

ΛΥΣΕΙΣ ΓΙΑ ΠΑΡΑΓΩΓΗ ΖΕΣΤΟΥ ΝΕΡΟΥ ΧΡΗΣΗΣ ΜΕ ΑΝΤΛΙΕΣ ΘΕΡΜΟΤΗΤΑΣ

- * ***Επαγγελματικές εφαρμογές***
- * ***Οικιακές Εφαρμογές***



Floor Standing Hydro Kit



Last Revision Date : Mar 30th, 2025

• Market Trends

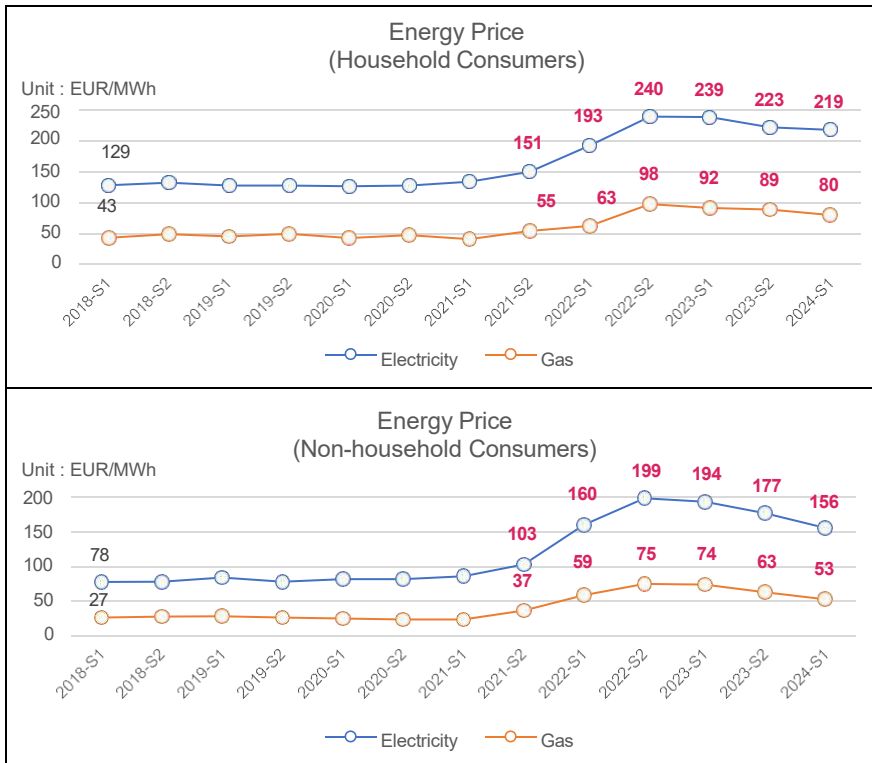
Due to energy supply issues and global warming issues, it becomes more important to install products which have high efficiency and emits low CO₂.



Soaring Energy Price in EU

- Electricity and gas prices soared since the first half of 2021 for a number of reasons such as inflation, war, oil prices, energy demand, and taxes.

■ Energy Prices of European Union 27 countries



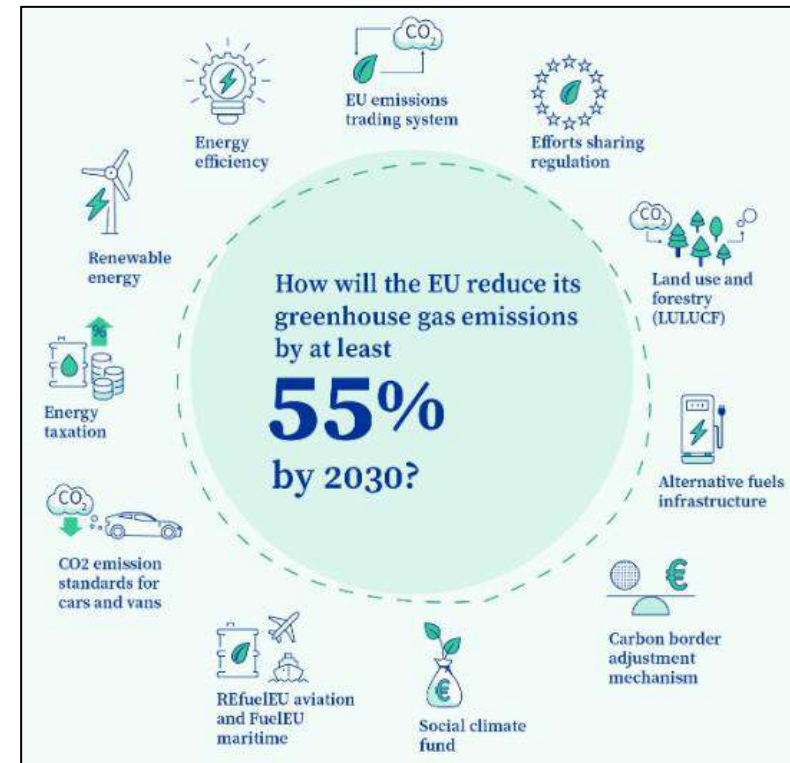
✖ Source : Eurostat
(<https://ec.europa.eu/eurostat/web/main/data/database>)



Climate Neutrality by 2050 in EU

- 2030 Climate Target Plan : The commission proposes to raise the EU's ambition on reducing greenhouse gas emissions to at least 55% below 1990 levels by 2030 for climate neutrality by 2050.

■ 2030 Climate Target Plan



✖ Source : European Council
(<https://www.consilium.europa.eu/en/policies/climate-change/>)

• Line-up for Hydro Kit

Mid Temp. High Temp.

Intro

Floor Standing Hydro Kit has large capacity and is suitable for medium to large commercial segments.



Heating Capacity(kW)		5.6	7.1	9.0	13.8		31.5	52.0
Cooling Capacity(kW)		5.6	7.1	9.0	12.3		28.0	46.4
Medium Temp.	Wall Mounted	1Φ 	1Φ 	1Φ 				
	IWT (Integrated Water Tank)	1Φ 	1Φ 	1Φ 				
	Floor Standing				1Φ 		1Φ 	1Φ 
Heating Capacity(kW)					13.8	25.2		
High Temp.	Floor Standing				1Φ 3Φ 	1Φ 3Φ 		
					ARNH04GK3B4 ARNH04LK3B4	ARNH08GK3B4 ARNH08LK3B4		

• Applications of Hydro Kit

There are many applications that requires cold or how water by applying the Hydro Kit.

COLD WATER

SPACE COOLING



(FCU)

PROCESS WATER



(Plastic extruder)

HOT WATER

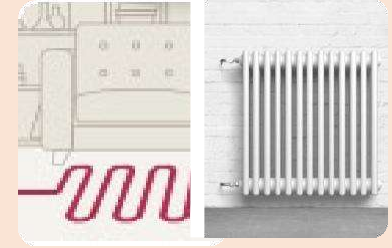
BASIN



SHOWER



SPACE HEATING



(Under Floor Heating)

(Radiator)

KITCHEN



BATH



SWIMMING POOL



• What is a Hydro Kit?

