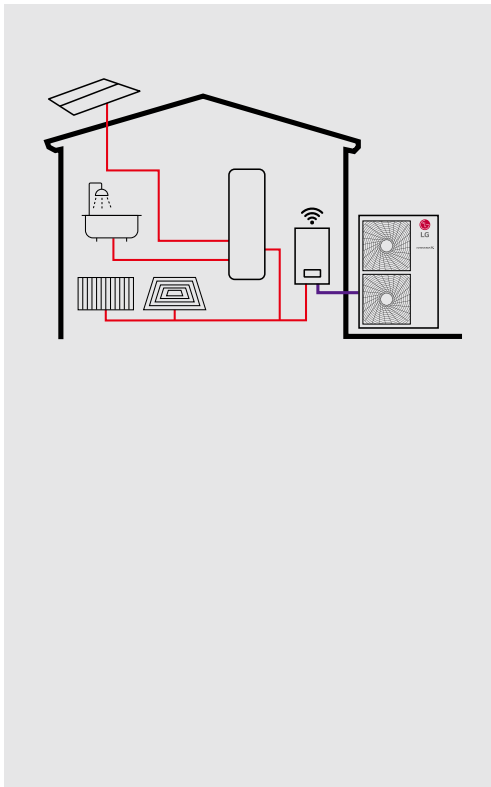


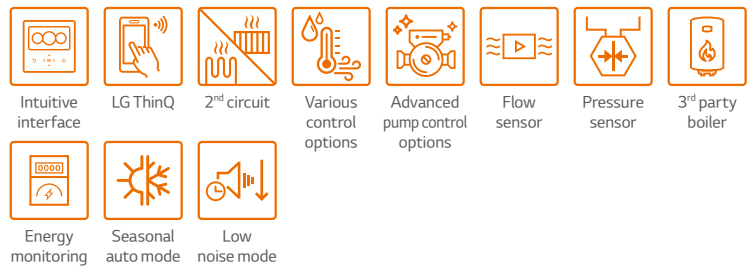
THERMA V™ R32 HYDROSPLIT



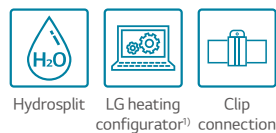
Excellent Performance & Efficiency



User Convenience



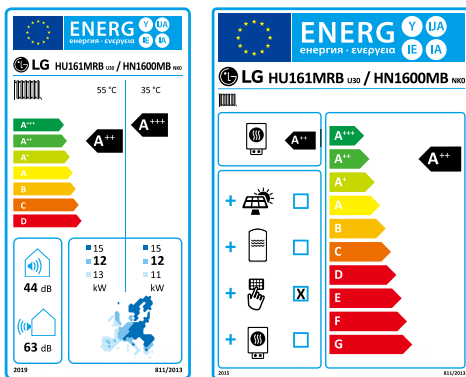
Easy Installation & Maintenance



1) Will be supported within this year.

* Detailed description for each function is presented on page 26 – 43.

Energy Labeling



* 16kW 1Ø model.

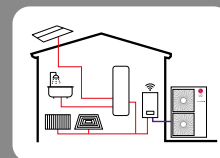
* A+++ to D scale.

Hydrosplit Concept

With innovation and safety in mind, the LG THERMA V Hydrosplit separates the Indoor unit (IDU) and outdoor unit (ODU), connecting them through water pipes.

The unit's heat exchanger is located within the ODU, reducing the risk of indoor refrigerant leakage. Quick and easy installation is made possible by the IDU's built-in hydronic components such as water pump, expansion tank, and air vent as well as the fact that the electric wiring can be done in the same space as the IDU.



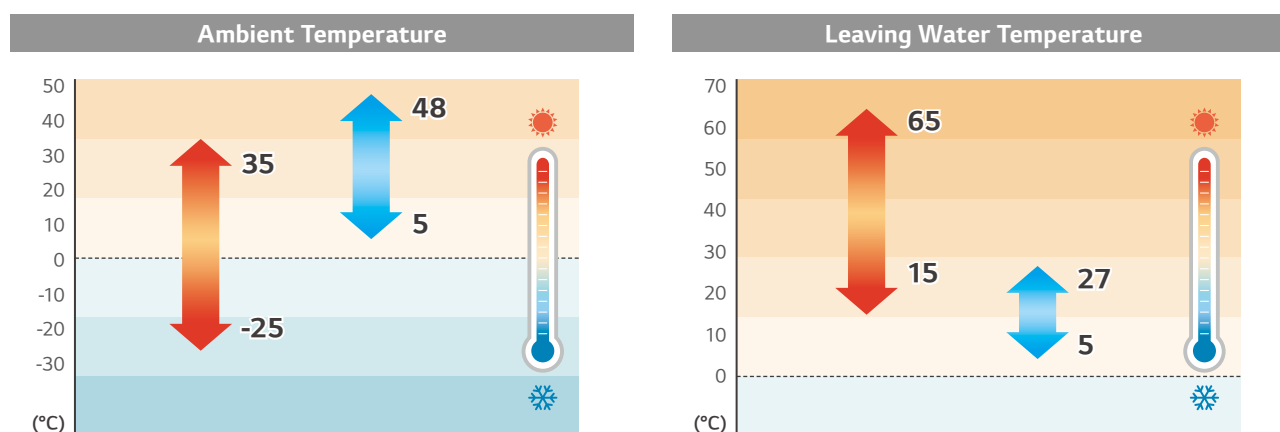


Capacity Range (Heating & Cooling)

R32 Hydrosplit

Capacity Range [kW]	12	14	16
Heating Capacity	● (12.0)	● (14.0)	● (16.0)
Cooling Capacity	● (12.0)	● (14.0)	● (16.0)

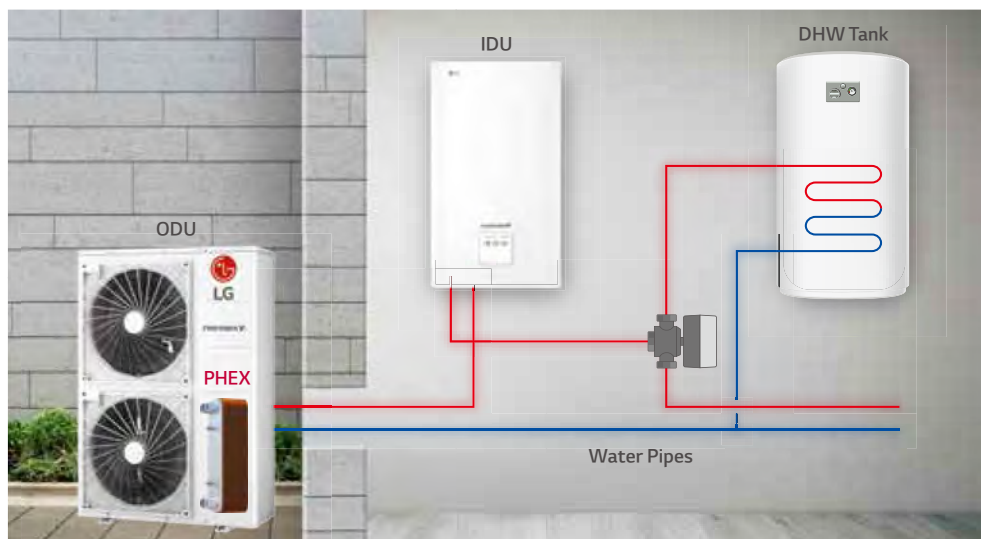
Operation Range (Heating & Cooling)



