Pipe (Internal Dia.)	A (inch)	25A (Male PT 1)
Water Pipe Connections	Inlet	A (inch)	25A (Male PT 1)
	Outlet	A (inch)	25A (Male PT 1)
Weight	Body	29.2	33.7
Sound Pressure Levels (H / M / L)	dB(A)	26	26
Power Supply	Ø, V, Hz	1, 220-240, 50	1, 220-240, 50
Communication Cable	mm <sup>2</sup> x No.	1.0 - 1.5 x 2C	1.0 - 1.5 x 2C

1) Nominal : Performance tested under EN14511

Note :

1. Capacities are based on the following conditions :

- Cooling : Indoor 27°C (80.6°F) DB / 19°C (66.2°F) WB, Outdoor 35°C (95°F) DB / 24°C (75.2°F) WB, Water Inlet 23°C (73.4°F) / Outlet 18°C (64.4°F)

- Heating : Indoor 20°C (68°F) DB / 15°C (59°F) WB, Outdoor 7°C (44.6°F) DB / 6°C (42.8°F) WB, Water Inlet 30°C (86°F) / Outlet 35°C (95°F)

2. Piping Length : Interconnected Pipe Length = 7.5m

3. Difference Limit of Elevation (Outdoor - Indoor Unit) is Zero.

4. MULTI V S 4HP (ARUN040GSS0, ARUN040LSS0) cannot be connected to Hydro Kit.

5. MULTI V Water S cannot be connected to Hydro Kit.

6. Anti freezing liquid should be added under 10°C (outdoor temp.) during cooling mode.

## Accessories

CHASSIS	ARNH04GK2A4	ARNH10GK2A4
Drain Pump	-	-
Cassette Cover	-	-
Refrigerant Leakage Detector	PRLDNVSO	-
EEV Kit	-	-
Multi-tenant Power Module	○	-
Robot Cleaner	-	-
Pre Filter (Washable)	-	-
Ion Generator	-	-
CO <sub>2</sub> Sensor	-	-
Ventilation Kit	-	-
IR Receiver	-	-
Zone Controller	-	-
Dry Contact (with additional accessory)	PDRYCB000 (1 point contact), PDRYCB320	-
External Input (1 point)	○	-
Wi-Fi	PWFMD200	-

※ ○ : Applied, - : Not applied  
Option : Refer to model name in table

## ARNH04GK3A4 / ARNH08GK3A4



MODEL	UNIT	ARNH04GK3A4	ARNH08GK3A4
Heating Capacity	kW	13.8	25.2
Power Input Nominal <sup>1)</sup>	W	2,300	5,000
Exterior Color		Morning Gray	Morning Gray
RAL Code		RAL 7030	RAL 7030
Dimensions (W x H x D)	Body	520 x 1,080 x 330	520 x 1,080 x 330
	Shipping	682 x 1,168 x 423	682 x 1,168 x 423
Pipe Connections	Liquid Side	Ø9.52 (3/8)	Ø9.52 (3/8)
	Gas Side	Ø15.88 (5/8)	Ø19.05 (3/4)
	Drain Pipe (Internal Dia.)	A (inch)	25A (Male PT 1)
Water Pipe Connections	Inlet	A (inch)	25A (Male PT 1)
	Outlet	A (inch)	25A (Male PT 1)
Weight	Body	87.0	91.0
Sound Pressure Levels (H / M / L)	dB(A)	43	46
Power Supply	Ø, V, Hz	1, 220-240, 50	1, 220-240, 50
Communication Cable	mm <sup>2</sup> x No.	1.0 - 1.5 x 2C	1.0 - 1.5 x 2C

1) Nominal : Performance tested under EN14511

Note :

1. Capacities are based on the following conditions :

- Heating : Indoor 20°C (68°F) DB / 15°C (59°F) WB, Outdoor 7°C (44.6°F) DB / 6°C (42.8°F) WB, Water Inlet 55°C (131°F) / Outlet 65°C (149°F)

2. Piping Length : Interconnected Pipe Length = 7.5m

3. Difference Limit of Elevation (Outdoor - Indoor Unit) is Zero.

4. MULTI V S 4HP (ARUN040GSS0, ARUN040LSS0) cannot be connected to Hydro Kit.

5. MULTI V Water S cannot be connected to Hydro Kit.

## Accessories

CHASSIS	ARNH04GK3A4	ARNH08GK3A4
Drain Pump	-	-
Cassette Cover	-	-
Refrigerant Leakage Detector	PRLDNVSO	-
EEV Kit	-	-
Multi-tenant Power Module	○	-
Robot Cleaner	-	-
Pre Filter (Washable)	-	-
Ion Generator	-	-
CO <sub>2</sub> Sensor	-	-
Ventilation Kit	-	-
IR Receiver	-	-
Zone Controller	-	-
Dry Contact (with additional accessory)	PDRYCB000 (1 point contact), PDRYCB320	-
External Input (1 point)	○	-
Wi-Fi	PWFMD200	-