The Hydro Kit is a product which provides hot water without exhaust gases by connecting it to a heat pump product. (Hot Water : Up to 50°C for the K2 Chassis / Up to 80°C for the K3 Chassis)

K2 Chassis (Up to 50°C)

Multi V Outdoor Unit

Hydro kit
(P.HEX)

Domestic Hot Water Tank

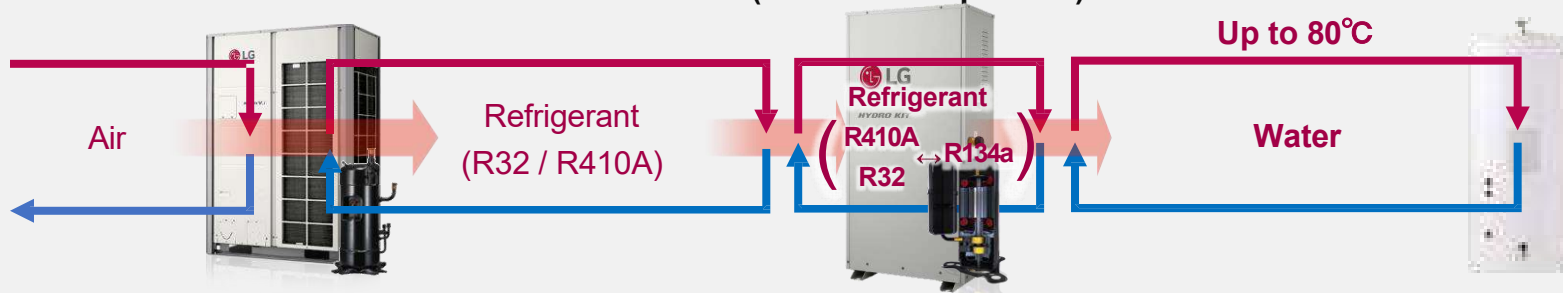


K3 Chassis (Up to 80°C)

Multi V Outdoor Unit

Hydro kit
(P.HEX + Compressor)

Domestic Hot Water Tank



• Wall mounted hydro kit

Wall mounted hydro kit is suitable for residential application and retail application requiring hot water.

Compatibility with R32

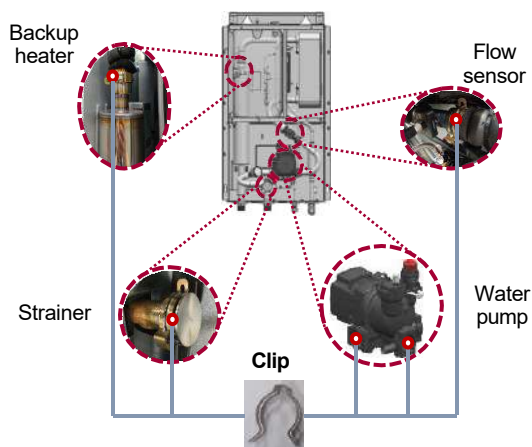


LG reduced refrigerant charge by applying environment-friendly refrigerant R32.

- Low GWP
- Less Refrigerant Charge
- Reduced Equipment Size

Easy Maintenance

Clip solution provide easy maintenance and SVC works.

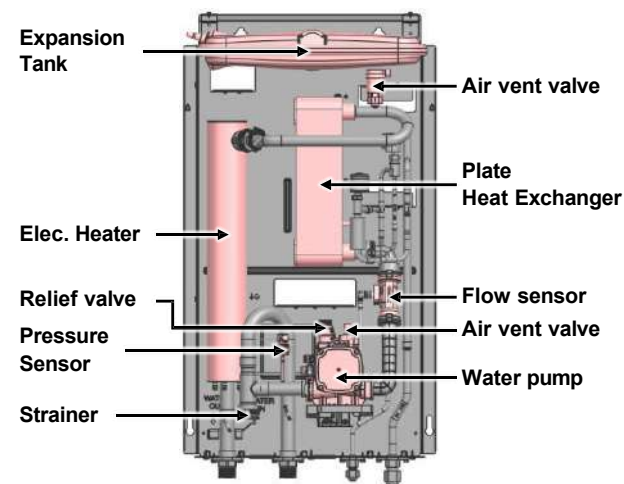


Wall Mounted Hydro Kit



Integrated Water Side Components

Various water side components are integrated into IDU, it **reduces installation cost and time**.



Wider Range / Smaller Capacity

Suitable for Residential Application or DHW Solution for small office.

• Medium Temperature Line-up

[Unit : kW]

Type		5.6	7.1	9.0	13.8	31.5
LG	Floor Standing				○	○
	IWT	○	○	○		
	Wall Mounted	○	○	○		

• Integrated Water Tank Hydro Kit

The Hydro Kit IWT is a medium temperature integrated water tank model.



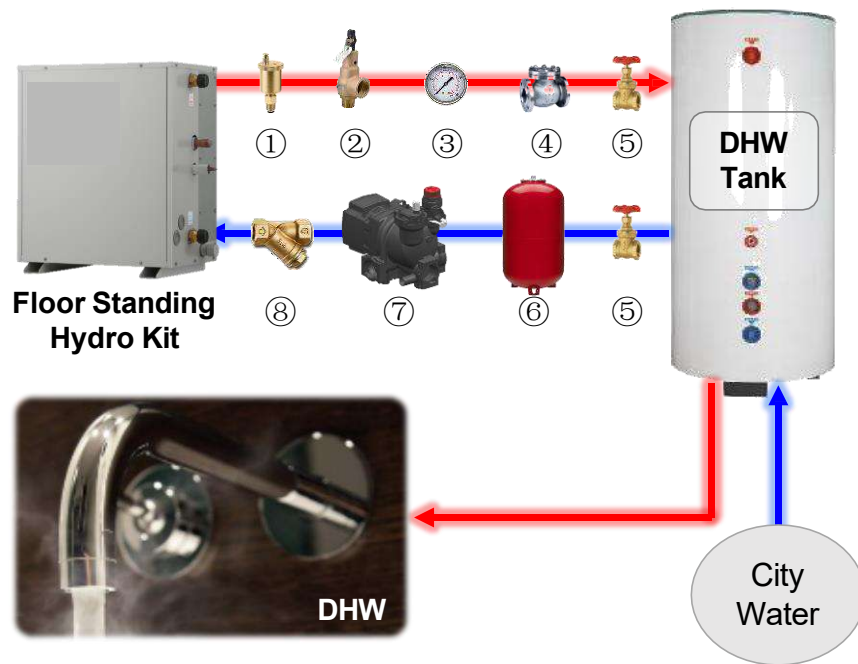
Product Type			Hydro Kit IWT		
			Medium Temp.		
Nominal Capacity		kBtu/h	18	24	30
Appearance		-	 ARNH**GK5A4 (K5 Chassis)		
Power Supply		-	1Φ, 220-240V, 50Hz		
Inlet Water Temperature	Cold Water	°C	10 ~ 35°C		
	Hot Water	°C	10 ~ 50°C		
Rated Capacity	Cooling	kW	5.6	7.1	9.0
	Heating	kW	5.6	7.1	9.0
Water Flow Rate	Rated	LPM	15.8	20.1	25.9
Connectable ODUs		-	MULTI V <i>i</i> , MULTI V 5, MULTI V S, MULTI V WATER 5		