PRODUCT FEATURES

Hydrosplit Concept

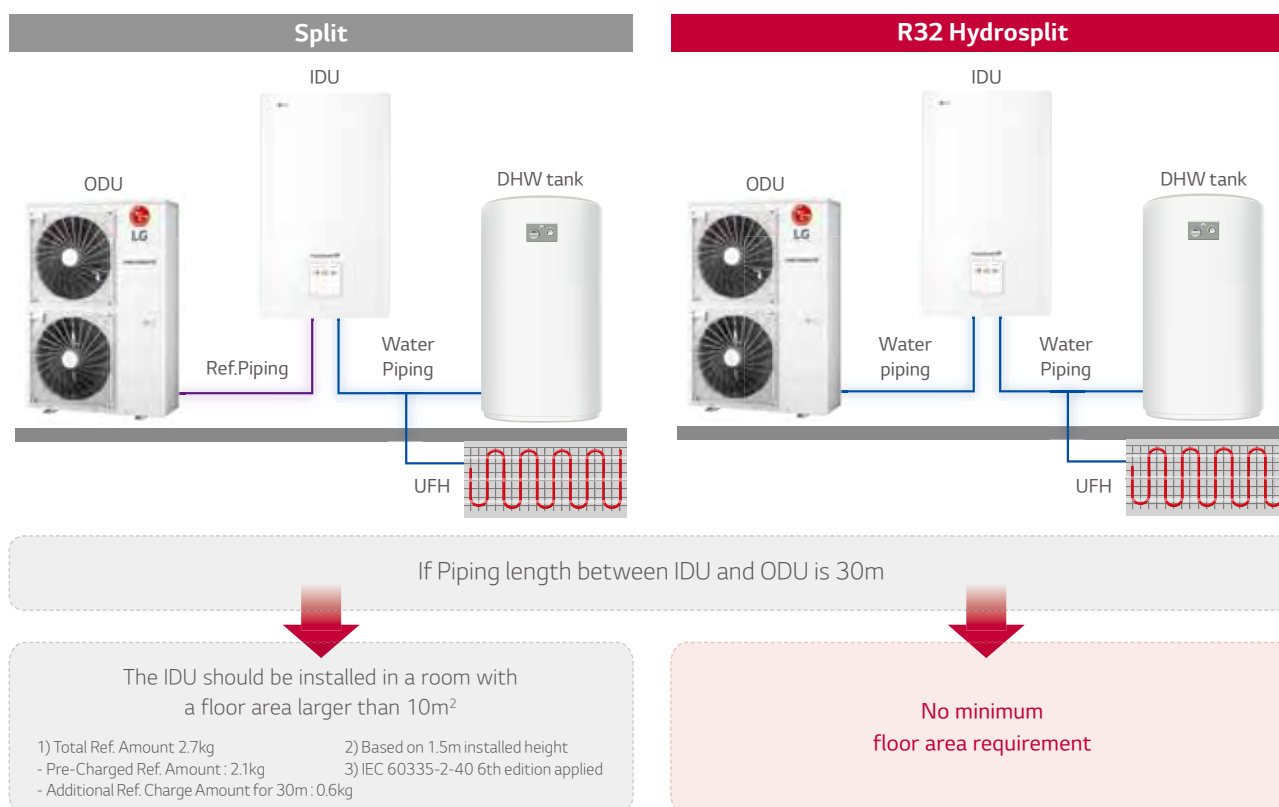
The THERMA V R32 Hydrosplit connects an IDU and ODU by water pipes due to the heat exchanger's location in the outdoor unit, thus reducing the risk of indoor refrigerant leakage.



* PHEX : Plate Heat Exchanger

No Risk of Indoor Refrigerant Leakage

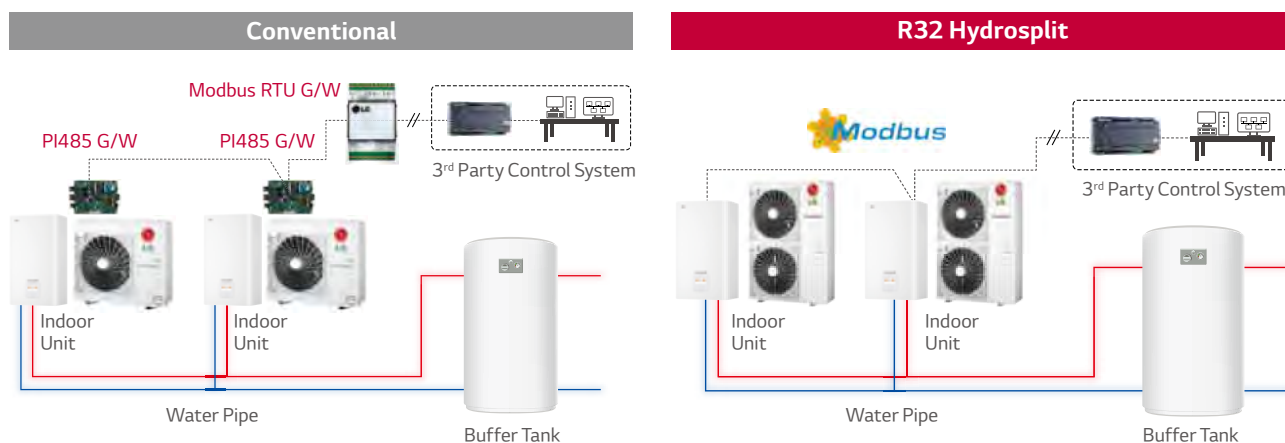
As there is no refrigerant inside of room, no need to consider minimum floor area requirement for IDU due to R32 refrigerant. As a result, it is possible to expand living area more for other purpose.



Modbus Communication

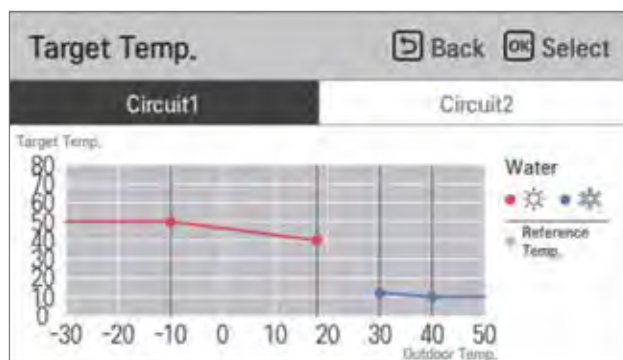
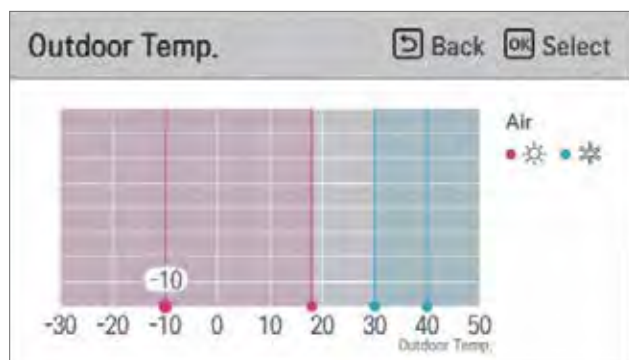
Considering the units in parallel installation, it is required to think how to control them.

The R32 Hydrosplit can be connected to 3rd party control system using Modbus protocol directly, without Modbus RTU gateway and PI485 gateway. Moreover, R32 Hydrosplit is able to support much more functions than conventional one using new Modbus memory map.



