

#Care For Where You Live



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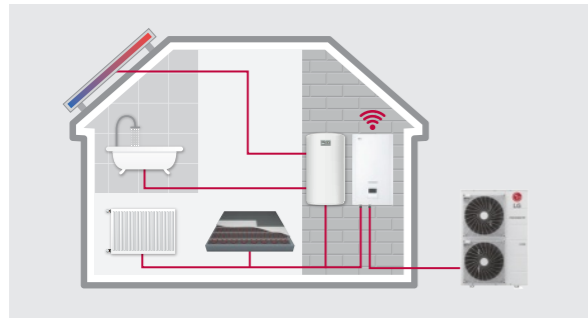
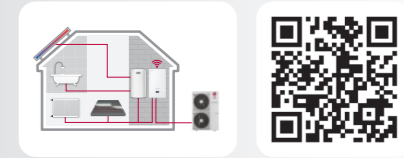
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R32 HYDROSPLIT HYDRO BOX

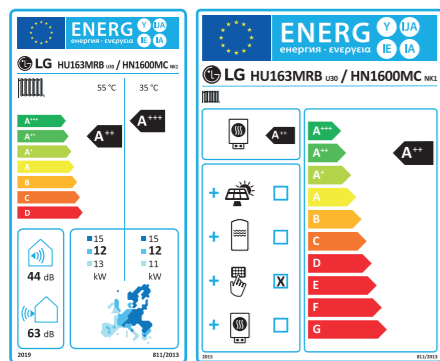


THERMA V™ R32

R32 HYDROPLIT HYDRO BOX



Energy Label

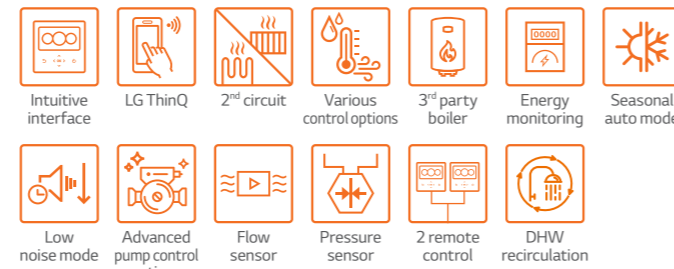


* 16 kW 3 Ø model.
* A+++ to D scale.

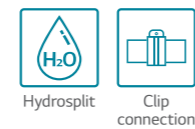
Excellent performance & efficiency



User convenience



Easy installation & maintenance

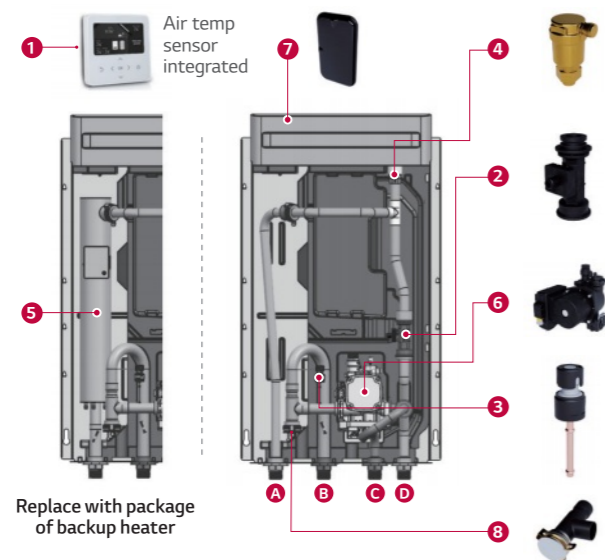


* Detailed description for each function is presented on page 44 – 54.

R32 Hydrosplit Hydro Box Introduction

The Therma V R32 Hydrosplit Hydro Box is a heating and cooling solution, where indoor and outdoor units are connected by water pipes, while the unit's heat exchanger is located with the outdoor unit, thus eliminating the risk of indoor refrigerant leakage, which makes it perfect for renovation projects.