• Integrated Water Components

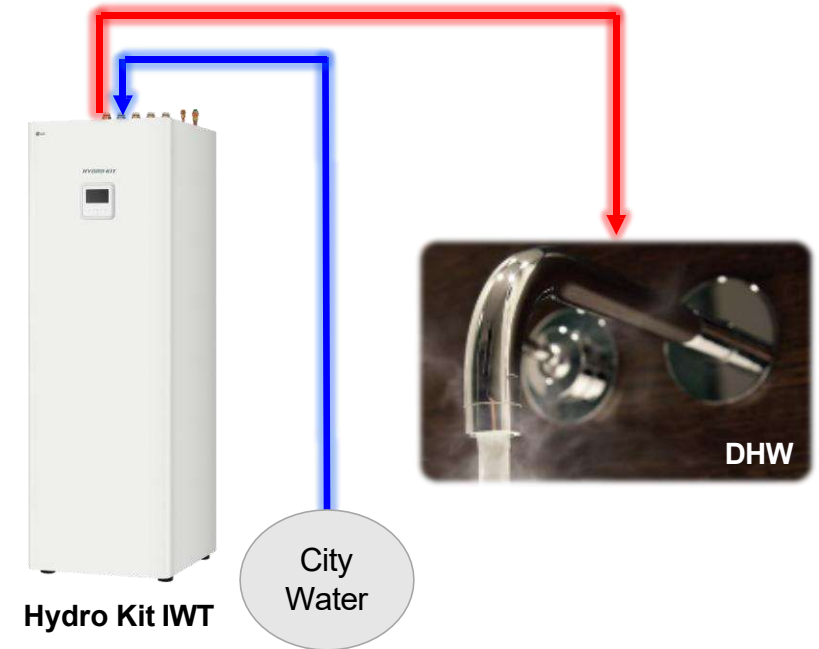
Easy Installation & Maintenance

All hydronic components are integrated into one unit, so it can save time and cost for the additional installation work.

Floor Standing Hydro Kit



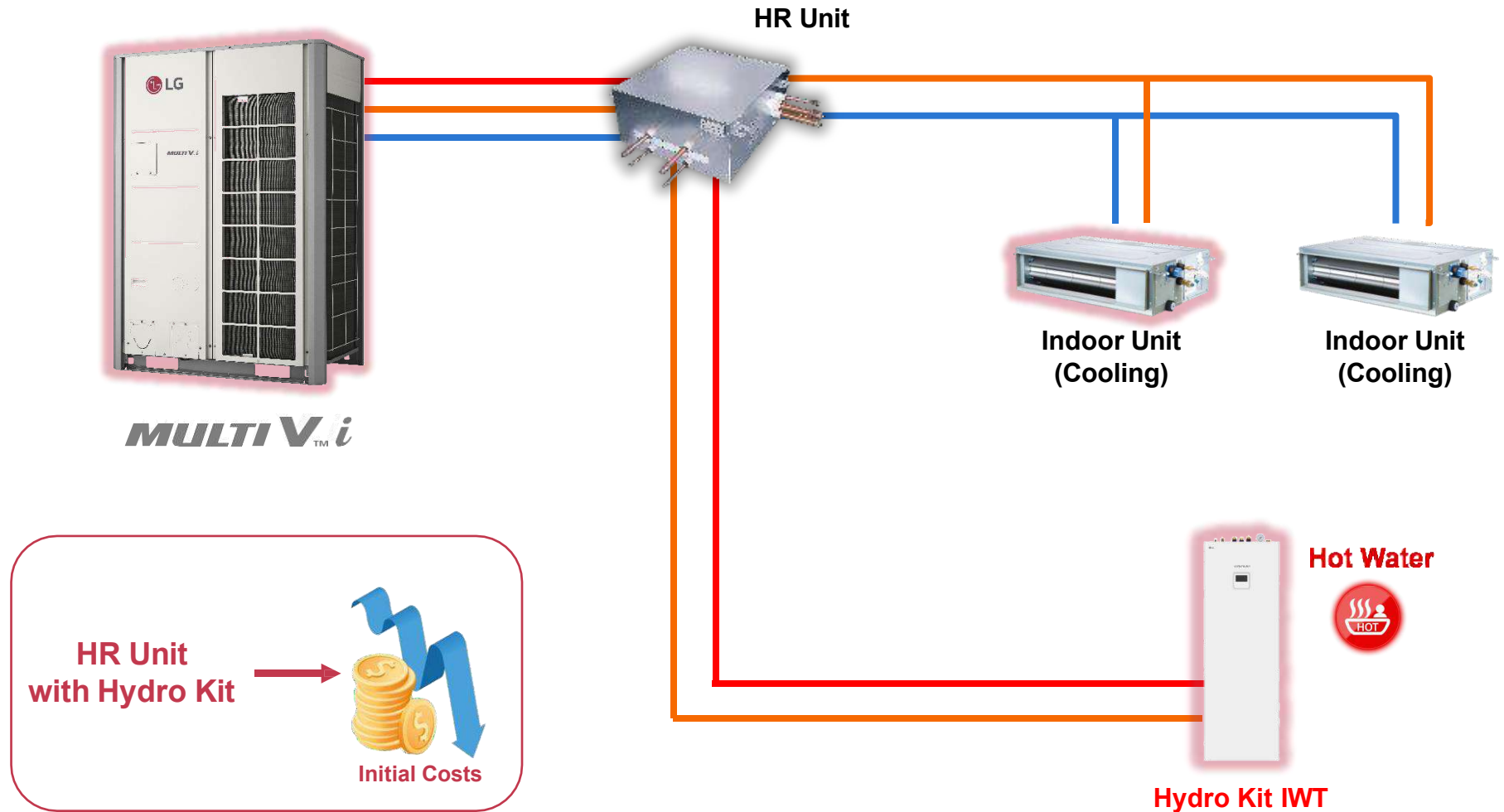
Hydro Kit IWT



①	Air Vent	⑤	On/Off Valve
②	Safety Valve	⑥	Expansion Tank
③	Pressure Gauge	⑦	Water Pump
④	Check Valve	⑧	Strainer

• Heat Recovery System

With HR unit, indoor units and Hydro Kit IWT can be installed as one system, making installation simple. Also, energy consumption can be reduced since absorbed heat from indoor space is used for supplying hot water in case of heat recovery type outdoor unit.