Visualized Seasonal Auto Mode Setting

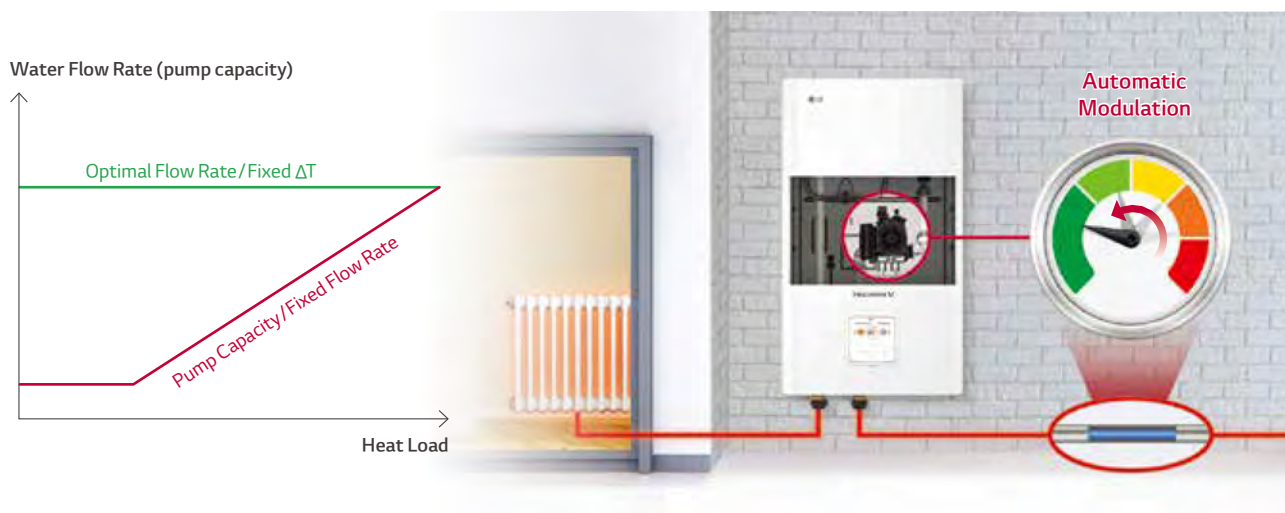
In this mode, the target temperature and operation mode will be changed automatically according to the outdoor temperature. Moreover, now this function can be used in 2nd heating circuit and conveniently set using visualized graphic.



PRODUCT FEATURES

Advanced Pump Control Options

Various pump control options are possible for the user's convenience. With the R32 Hydrosplit, the water flow rate can be changed as per heat load condition, therefore it makes more energy efficient operation during low load condition.

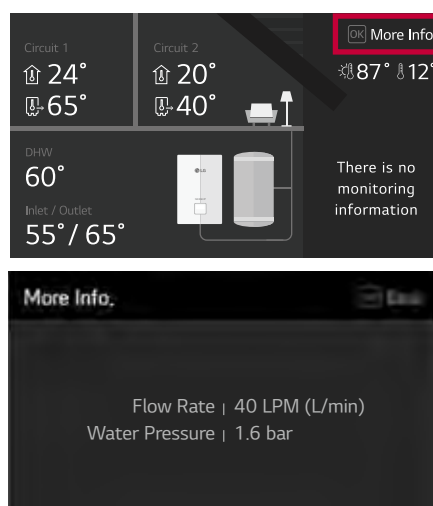
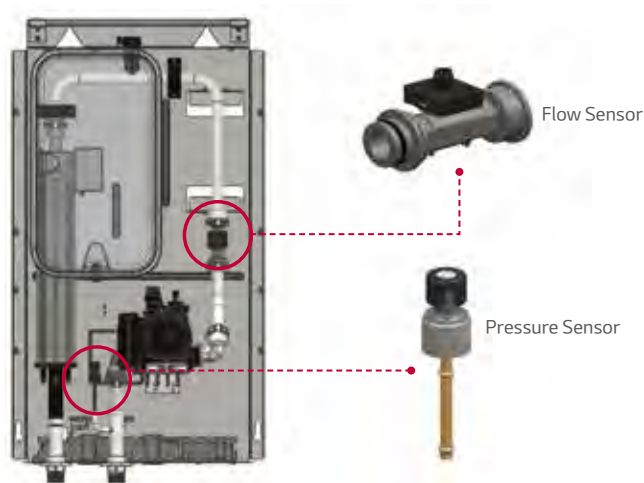


Options	Description	Water Flow Change as per load condition
Pump Capacity	It operates with the capacity set for the water pump. (range 10 ~ 100%)	No
Fixed Flow Rate	Automatically controlled to maintain the set flow rate. (range 17 ~ 46 LPM)	No
Fixed ΔT^*	Automatically controlled to maintain the set ΔT . (range 5 ~ 13°C)	Yes
Optimal Flow Rate (default)	ΔT is changed as per Target Temp.	Yes

* ΔT = temperature difference between inlet and outlet water temperature.

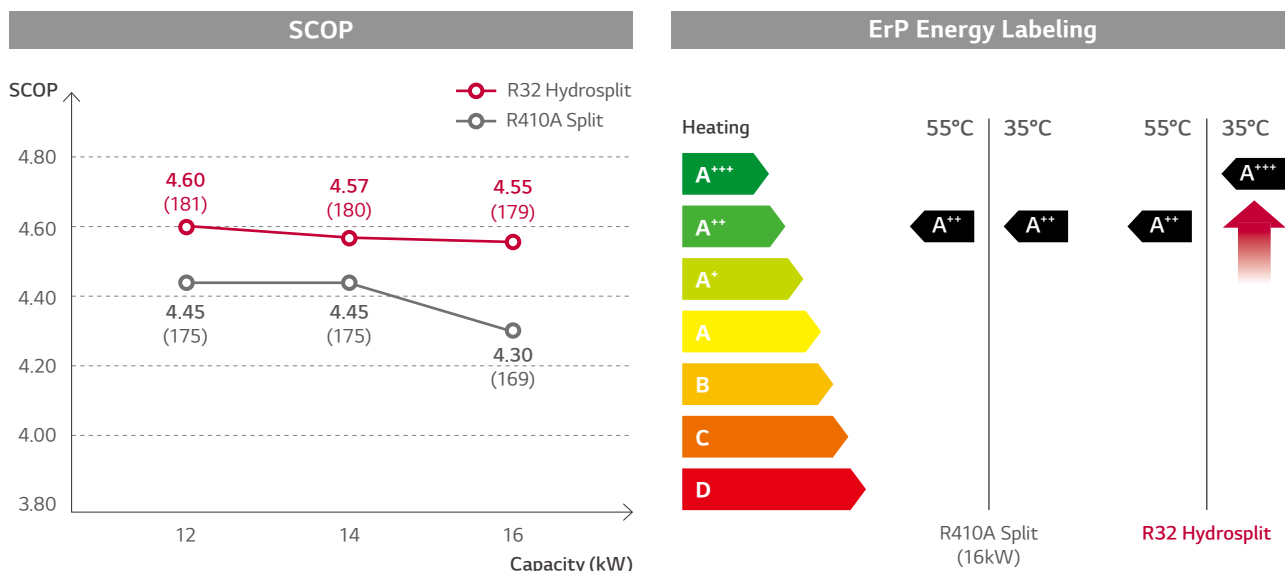
Water Circuit Monitoring

It is possible to monitor via remote controller not only temperature of water circuit but also flow rate and pressure. This information is not only useful to the installer during installation, but also helps to periodically clean the strainer.



High Energy Efficiency

The energy label directive is a key factor in selecting a heating device in the European heating market. The R32 Hydrosplit has an energy label rating (ErP) for space heating of A+++.