※ ○ : Applied, - : Not applied  
Option : Refer to model name in table

Controller	Product	Premium	Standard III	Standard II	Simple	Simple for Hotel	Wireless	Dry Contact				
		PREMTA000 PREMTA000A PREMTA000B	PREMTB100	PREMTB100	PREMTB001	PREMTB001	PQRCVCL0Q PQRCVCL0QW	PQRCHCA0Q PQRCHCA0QW	PWLSSB21H (H/P)	Simple Dry Contact PDRYCB000	2 points Dry Contact PDRYCB400	Dry Contact for Thermostat PDRYCB320
4 Way	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
	ARNU-B4	○	○	○	○	○	○	○	○	○	○	○
	ARNU-C4	○	○	○	○	○	○	○	○	○	○	○
Ceiling Mounted Cassette	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
	ARNU-C4	○	○	○	○	○	○	○	○	○	○	○
Round CST	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
Ceiling Concealed Duct	High Sensible	ARNU-A4	○	○	○	○	△	○	○	○	○	○
	High / Mid Statics	ARNU-A4	○	○	○	○	△	○	○	○	○	○
	Low Statics	ARNU-G4	○	○	○	○	△	○	○	○	○	○
FAU (Fresh Air intake)	ARNU-Z4	○	○	○	○	△	○	○	○	○	○	
Convertible & Ceiling Suspended	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
Console	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
Floor Standing	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
	ARNU-U4	○	○	○	○	○	○	○	○	○	○	○
Floor Standing (PAC)	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
Wall Mounted	ARNU-A4	○	○	○	○	○	○	○	○	○	○	○
	ARNU-R4	○	○	○	○	○	○	○	○	○	○	○
	ARNU-A4 ARNU-C4 ARNU-N4	○	○	○	○	○	○	○	○	○	○	○
HYDRO KIT <sup>1)</sup>	ARNH-A4	-	-	-	-	-	○	-	○	-	-	
Ventilation	Energy Recovery Ventilator	○	○	○	-	-	-	○	-	-	○	○
	Energy Recovery Ventilator with DX coil	○	○	○	-	-	-	○	-	-	○	○
AHU Communication Kit		○	○	○	-	-	△	-	-	-	-	-

※ ○ : Compatible, △ : Need wired remote controller / IR receiver, - : Not compatible  
1) It has a separate remote controller

Controller Name	Wired Remote Controller					Wireless Remote Controller	Wi-Fi Modem
	Premium	Standard III	Standard II	Simple	Simple (Hotel)		
Model Name	PREMTA000 PREMTA000A PREMTA000B	PREMTB100 PREMTB100	PREMTB001 PREMTB001	PQRCVCL0Q PQRCVCL0QW	PQRCHCA0Q PQRCHCA0QW	PWLSSB21H (H/P)	PWFMD200
Basic	On / Off	○	○	○	○	○	○
	Fan Speed Control	○	○	○	○	○	○
	Temperature Setting	○	○	○	○	○	○
	Mode Change	○	○	○	○	-	○
	Auto Swing	○	○	○	○	○	○
	Vane Control (Louver Angle)	○	○	○	○	○	○
	E.S.P (External Static Pressure)	○	○	○	○	○	-
	Electric Failure Compensation	○	○	○	○	○	-
	Indoor Temperature Display	○	○	○	○	○	○
	ALL Button Lock (Child Lock)	○	○	○	○	○	-
Advanced	Schedule / Timer	Weekly - Yearly	Weekly - Yearly	Weekly	-	-	Sleep / On / Off Weekly
	Additional Mode Setting <sup>1)</sup>	○	○	○	-	-	-
	Time Display	○	○	○	-	-	○
	Humid. Display	○	○	-	-	-	-
	Advanced Lock (mode, set point, set point range, on/off Lock)	Advanced Lock	Advanced Lock	-	-	-	-
	Filter Sign	○	○	○	-	-	-
	Energy Management <sup>2)</sup>	○	○	○	-	-	-
	Dual Set Point	○	○	-	-	-	-
	Human Detection	-	○	-	-	-	-
	Temp, Humidity Compensation	○	○	-	-	-	-
ETC	Wi-Fi AP mode setting	○	○	○	○	○	-
	Operation Status LED	○	○	○	○	○	-
	Wireless Remote Controller Receiver	○ <sup>3)</sup>	-	○ <sup>3)</sup>	○ <sup>3)</sup>	○ <sup>3)</sup>	-
	Display	5 inch Color	4.3 inch Color	4.3 inch mono	2.6 inch mono	2.6 inch mono	2 inch mono
	Size (W x H x D, mm)	137 x 121 x 16.5	120 x 120 x 16	120 x 121 x 16	70 x 121 x 16	70 x 121 x 16	51 x 153 x 26
Black Control for Screen Saver	○	○	-	-	-	-	-

※ ○ : Applied, - : Not Applied  
1) It might not be indicated or operated at the partial product  
2) Centralized control (PACEZA000 / PACSSA000 / PACPSA000 / PLNWK000) and PDI (PQNU1S40 / PPWRDB000) should be installed for this function  
3) For ceiling type duct  
Note  
- Indoor unit should have functions requested by the controller  
- If you need more detail, please refer to the manual of product. (<http://partner.lge.com>: Home > DocLibrary > Manual)