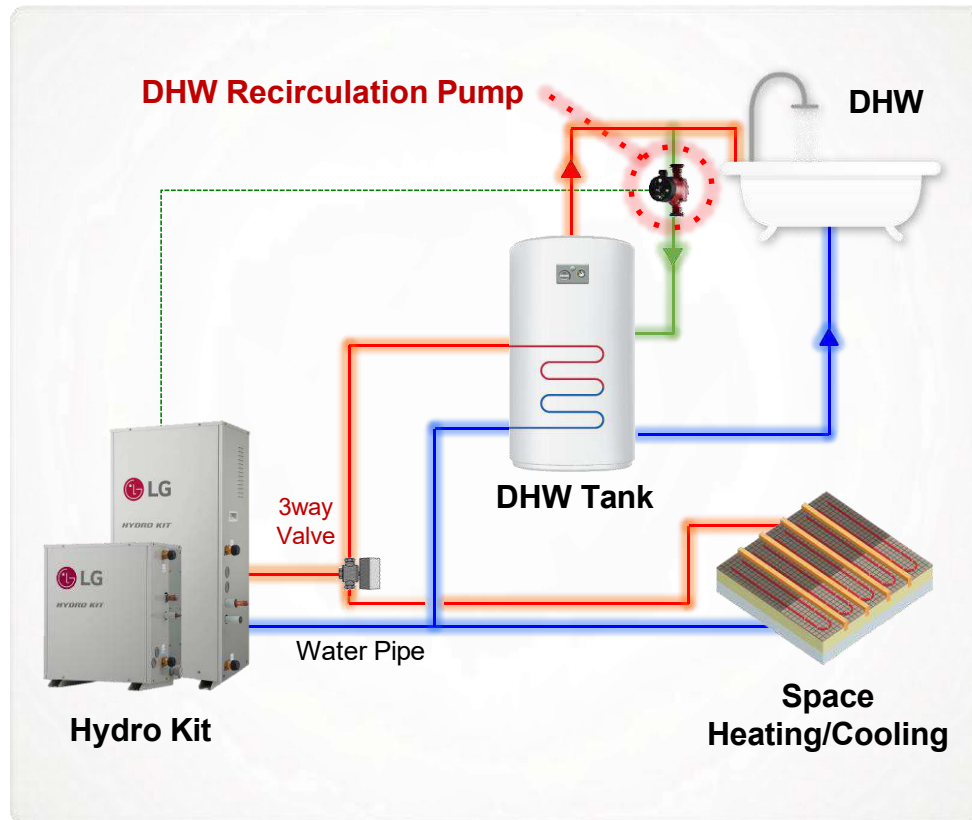




DHW Recirculation Pump

Hydro Kit can be connected to the DHW recirculation pump and the pump operates for a set period of time, so when the user turns on the tap, hot water comes out immediately.

Installation Scene



How to Set

Installer Setting

Activate, On/Off Time Setting

Domestic Hot Water	Back	OK
Tank setting1		
Tank setting2		
Heater priority		
DHW time setting		
Recirculation time		

Recirculation time	Back	OK
On		
Off		
Not use		
50		
20		

Setting	Setting Option	Default
DHW Recirculation	Use/Not Use	Not Use
On Time	5 ~ 60 min	10 min
OFF Time	5 ~ 60 min	20 min

User Setting

Scheduling

Menu	Back	OK
Schedule		

DHW Recirculation	Back	OK
1 06:00 ~ 07:00 Mon_Wed_Fri		
2 00:00 ~ 01:00 Everyday		
Not use		

- ※ DHW recirculation pump is a separately purchased component that is installed on field.
- ※ Both installer setup and user setup are required.
- ※ DHW recirculation schedule can be set up to 4 times.

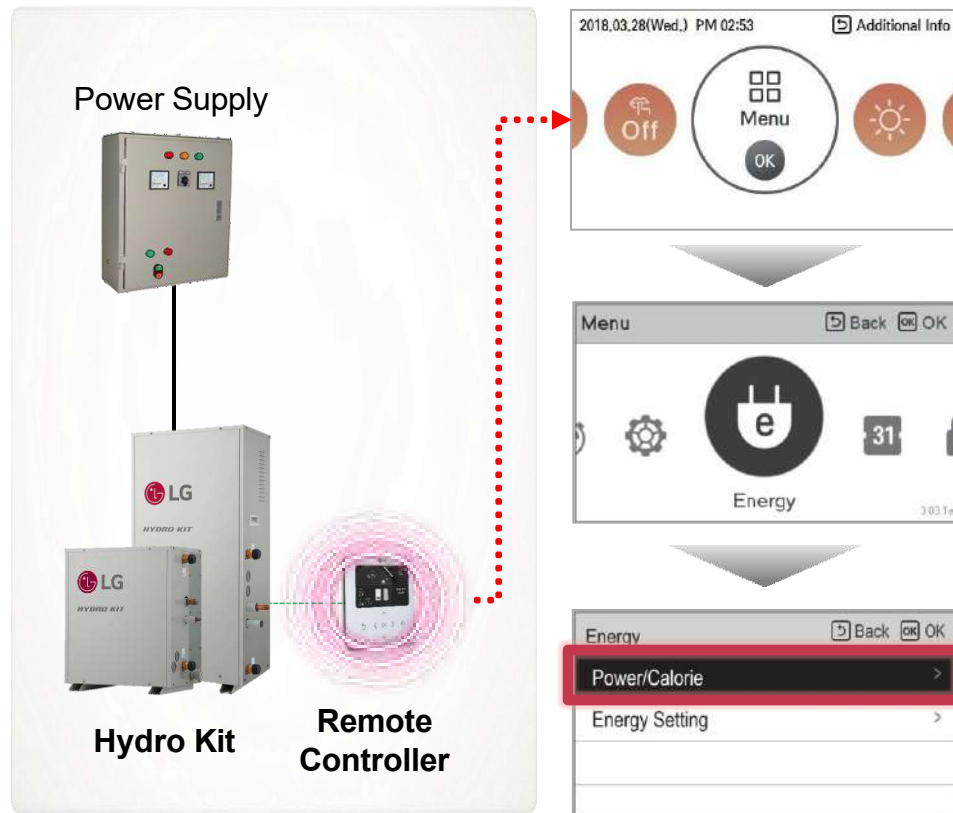


Energy Monitoring

Mid Temp. High Temp.
Convenient Function

Estimated power consumption and thermal energy can be monitored on the remote controller without connecting meter interface.

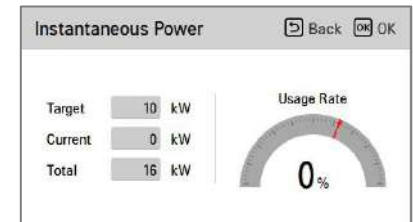
How to install & check



Monitoring Result at Controller

- Instant power consumption
- Power consumption by period (daily, weekly, monthly, yearly)
: Categorized as heat, cool, and DHW
- Produced heat output by period (daily, weekly, monthly, yearly) ¹⁾

Power/Calorie		Back	OK	OK
Year-on-year Usage		>		
Weekly Trend		>		
Monthly Trend		>		
Yearly Trend		>		
Summary		>		



Summary				 Back
Power		Heat Output		
	Heat	Cool	DHW	Total
Today	0	0	0	0
Monthly	0	0	0	0
Yearly	683	0	1149.2	1832.2

Unit : kWh

Summary		 Back
Power		Heat Output
	Heat Output	
Today	0	
Monthly	0	
Yearly	0	
		Unit : kWh

1) When using antifreeze, it will not be available.

※ The calculated produced heat output and power are an estimation, the accuracy cannot be guaranteed. The energy data should NOT be used for being invoiced or requested to government incentive and subsidy. For more accurate power output, please install PDI to check.



Convenient Scheduling

Mid Temp. High Temp.
Convenient Function

Operation schedule can be customized to the user's taste by the remote control. This function helps save energy and makes users feel convenient.



07:00

DHW : Hot water On



18:00

Heating : Heating On



20:00

Heating : Change the Temp.



02:00

Heating : Change the Temp.

The remote control displays the 'Daily Schedule Room' screen with a circular temperature gauge showing 6.19. Below the gauge, it shows 'AM 12:00 - AM 10:00'.