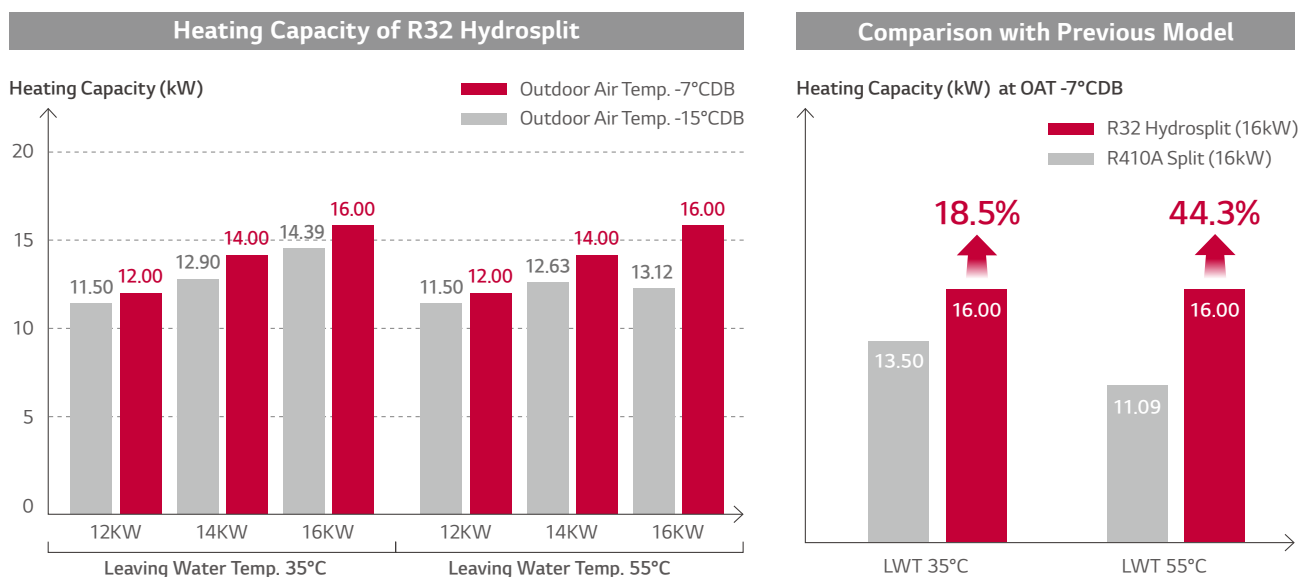


* Test Condition

Test procedure follows EN14825 (low temp. average). based on the single phase model line-up.

High Heating Performance even at Low Temperature

The R32 Hydrosplit provides excellent heating performance – especially at low ambient temperatures. Its heating capacity at OAT -7°CDB is the same as normal capacity and heating capacity at OAT -15°CDB reaches more than 90% of normal capacity¹⁾. The heating capacity of the R32 Hydrosplit is 18.5% higher at low ambient temperatures and 44.3% higher at mid ambient temperature than the R410A Split.



1) Normal : Outdoor air temperature 7°CDB / 6°CWB, Water outlet temperature 35°C

PRODUCT SPECIFICATION

R32 Hydrosplit

IDU

HN1600MB NK0

ODU

HU121MRB U30 / HU123MRB U30

HU141MRB U30 / HU143MRB U30

HU161MRB U30 / HU163MRB U30



R1 Compressor™

Black Fin



ThinQ

011-1W0382 EHPA for Switzerland and Germany

Features

- Water pipes connects IDU & ODU
- High energy efficiency (SCOP up to 4.60/A+++)
- Hydronic components built into IDU : water pump, expansion tank, air vent
- Excellent performance at low ambient temperature (100% @ -7°C)
- Wide operation range (ambient : -25 ~ 35°C / water side : 15 ~ 65°C)
- Built-in water flow & pressure sensors to monitor real-time water circuit
- Advanced water pump control (optimal flow rate, fixed capacity, fixed flow rate, fixed ΔT)
- Enhanced 2nd circuit control logic
- R32 refrigerant with low GWP
- R1 scroll compressor
- Black Fin heat exchanger
- LG ThinQ
- KEYMARK/EHPA certification/MCS/Eurovent certification

Model Line-up

Category	Unit	Model Name		
		Capacity (kW)		
		12.0	14.0	16.0
1 Phase Model 220 ~ 240V, 1Ø, 50Hz	Outdoor Unit	HU121MRB U30	HU141MRB U30	HU161MRB U30
	Indoor Unit	HN1600MB NK0		
3 Phase Model 380 ~ 415V, 3Ø, 50Hz	Outdoor Unit	HU123MRB U30	HU143MRB U30	HU163MRB U30
	Indoor Unit	HN1600MB NK0		

Seasonal Energy

Description			Outdoor Unit	HU121MRB U30 HU123MRB U30	HU141MRB U30 HU143MRB U30	HU161MRB U30 HU163MRB U30
			Indoor Unit	HN1600MB NKO		
Space Heating (according to EN14825)	Average Climate Water Outlet 35°C	SCOP	-	4.60	4.57	4.55
		Seasonal Space Heating Efficiency (η_s)	%	181	180	179
		Seasonal Space Heating Eff. Class (A+++ to D scale)	-	A+++	A+++	A+++
	Average Climate Water Outlet 55°C	SCOP	-	3.50	3.47	3.45
		Seasonal Space Heating Efficiency (η_s)	%	137	136	135
		Seasonal Space Heating Eff. Class (A+++ to D scale)	-	A++	A++	A++

Nominal Capacity and Nominal Power Input

Description		OAT (DB)	LWT (DB)	Outdoor Unit	HU121MRB U30 HU123MRB U30	HU141MRB U30 HU143MRB U30	HU161MRB U30 HU163MRB U30
				Indoor Unit	HN1600MB NKO		
Nominal Capacity	Heating	7°C	35°C	kW	12.00	14.00	16.00
		7°C	55°C		11.00	11.50	12.00
		2°C	35°C		11.00	12.00	13.80
	Cooling	35°C	18°C		12.00	14.00	16.00
		35°C	7°C		12.00	14.00	16.00
		7°C	35°C		2.38	2.86	3.33
Nominal Power Input	Heating	7°C	55°C	kW	3.79	4.04	4.29
		2°C	35°C		3.01	3.31	3.83
		7°C	35°C		2.53	3.26	4.00
	Cooling	35°C	18°C		4.44	5.38	6.40
		35°C	7°C		5.04	4.89	4.80
		7°C	55°C		2.90	2.85	2.80
COP	Heating	2°C	35°C	W/W	3.65	3.63	3.60
		35°C	18°C		4.75	4.30	4.00
		35°C	7°C		2.70	2.60	2.50

PRODUCT SPECIFICATION

R32 Hydrosplit

Product Specification (Outdoor Unit)

Technical Specification			Unit	HU121MRB U30	HU141MRB U30	HU161MRB U30	HU123MRB U30	HU123MRB U30	HU143MRB U30
Operation Range (outdoor temp.)	Heating	Min. ~ Max.	°CDB	-25 ~ 35					
	Cooling		°C	5 ~ 48					
Compressor	Quantity		EA	1					
	Type		-	Hermetic Sealed Scroll					
Refrigerant	Type		-	R32					
	GWP (global warming potential)		-	675					
	Precharged Amount		g	2,100					
	t-CO ₂ eq		-	1.418					
Piping Connections	Water Circuit	Inlet	mm (inch)	Male PT 25.4(1)					
		Outlet	mm (inch)	Male PT 25.4(1)					
Rated Water Flow Rate (at LWT 35°C)			LPM	34.5	40.3	46.0	34.5	40.3	46.0
Sound Power Level	Heating	Rated	dB(A)	61	62	63	61	62	63
Sound Pressure Level (at 1m)	Heating	Rated	dB(A)	53	54	55	53	54	55
Dimensions	Unit	W x H x D	mm	950 x 1,380 x 330					
Weight	Unit		kg	91.7					
Power Supply	Voltage, Phase, Frequency		V, Ø, Hz	220 ~ 240, 1, 50			280 ~ 415, 3, 50		
	Rated Running Current	Heating	A	10.6	12.7	14.8	3.5	4.2	4.9
		Cooling	A	11.2	14.4	17.7	3.7	4.8	5.9
	Recommended Circuit Breaker		A	40			16		
Wiring Connections	Power Supply Cable (included earth, H07RN-F)		mm ² x cores	6.0 x 3C			2.5 x 5C		

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound power level is measured on the rated condition in the reverberation rooms by ISO 9614 standard.
Therefore, these values can be increased owing to ambient conditions during operation.
Sound pressure level is converted values from sound power level as per distance.
4. Performances are based on the following conditions (It is according to EN14511) :
Interconnected pipe length is standard length and difference of elevation (outdoor ~ indoor unit) is 0m.
5. This product contains fluorinated greenhouse gases.
6. Strainer is accessory provided with the outdoor unit.