Key Components

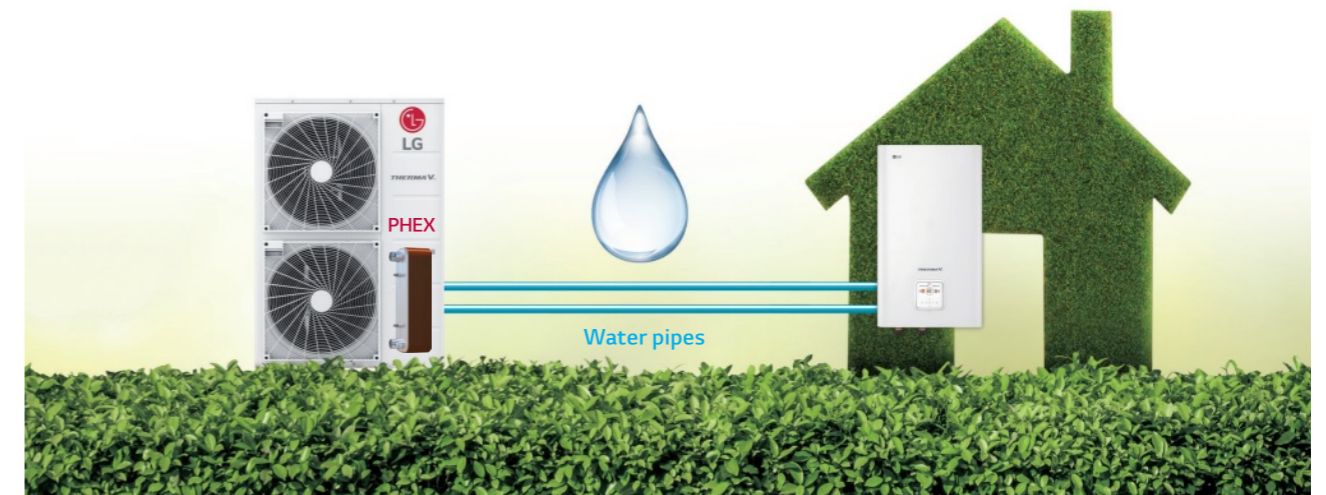


- 1 Standard III remote controller (attached on the front panel)
 - 2 Flow sensor
 - 3 Water pressure sensor
 - 4 Air vent valve
 - 5 Backup electric heater (6 kW, accessory)
 - 6 Water pump
 - 7 Expansion vessel (8 ℓ)
 - 8 Strainer
- A Heating circuit outlet pipe (male PT 1")
 - B Heating circuit inlet pipe (male PT 1")
 - C Outlet pipe to outdoor unit (male PT 1")
 - D Inlet pipe from outdoor unit (male PT 1")