The 'Schedules & Edit Room' screen shows a list of schedules:

+ Add Schedule	
50°	12:00 AM Everyday 24.03.28 ~ 24.03.28
Off	12:00 AM Everyday 24.03.29 ~ 24.03.29
50°	08:00 AM Everyday 24.03.29 ~ 24.03.29

- Energy saving is possible by setting the operating temperature and on/off according to the occupancy pattern.
- Up to 30 events can be set for each of cooling, heating and DHW.

• Wi-Fi Control

Customers can monitor and control the Hydro Kit anytime, and from anywhere through LG ThinQ.

Mobile Remote Control

- Power On/Off
- Mode Setting
- Monitoring & Control
 - 1) Heating (Air Temperature)
: Hot Water Activation (Tgt.) / Space (Tgt.)
 - 2) Heating (Leaving Water Temperature)
: Hot Water Activation (Tgt.) / Outlet Temp. (Tgt.)

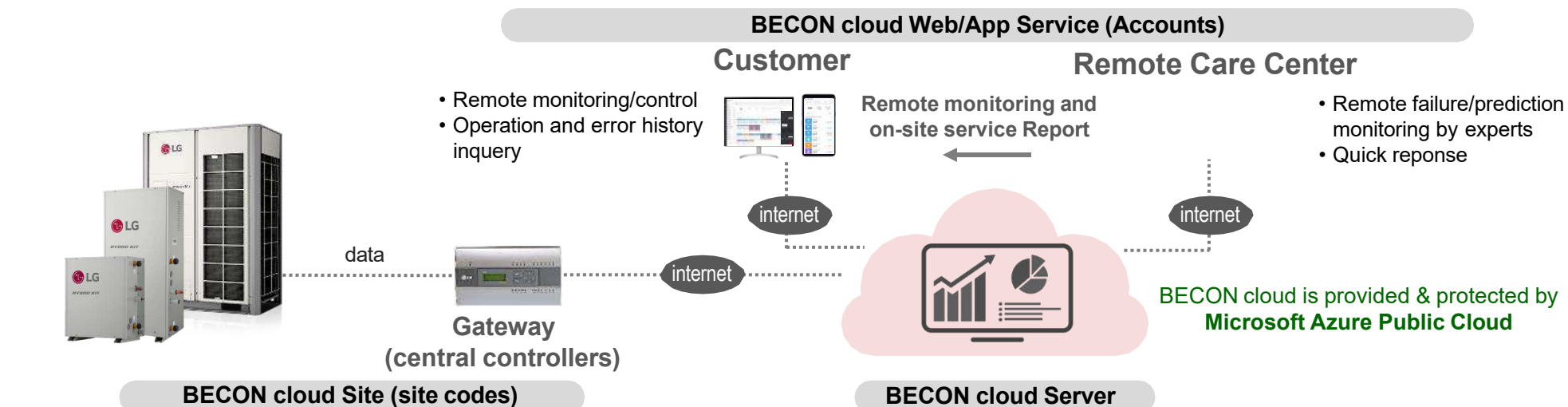
※ For Wi-Fi control, the Wi-Fi modem should be purchased separately. (Model Number : PWFMD200)
※ The LG ThinQ application can be downloaded by searching "LG ThinQ" in the Play Store or App Store.
※ Functions may vary depending on the indoor unit and region.
※ For voice control, you need to check Google or Amazon device availability in your country.



• BECON Cloud(TMS)

Mid Temp. High Temp.
Convenient Function

BECON cloud (TMS) checks system operation status through various sensor, and finds the cause of the problem and guides to maintain stable system operation.



Collecting various information

Analysis

Solution provided

Product Information



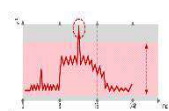
External Environment



Energy monitoring / saving analysis



Device operation / health analysis



Failure prediction



Energy Savings / Waste Reduction Guide



Stable operation / Part replacement guide

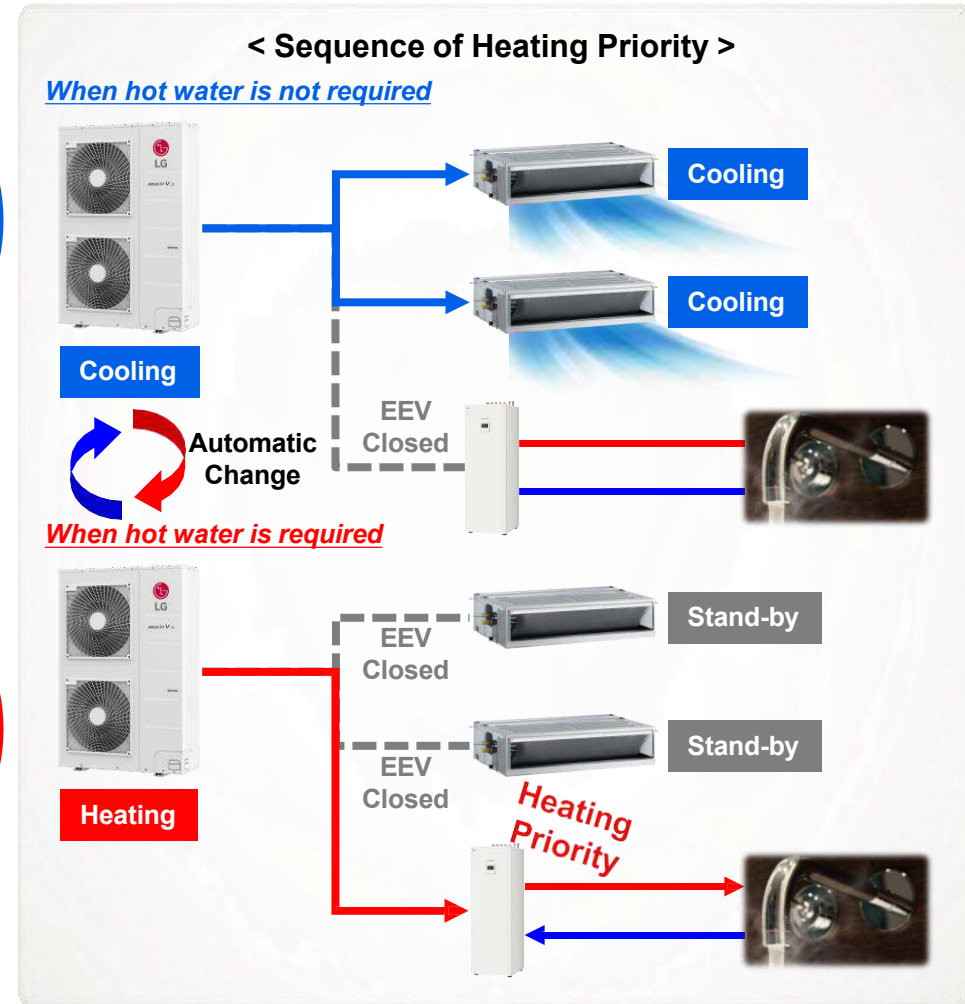
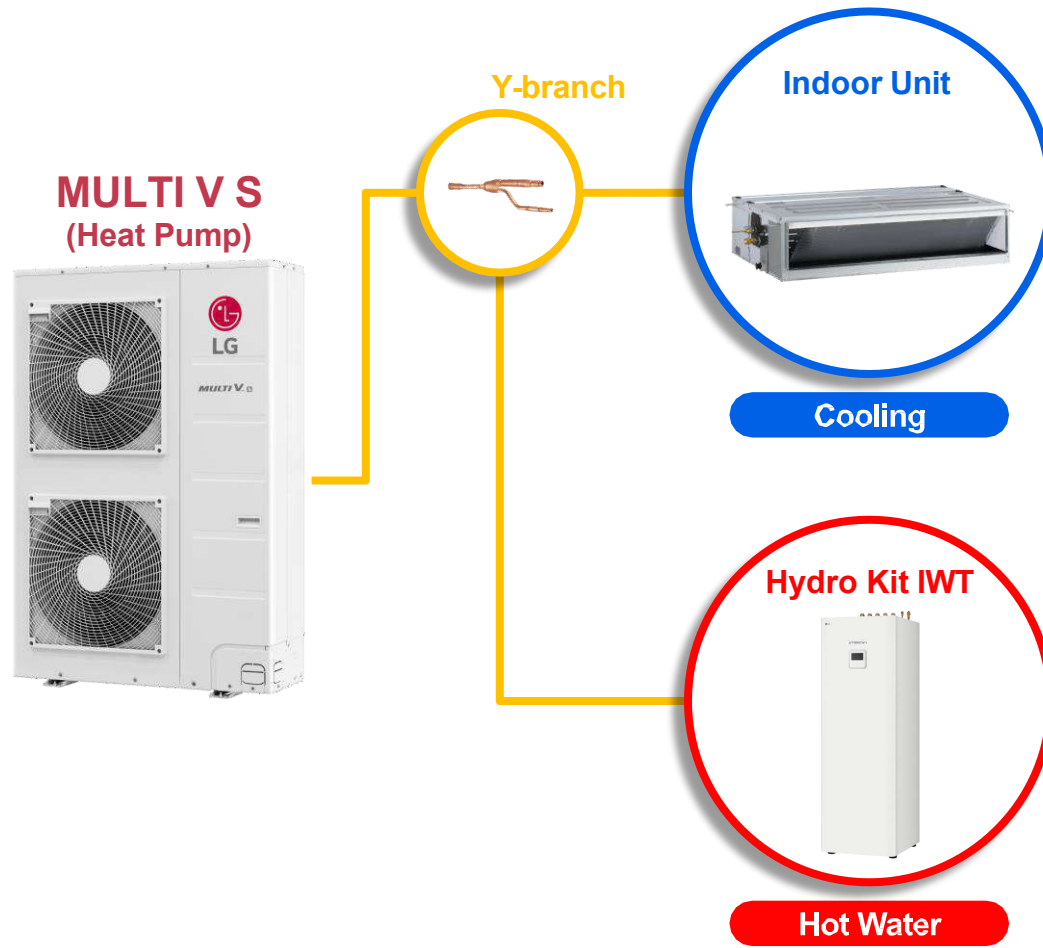