Product Specification (Indoor Unit)

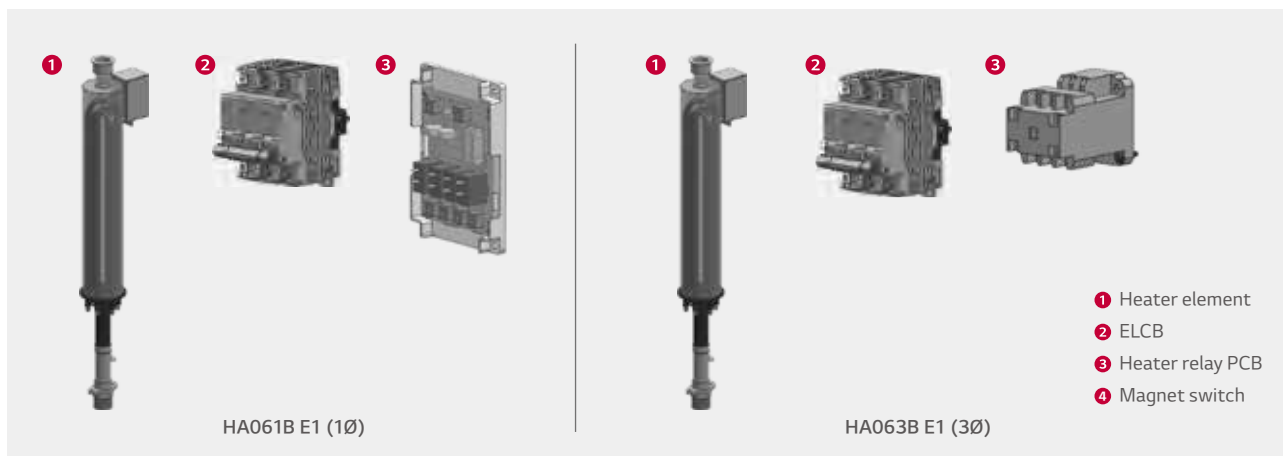
Indoor Unit			Unit	HN1600MB NKO
Operation Range (leaving water)	Heating	Min. – Max.	°C	15 ~ 65
	Cooling	Min. – Max.	°C	5~27 (16~27) ²⁾
	DHW ¹⁾	Min. – Max.	°C	15 ~ 80
Flow Sensor	Measuring Range	Min. – Max.	ℓ/min	5 ~ 80
Water Pressure Sensor	Measuring Range	Min. – Max.	bar(G)	0 ~ 20
Expansion Vessel	Volume		ℓ	8
Safety Valve	Pressure Limit	Upper limit	bar	3
Piping Connections	Water Circuit	Inlet	mm (inch)	Male PT 25.4(1)
		Outlet	mm (inch)	Male PT 25.4(1)
Wiring Connections	Power and Communication Cable (included earth, H07RN-F)		mm ² x cores	0.75 x 4C
Sound Power Level	Heating	Rated	dB(A)	44
Dimensions	Unit	W x H x D	mm	490 x 850 x 315
Weight	Unit		kg	30.3

1) DHW 58 ~ 80°C operating is available only when the booster heater is operating.

2) When fan coil unit not used.

Accessory Parts (Optional Accessory)

Back up Heater¹⁾



Electrical Specification			HA061B E1	HA063B E1
Back up Heater	Type	-	Sheath	
	No. of Heating Coil	EA	2	3
	Max. Power Consumption	kW	3.0 + 3.0	2.0 + 2.0 + 2.0
	Heating Step	Step	2	2
	Power Supply	V, Ø, Hz	220 ~ 240, 1, 50	380 ~ 415, 3, 50
Wiring Connection	Power Cable (included earth, H07RN-F)	mm ² x cores	4.0 x 3C	2.5 x 4C
	Communication Cable (included earth, H07RN-F)	mm ² x cores	0.75 x 4C	0.75 x 2C

1) Available from November 2021

Accessory Parts (Separately Provided)

Strainer



Technical Specification		Details
Material	Body	Brass
	Mesh	STAINLESS STEEL (STS304)
Mesh Size		30
Connection		PF 1 inch

PRODUCT SPECIFICATION

Performance Table for Heating Operation

Maximum Heating Capacity (Including Defrost Effect)

HU121MRB U30 + HN1600MB NKO / HU123MRB U30 + HN1600MB NKO

Outdoor Temperature	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
	TC	TC	TC	TC	TC	TC	TC	TC
-25°C DB	9.66	8.85	8.42	8.29	-	-	-	-
-20°C DB	10.13	10.00	9.88	9.75	9.63	-	-	-
-15°C DB	11.50	11.50	11.50	11.50	11.50	11.50	-	-
-7°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	-
-4°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
-2°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
2°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
7°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
10°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
15°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
18°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

HU141MRB U30 + HN1600MB NKO / HU143MRB U30 + HN1600MB NKO

Outdoor Temperature	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
	TC	TC	TC	TC	TC	TC	TC	TC
-25°C DB	10.04	9.21	8.76	8.62	-	-	-	-
-20°C DB	11.82	11.25	10.95	10.67	10.59	-	-	-
-15°C DB	12.52	12.90	13.26	12.88	12.81	12.63	-	-
-7°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	-
-4°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
-2°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
2°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
7°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
10°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
15°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
18°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00

HU161MRB U30 + HN1600MB NKO / HU163MRB U30 + HN1600MB NKO

Outdoor Temperature	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
	TC	TC	TC	TC	TC	TC	TC	TC
-25°C DB	10.98	10.00	9.50	9.33	-	-	-	-
-20°C DB	13.43	12.54	12.03	11.78	11.47	-	-	-
-15°C DB	14.23	14.39	14.50	13.95	13.86	13.12	-	-
-7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	-
-4°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
15°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Note

1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C), LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)

2. Direct interpolation is permissible. Do not extrapolate.

3. Measuring procedure follows EN-14511.

• Rated values are based on standard conditions and it can be found on specifications.

• Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.

• In accordance with the test standard (or nations), the rating will vary slightly.

4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum Cooling Capacity

HU121MRB U30 + HN1600MB NK0 / HU123MRB U30 + HN1600MB NK0

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	TC	TC	TC	TC	TC	TC	TC
10°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00
30°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00
40°C DB	11.75	12.00	12.00	12.00	12.00	12.00	12.00
45°C DB	11.50	12.00	12.00	12.00	12.00	12.00	12.00

HU141MRB U30 + HN1600MB NK0 / HU143MRB U30 + HN1600MB NK0

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	TC	TC	TC	TC	TC	TC	TC
10°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00
30°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00
40°C DB	13.75	14.00	14.00	14.00	14.00	14.00	14.00
45°C DB	13.50	14.00	14.00	14.00	14.00	14.00	14.00

HU161MRB U30 + HN1600MB NK0 / HU163MRB U30 + HN1600MB NK0

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	TC	TC	TC	TC	TC	TC	TC
10°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
30°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
40°C DB	15.75	16.00	16.00	16.00	16.00	16.00	16.00
45°C DB	15.50	16.00	16.00	16.00	16.00	16.00	16.00

Note

1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C), LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)

2. Direct interpolation is permissible. Do not extrapolate.

3. Measuring procedure follows EN-14511.

- Rated values are based on standard conditions and it can be found on specifications.
- Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
- In accordance with the test standard (or nations), the rating will vary slightly.