Error Monitoring/ Technical support

• Heating Priority Function

Easy Installation & Maintenance

When the Hydro Kit IWT is connected to the MULTI V S Heat Pump, it can provide hot water during the cooling season by the Heating Priority function.



• Convenient Scheduling

Convenient Functions

Operation schedule can be customized to the user's taste by the remote control. This function helps save energy and makes users feel convenient.



07:00

DHW : Hot water On



18:00

Heating : Heating On



20:00

Heating : Change the Temp.



02:00

Heating : Change the Temp.



Schedules & Edit Room			Back	OK
+ Add Schedule				
50°	12:00 AM	Everyday 24.03.28 ~ 24.03.28		
Off	12:00 AM	Everyday 24.03.29 ~ 24.03.29		
50°	08:00 AM	Everyday 24.03.29 ~ 24.03.29		

- Energy saving is possible by setting the operating temperature and on/off according to the occupancy pattern.
- Up to 30 events can be set for each of cooling, heating and DHW.

HEAT PUMP WATER HEATER

R290

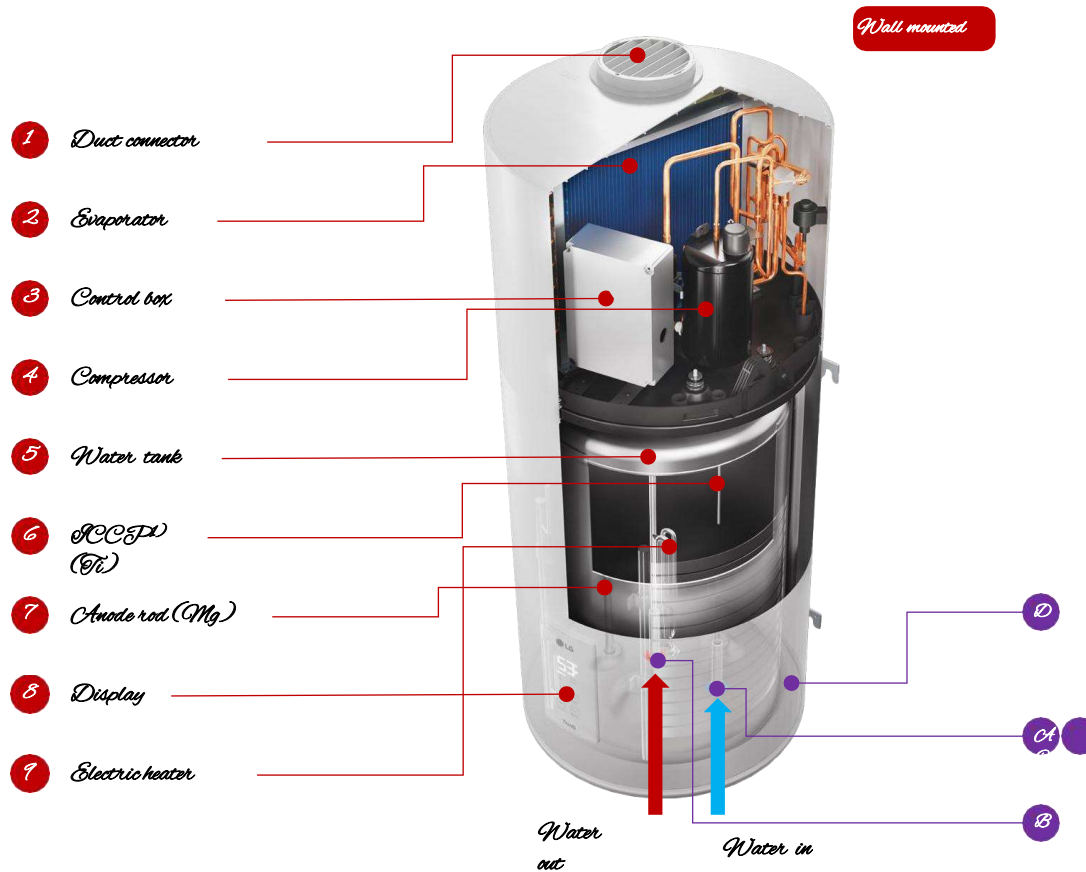


R134a



Round type models

Major components

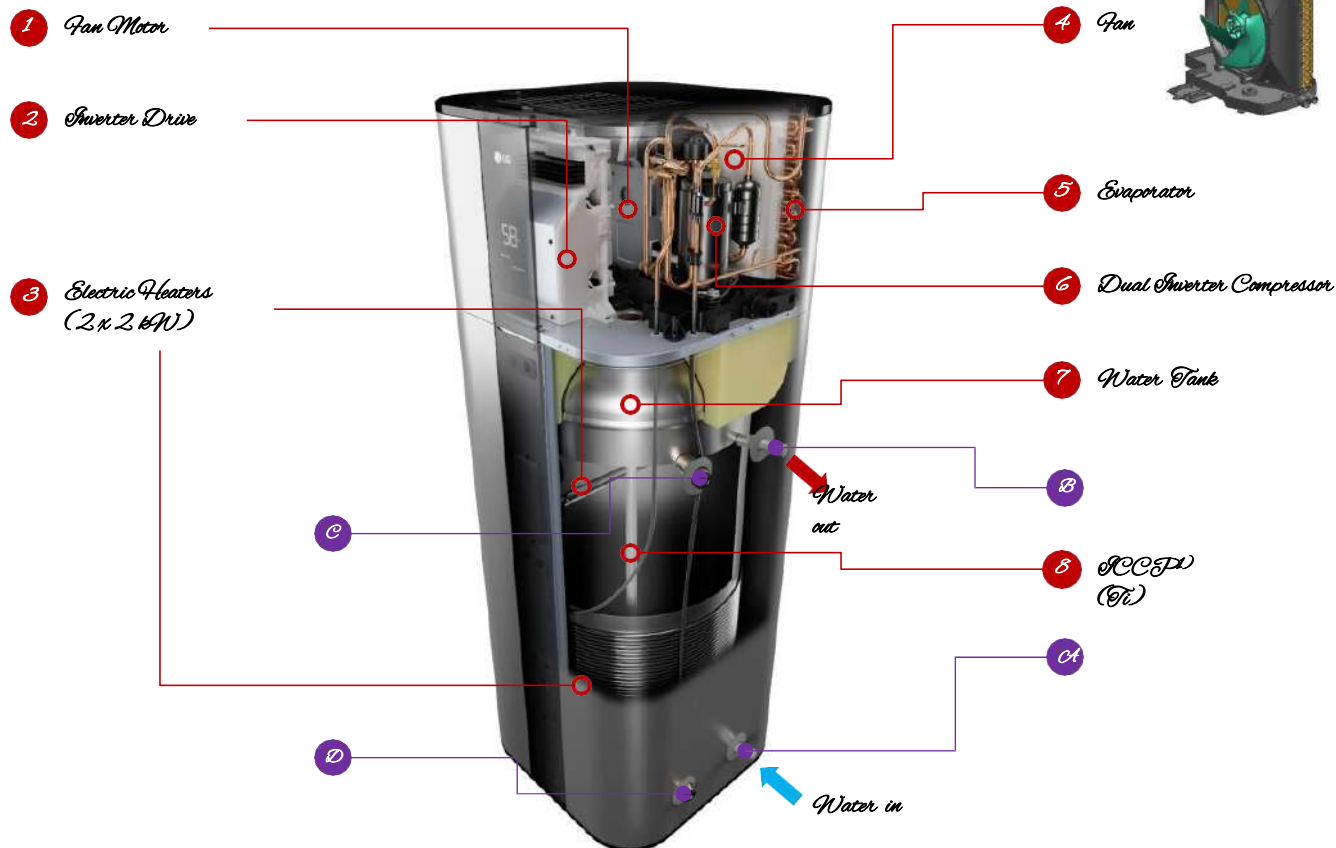


1) Impressed Current Cathodic Prevention

* Picture shown 100 l models.

Square type models

Major components

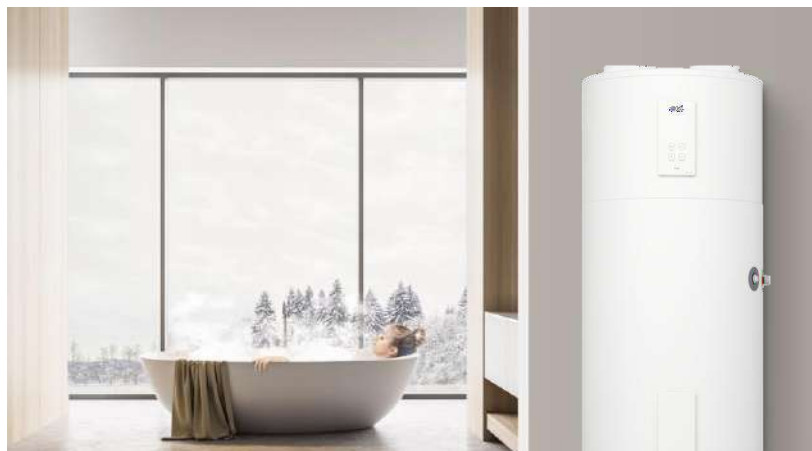


1) Impressed Current Cathodic Prevention

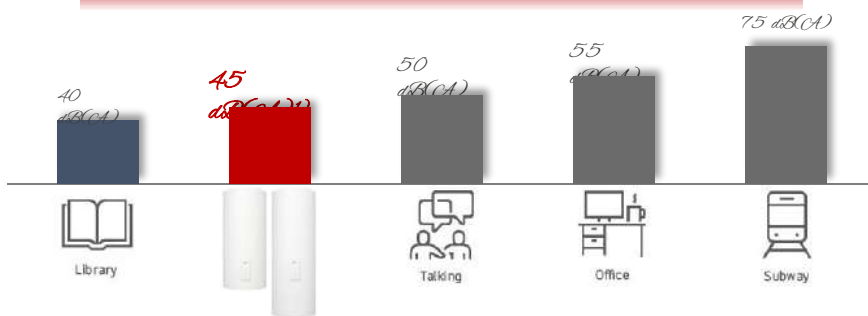
* Picture shown 200 l models.

LG Heat Pump Water Heater

Quiet operation noise



Since the noise level is below 45 dB(A)¹⁾, it provides a comfortable environment even in indoor installation scenes.



1) Based on 100 / 150 l models (WH**ESF0.HA)

2) Rated sound power/pressure level was measured on the rated condition in accordance with EN 12102-2 and ISO 3741

3) Sound pressure level measured at 2 m away from the unit

Users will hardly recognize the water heater operating, as it runs quietly at just 38 dB(A) from 2 meters away, creating a calm and peaceful environment

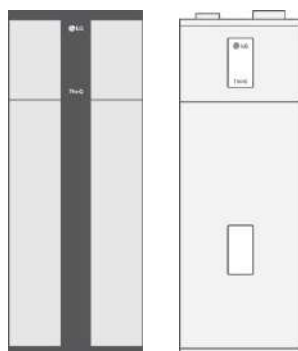


Sound levels	Round type			Square type	
	100ℓ	150ℓ	200ℓ	200ℓ	270ℓ
Sound power level [dB(A)] ²⁾	45	45	53	55	55
Sound pressure level [dB(A)] ^{2),3)}	38	38	38	38	38

Ensuring safe water systems

Anti-legionella operation

The Anti Legionella function is designed to provide safe and clean water, operating automatically to protect users' health and maintain a reliable heat pump water heater.