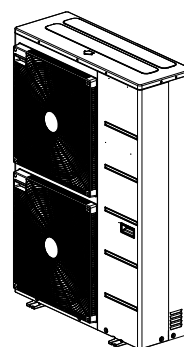
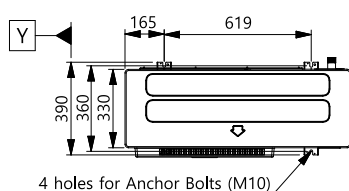
PRODUCT SPECIFICATION

Drawings

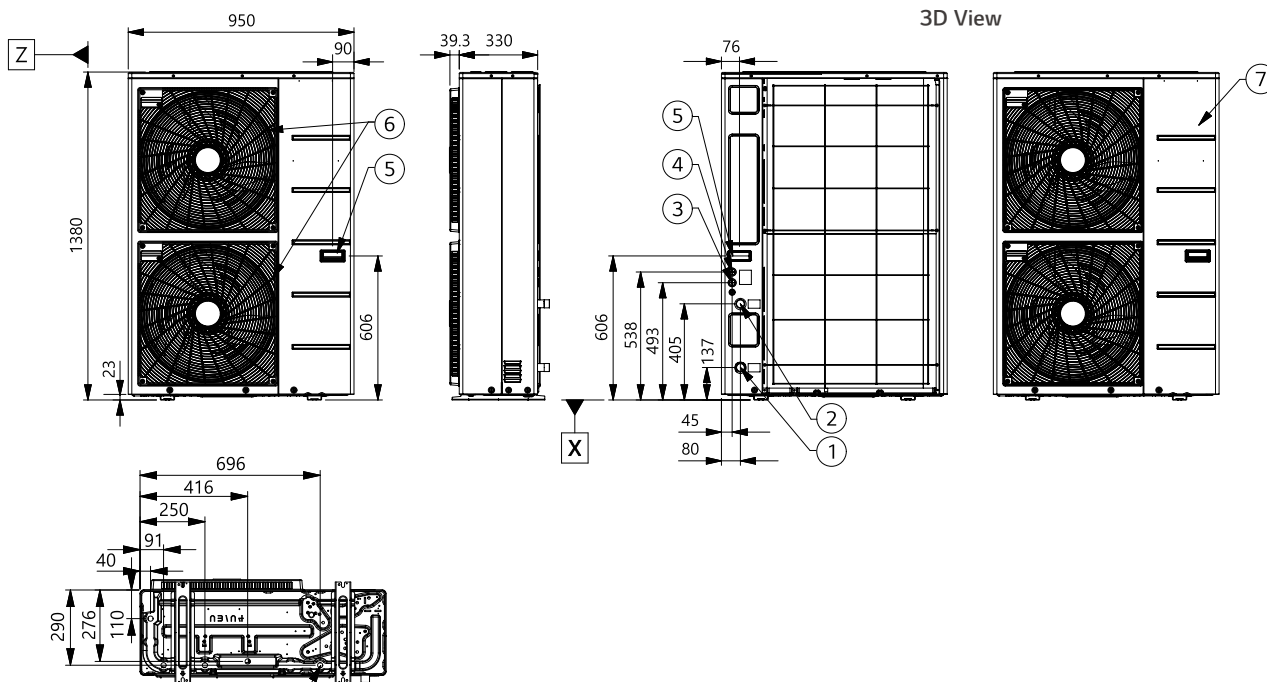
Category	Unit	Model Name		
		Capacity (kW)		
		12.0	14.0	16.0
1 Phase Model 220 - 240V, 1Ø, 50Hz	Outdoor Unit	HU121MRB U30	HU141MRB U30	HU161MRB U30
	Indoor Unit	HN1600MB NK0		
3 Phase Model 380 - 415V, 3Ø, 50Hz	Outdoor Unit	HU123MRB U30	HU143MRB U30	HU163MRB U30
	Indoor Unit	HN1600MB NK0		

HU121MRB U30 / HU141MRB U30 / HU161MRB U30
HU123MRB U30 / HU143MRB U30 / HU163MRB U30

[Unit : mm]



3D View

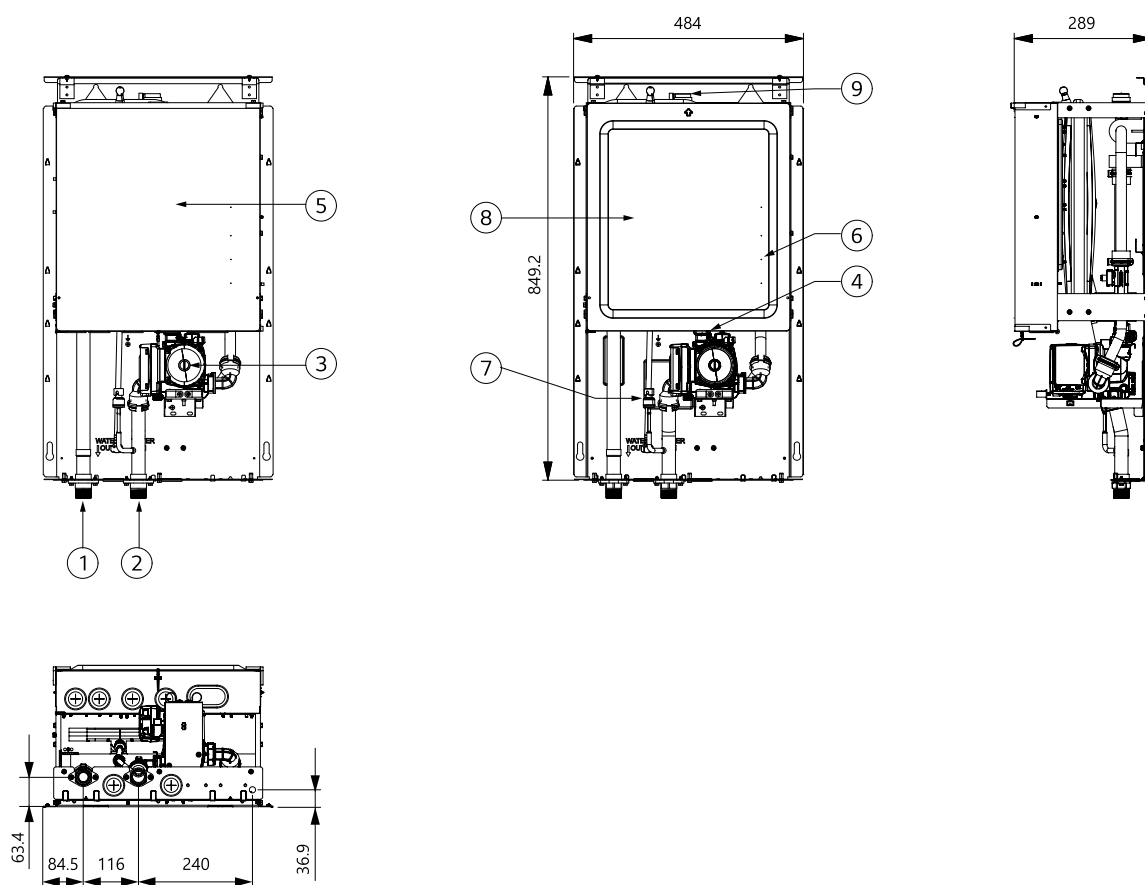


5-ID Ø20 holes for drain connection

No.	Part Name	Description
1	Entering Water Pipe	Male PT 1 inch
2	Leaving Water Pipe	Male PT 1 inch
3	Unit Power	Power Cable Hole
4	Low Voltage	Communication Cable Hole
5	Handle	-
6	Air Outlet	-
7	Control Box	PCB and terminal blocks

HN1600MB NK0

[Unit : mm]



No.	Part Name	Description
1	Leaving Water Pipe	Male PT 1 inch
2	Entering Water Pipe	Male PT 1 inch
3	Water Pump	GRUNDFOS UPML GEO 20-105 CHBL
4	Safety Valve	Open at water pressure 3 bar
5	Control Box	PCB and Terminal blocks
6	Flow Sensor	SIKA VVX20 5-80 LPM
7	Pressure Sensor	SENSATA 2HMP3-04W 0-2MPa
8	Expansion Tank	Absorbing volume change of heated water
9	Air Vent	Air purging when charging water