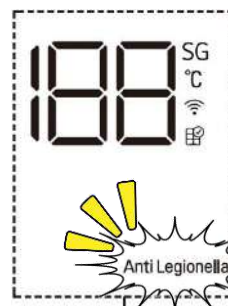


If the user activates the Anti Legionella mode, it will automatically perform the action of heating the water in the water tank to above 60°C for 1 hour once a week.

Water temperature (°C)	Survival potential	Reproduction potential	notes
70°C and above	Almost instant death	Impossible	Immediate sterilization effect
✓ 60°C-70°C	Death within 2 minutes at 60°C	Impossible	Rapid death
45°C-60°C	Low	Impossible	Survives but does not reproduce
30°C-45°C	High	Optimal reproduction	Optimal growth temperature range
20°C-30°C	Moderate	Low	Limited reproduction possible

Source: "Legionella and the Prevention of Legionellosis," published by WHO, 2007.

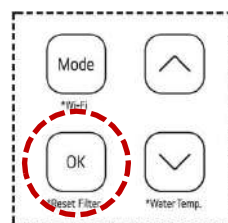
How to set the Anti Legionella mode



② Display screen

STEP 2

Display blinks "Anti Legionella" x 4 times



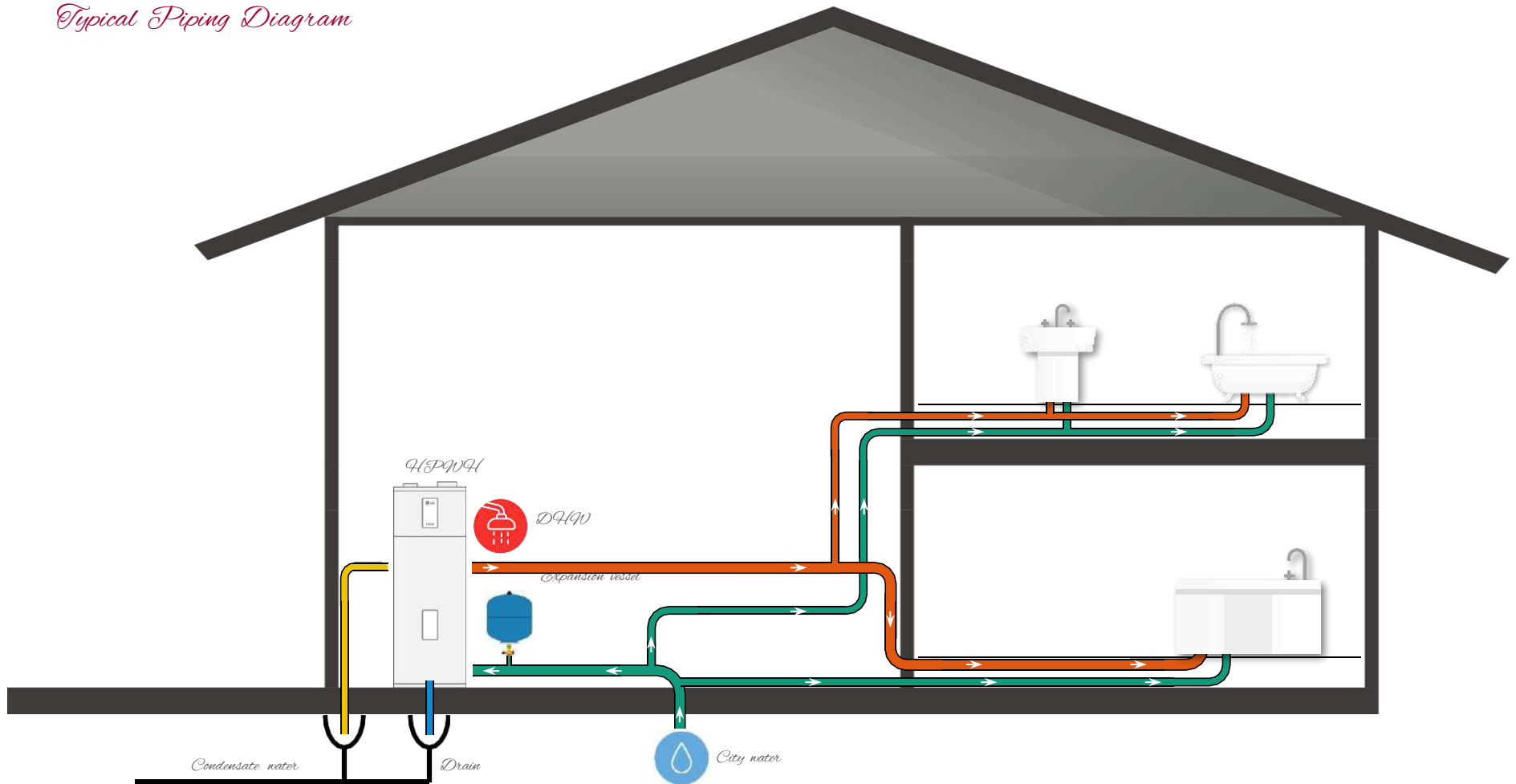
① Button

STEP 1

Press and hold 'OK' button about 3 seconds to set the Anti Legionella mode active or inactive

LG Heat Pump Water Heater

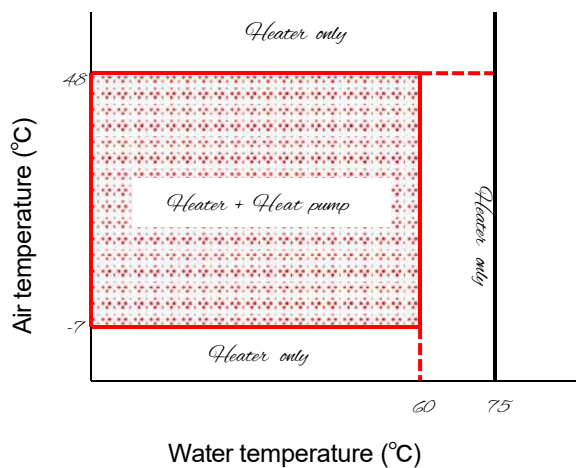
Typical Piping Diagram



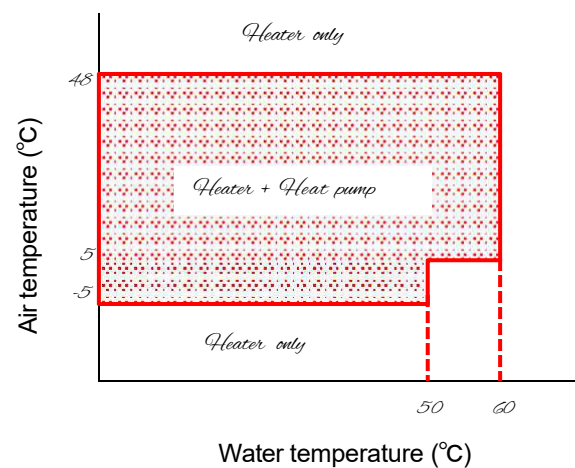
LG Heat Pump Water Heater

Operation range

Round type¹⁾



Square type²⁾



* The operation range figure is based on the following conditions: no ducted.

1) WH10ESF0.HA/ WH15ESF0.HA/ WH20ESF0.CA

2) WH20SF5/ WH27SF5/ WH20STR2.FA/ WH27STR2.FA

THANK Y
OU