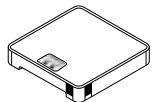
THERMA VTM
ACCESSORIES



ACCESSORIES

Accessories Provided by LG

Category	Model Name	Model Number	Figure	Applicable Product	Relevant Function	Purpose	Feature
Sensors	Room Temperature Sensor	PQRSTA0		All except for R410A IWT	Room Temperature Based Control	To detect room air temperature for room temperature based control	• Max. wire length : 15m
	2 nd Circuit Thermistor	PRSTAT5K10		All except for R410A IWT and High temp.	2 nd Circuit (mixing circuit)	To detect 2 nd circuit temperature when using 2 nd circuit function	• 5kΩ thermistor, 10m
	Domestic Hot Water Sensor	PHRSTA0		All except for IWT and High temp. models	Domestic Hot Water Heating	To detect DHW tank temperature	• Included in PHLTA kit
Valves	3 Way Valve	OSHA-3V		All except for IWT models	Domestic Hot Water Heating	To divert water flow between space heating and DHW heating	• Size : DN 20 G 1" connection, male threaded
	Thermostatic Mixing Valve	OSHA-MV		Regardless of model	Domestic Hot Water Supply	To blend hot water with cold water for ensuring constant, safe shower and bath outlet temp.	• Size : 3/4" DN20 male threaded
		OSHA-MV1					• Size : 1" DN25 male threaded
DHW Tanks	Domestic Hot Water Tank (single coil)	OSHW-200F		All except for IWT models	Domestic Hot Water Heating	To generate and store domestic hot water	• Storage volume : 200L, 300L, 500L
		OSHW-300F					• Type : Internal double coil
		OSHW-500F					• Material : Stainless steel
	Domestic Hot Water Tank (double coil)	OSHW-300FD		All except for IWT and High temp. models			• Capacity of booster heater : 2.4kW
Installation Kits	Domestic Hot Water Tank Kit	PHLTA (1Ø, split)		All except for IWT and High temp. models	Domestic Hot Water Heating	To operate with DHW tank	• Parts included : DHW tank sensor (thermistor), Circuit breaker, Relay
		PHLTC (3Ø, split)					
		PHLTB (monobloc)					• Parts included : DHW tank sensor (thermistor), Circuit breaker, Relay, Multi harness
	Solar Thermal Kit	PHLLA		All except for IWT, Hydrosplit and High temp. models	Solar Thermal Heat Utilization	To operate with solar thermal system	• Length of thermistor : 12m • Size of tube connector (W x H x D) : 110 x 55 x 22

Category	Model Name	Model Number	Figure	Applicable Product	Relevant Function	Purpose	Feature
Installation Kits	Electric Back Up Heater	HA031M E1		R32 Monobloc and R32 Silent Monobloc (HA063M E1 is not applicable for R32 Silent Monobloc)	Capacity Back Up & Emergency Operation	To supplement insufficient capacity	• Heater capacity : 3kW • Number of heating coil : 1EA (3.0kW) • Size (W x H x D) : 210 x 607 x 217 • Power : 220 ~ 240V, 1Ø
		HA061M E1					• Heater capacity : 6kW • Number of heating coil : 2EA (3.0 + 3.0kW) • Size (W x H x D) : 210 x 607 x 217 • Power : 220 ~ 240V, 1Ø
		HA063M E1					• Heater capacity : 6kW • Number of heating coil : 3EA (2.0 + 2.0 + 2.0kW) • Size (W x H x D) : 210 x 607 x 217 • Power : 380 ~ 415V, 3Ø
Vessel	Buffer Tank for Space Heating	OSHB-40KT		R32 IWT	-	To provide the buffer volume of water to the heating circuit	• Volume : 40L • Size (W x H x D) : 518 x 560 x 175
	Expansion Vessel for DHW	OSHE-12KT		R32 IWT	-	To absorb the volume changes by temperature of water for the DHW circuit	• Volume : 8L • Connection : 3/4" • Max. pressure : 10 bar • Size (W x H x D) : 416 x 238 x 502
ETC	Extension Wire for Wire Remote Controller	PZCWRC1		All except for R410A IWT	-	To extend wire between wired remote controller and indoor unit	• Length : 10m
	Extension Cable for Wi-Fi Modem	PWYREW000		All except for R410A IWT	Wi-Fi Control via LG ThinQ	To extend wire between Wi-Fi modem and indoor unit	• Length : 10m
	2 Remote Control Wire	PZCWRC2		All except for R410A IWT model	2 Remote Control	To connect two remote controller on the one indoor unit	• Length : 0.25m
	Drain Pan	PHDPB		R32 Split, R410A Split	Cooling Operation	To collect condensed water in indoor unit when cooling operation	-
		PHDPC		R32 Hydrosplit			
	Cover Plate	PDC-HK10		R32 Hydrosplit, R32 Split, R32 IWT, R410A Split	-	To fill the blank space of the indoor unit front panel when the remote controller is relocated indoors.	-

ACCESSORIES

Accessories Provided by LG

Category	Model Name	Model Number	Figure	Applicable Product	Relevant Function	Purpose	Feature
Remote Controller	Wired Remote Controller	PREMTW101		All except for R410A IWT model	2 Remote Control	To control AWHP using two remote controller (additional remote controller)	- New modern design 4.3 inch color LCD display - Information displayed with simple graphic, icon & text - Built-in temperature sensor - Size (W x H x D) : 120 x 120 x 16 - Extension cable (PZCWRC1, 10m) and 2 remote cable (PZCWRC2, 0.25m) are included
Central Controller	AC Ez Touch	PACEZA000		All except for R410A IWT model	Centralized Control	To control AWHP using LG central controller	5 inch color display - User-friendly control with iconographic interface (touch screen) - Max. 32 unit control - Total 200 schedule events (weekly / monthly / yearly / exception day) - Operation history - Remote controller lock (all, temp, mode) - PC access supported (IPv6 supported) - DI 1EA (emergency stop only) - Size (W x H x D) : 137 x 121 x 25
	AC Smart 5	PACS4B000 (Smart 4) PACS5A000 (Smart 5)					10.2 inch color display - User-friendly control with iconographic interface (touch screen) (Smart 4)_Max. IDU 32, (Smart 5)_Max. IDU 64 - Total 100 schedule events (weekly / monthly / yearly / exception day) - History / operation trend - Interlock with 3rd party equipment (ACS IO, ACU IO module is needed) - Error alarm by e-mail - Remote controller lock (all, temp, mode) - Map view (visual navigation) - Web access supported with HTML5 (PC, smartphone, tablet) - DI 2EA, DO 2EA - BACnet IP/modbus TCP protocol support - Size (W x H x D) : 253.2 x 167.7 x 28.9
	ACP 5	PACP4B000 (ACP4) PACP5A000 (ACP5)					- Web access controller - Max. 128 unit control - Total 100 schedule events (weekly / monthly / yearly / exception day) - History / operation trend - Interlock with 3rd party equipment (ACS IO, ACU IO module is needed) - Error alarm by e-mail - Remote controller lock (all, temp, mode) - Map view (visual navigation) - DI 10EA, DO 4EA - BACnet IP/modbus TCP protocol support - Size (W x H x D) : 270 x 155 x 65
Gateway	ACP Lonworks	PLNWKB000		All except for R410A IWT model	Centralized Control	To link with AWHP and other existing building control system	- Web access controller - Max. 64 unit control - ACP function included - Lonworks protocol support - Size (W x H x D) : 270 x 155 x 65

Category	Model Name	Model Number	Figure	Applicable Product	Relevant Function	Purpose	Feature
Gateway	Modbus RTU Gateway	PMBUSB00A		All except for R410A IWT model	Centralized Control	To communicate and control through the central controller (providing modbus RTU connection between AWHP and BMS)	• Modbus RTU slave (RS485) / 9,600 bps • Size (W x H x D) : 53.6 x 89.7 x 60.7 • Max. 16 IDUs with single module / Max. 64 IDUs with 4 modules • Power : DC 12V
	PI485 Gateway	PMNFP14A1		All except for R410A IWT model		To communicate and control through the central controller (converting LG protocol to RS485 protocol)	• 1 for each outdoor unit • Power : Supplied by outdoor unit
	PI485 Gateway	PP485B00K		R410A IWT		To communicate between outdoor unit and IWT type indoor unit	• 1 for each outdoor unit • Power : Supplied by outdoor unit
Dry Contact	Simple Dry Contact	PDRYCB000		All except for R410A IWT model	-	To connect between the AWHP and external devices to control various functions	• 1 Set per 1 unit • 1 Input contact for turning on/off • Input power : 220 ~ 240V • 2 output contacts - Operation status - Error status
	Dry Contact for Thermostat	PDRYCB320					• 1 Set per 1 unit • Non voltage or 12 ~ 24V • 8 digital input contacts for thermostat - On/off, operation mode, DHW heating - Emergency mode, silent mode • 2 Output contacts - Operation status - Error status
ETC	LG Wi-Fi Modem	PWFMD200		All except for R410A IWT model	Wi-Fi Control via LG ThinQ	To control AWHP via smartphone	• Basic control function - On/off, operation mode, set temp - DHW heating and set temp • Weekly on/off schedule • Error status check • Frequency : 2.4GHz • IEEE 802.11b/g/n supported
	Meter Interface	PENKTH000		All except for R410A IWT model	Energy Monitoring	To measure production / consumption power	• Energy meter interface to monitor Electricity and Heat energy - Max. 3 watt - Hour meter - Max. 1 heat meter - Pulse width : 40ms ~ 100ms • Modbus RTU comm. with THERMA V - 2 wire RS485 / 9600bps • Power : DC 12V • Size (W x H x D) : 54 x 90 x 61
	2 Zone Valve Controller	PZNVVB200		All except for R410A IWT model	Zone Valve Control	To control individual zone valves with room temperature sensor or room thermostat	• Individual temperature setting possible. (to be set through wired remote control in room temperature input mode) • Room temperature detection (AI : 2 ports) • 3rd Party thermostat interlock input. (DI : 2 port) • Can read one DI or AI for each zone. • Maximum number of connections : Max. 4EA (expandable up to 8-zone) • Size (W x H x D) : 53.6 x 89.7 x 60.7 • Power : DC12V for module, AC24V for valve

Note

1. PI485 Gateway (PMNFP14A1) should be installed on outdoor unit to use central controller.

ACCESSORIES

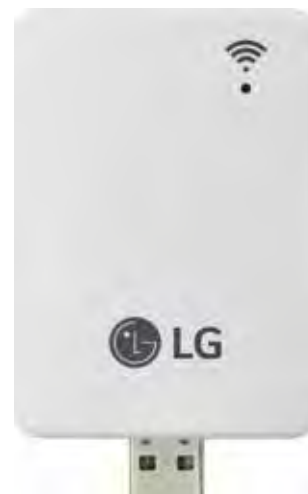
LG Wi-Fi Modem

PWFMDD200 ENCXLEU

Access LG THERMA V anytime and from anywhere with Wi-Fi equipped device. LG's exclusive Home Appliances control app (LG ThinQ) is available.

Simple operation for various functions.

- On/off
- Operation mode selection
- Current temperature
- Set temperature
- On/off reservation scheduling
- Energy monitoring
- ESS monitoring
- Silent mode reservation
- Holiday mode
- Quick DHW heating



Model Name	PWFMDD200
Size (mm)	46 x 68 x 14
Interfaceable Products	All THERMA V Line-ups except for R410A IWT
Connection Type	Indoor Unit 1 : 1
Communication Frequency	2.4GHz
Wireless Standards	IEEE 802.11b/g/n
Mobile Application	LG ThinQ (Android v4.1 (Jellybean) or higher, iPhone iOS 9.0 or higher)
Optional Extension Cable	PWYREW000 (10m extension)

Note

1. Functionality may be different according to each Indoor model.
2. User interface of application shall be revised for its design and contents improvement.
3. Application is optimized for smartphone use, so it may not be well functioning with tablet devices.
 - For the compatibility with indoor unit, please contact regional office.

Domestic Hot Water Tank

OSHW-200F AEU

OSHW-300F AEU

OSHW-500F AEU

OSHW-300FD AEU



Double Coil

Single Coil

Domestic Hot Water Tank		Unit	OSHW-200F	OSHW-300F	OSHW-500F	OSHW-300FD
General Characteristics	Water Volume	ℓ	200	300	500	300
	Diameter	mm	640	640	640	640
	Height	mm	1,350	1,850	1,900	1,850
	Empty Weight	Kg	61	100	146	106
	Tank Materials	-	STS : F18	STS : F18	STS : F18	STS : F18
	Color	-	Grey	Grey	Grey	Grey
Specification of Electric Back up	Additional Electric Heater	W	2,400	2,400	2,400	2,400
	Power Supply	V, Ø, Hz	230, 1, 50 (60)	230, 1, 50 (60)	230, 1, 50 (60)	230, 1, 50 (60)
	Adjustable Thermostat	°C	0 ~ 90	0 ~ 90	0 ~ 90	0 ~ 90
Specification of Heat Exchanger	Exchanger Type	-	Single	Single	Single	Double
	Material Exchanger	-	STS : F18	STS : F18	STS : F18	STS : F18
	Maximum Water Temp.	°C	90	90	90	90
	Coil Surface	m ²	2.3	3.1	4.8	3.1 + 0.97
Water Connections	Heat Pump Inlet	inch	1 BSP female	1 BSP female	1 ¼ BSP female	¾ BSP female (upper coil)
	Heat Pump Outlet	inch	1 BSP female	1 BSP female	1 ¼ BSP female	¾ BSP female (upper coil)
	Solar Inlet	inch	-	-	-	1 BSP Female (lower coil)
	Solar Outlet	inch	-	-	-	1 BSP Female (lower coil)
	City Water Inlet	inch	¾ BSP male	¾ BSP male	1 BSP male	¾ BSP male
	Hot Water Outlet	inch	¾ BSP female	1 BSP female	1 BSP female	1 BSP female
Energy Efficiency Class (A+ to F scale)		-	B	B	B	B
Standing Heat Loss		W	61	70	83	70

Mandatory Optional Accessories	
Domestic Hot Water Tank Installation Kit	PHLTA (1Ø, split), PHLTB (monobloc), PHLTC (3Ø, split)
Optional Accessories	
Thermostatic Mixing Valve (3/4" DN20)	OSHA-MV
Thermostatic Mixing Valve (1" DN25)	OSHA-MV1
3 Way Valve	OSHA-3V

ACCESSORIES

Combined Test with DHW Tank

LG has conducted a combination test of THERMA V with DHW tanks in accordance with EN16147 and obtained an ErP label for packages in order to cope with European nZEB regulations.

- R32 Monobloc (5, 7, 9kW) + OSHW-200F
- R32 Monobloc (12, 14, 16kW) + OSHW-200F
- R32 Monobloc (5, 7, 9kW) + OSHW-300F
- R32 Split Hydro Box (5, 7, 9kW) + OSHW-200F



Model	AWHP	R32 Split (5, 7, 9kW)	R32 Monobloc (5, 7, 9kW)	R32 Monobloc (12, 14, 16kW)	R32 Monobloc (5, 7, 9kW)
	IDU	HN0916M NK4	HM051M U43 HM071M U43 HM091M U43	HM121M U33 HM141M U33 HM161M U33	HM051M U43 HM071M U43 HM091M U43
	ODU	HU051MR U44 HU071MR U44 HU091MR U44			
	Tank	OSHW-200F AEU			
Declared Load Profile		L	L	L	XL
Average Climate	Grade	A+	A+	A	A+
	Efficiency	118%	122%	109%	134%
	Annual Energy Consumption	865kWh	839kWh	940kWh	1,254kWh
Energy Label					