Replace with package of backup heater

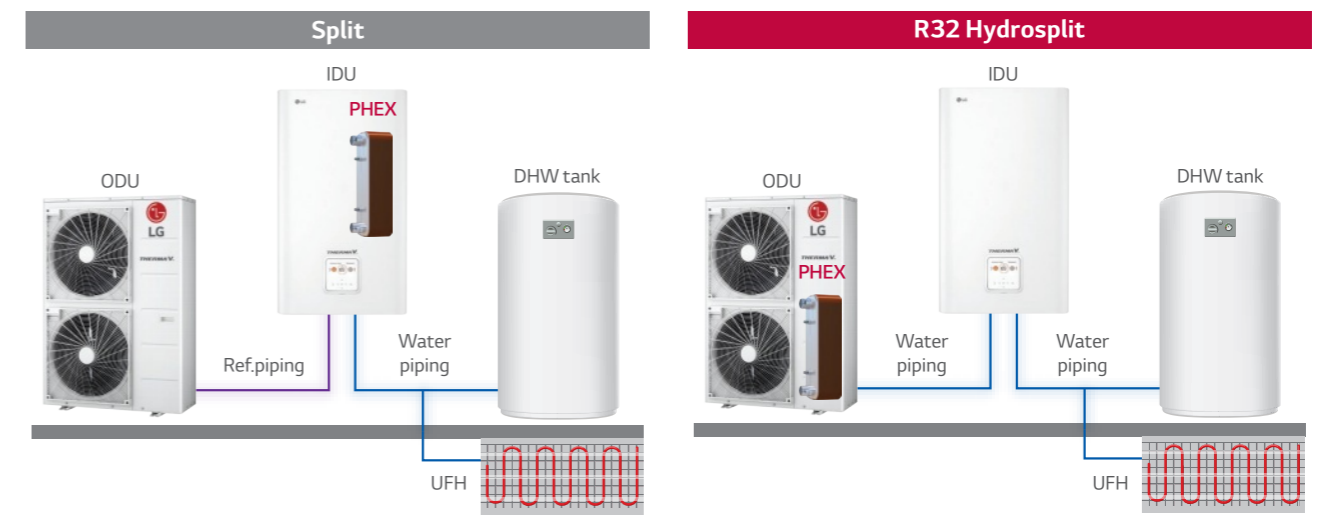
Hydrosplit Concept

The Therma V R32 Hydrosplit Hydro Box 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.



No Risk of Indoor Refrigerant Leakage

The Hydrosplit architecture, with no refrigerant circulating indoors, makes it possible to expand the living space, as the minimum floor area requirements do not apply.



If piping length between IDU and ODU is 30 m

The IDU should be installed in a room with a floor area larger than 10 m²

1) Total Ref. Amount 2.7 kg
- Pre-Charged Ref. Amount : 2.1 kg
- Additional Ref. Charge Amount for 30 m : 0.6 kg

2) Based on 1.5 m installed height
3) IEC 60335-2-40 6 th edition applied

No minimum floor area requirement

R32 Hydrosplit Hydro Box



Indoor unit

HN1600MC NK1

Outdoor unit

HU121MRB U30 / HU123MRB U30

HU141MRB U30 / HU143MRB U30

HU161MRB U30 / HU163MRB U30



Features

- Water pipes connect IDU & ODU
- SCOP up to 4.60 (average climate / low temp. application): **A+++**
- SCOP up to 3.50 (average climate / mid temp. application): **A++**
- COP up to 5.04 (outdoor air 7°C / leaving water 35°C)
- 100 % heating capacity at -7°C OAT (@ LWT 35°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
- R32 refrigerant with reduced Global Warming Potential (GWP)
- R1 Compressor
- Black Fin heat exchanger
- LG ThinQ
- Keymark / EHPA (for Germany, Austria and Switzerland) / MCS / Eurovent certification

Model line-up

Category	Unit	Model name		
		Capacity (kW)		
		12.0	14.0	16.0
1 Phase model 220 - 240 V, 1 Ø, 50 Hz	Outdoor unit	HU121MRB U30	HU141MRB U30	HU161MRB U30
	Indoor unit	HN1600MC NK1		
3 Phase model 380 - 415 V, 3 Ø, 50 Hz	Outdoor unit	HU123MRB U30	HU143MRB U30	HU163MRB U30
	Indoor unit	HN1600MC NK1		

Seasonal energy

Description	Outdoor unit	HU121MRB U30 (1 Ø)	HU141MRB U30 (1 Ø)	HU161MRB U30 (1 Ø)		
		HU123MRB U30 (3 Ø)	HU143MRB U30 (3 Ø)	HU163MRB U30 (3 Ø)		
Indoor unit		HN1600MC NK1				
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 ¹⁾ (DB)	LWT ²⁾ (DB)	Outdoor unit	HU121MRB U30 (1 Ø)	HU141MRB U30 (1 Ø)	HU161MRB U30 (1 Ø)		
				HU123MRB U30 (3 Ø)	HU143MRB U30 (3 Ø)	HU163MRB U30 (3 Ø)		
			Indoor unit	HN1600MC NK1				
Nominal capacity	Heating	7°C	35°C	kW	12.00	14.00	16.00	
		7°C	55°C		11.00	11.50	12.00	
	Cooling	2°C	35°C		11.00	12.00	13.80	
		35°C	18°C		12.00	14.00	16.00	
Nominal power input	Heating	7°C	35°C	kW	2.38	2.86	3.33	
		7°C	55°C		3.79	4.04	4.29	
	Cooling	2°C	35°C		3.01	3.31	3.83	
		35°C	18°C		2.53	3.26	4.00	
	COP	Heating	7°C		35°C	5.04	4.89	4.80
			7°C		55°C	2.90	2.85	2.80
EER	Cooling	2°C	35°C	3.65	3.63	3.60		
		35°C	18°C	4.44	5.38	6.40		
EER	Cooling	35°C	18°C	4.75	4.30	4.00		
		35°C	7°C	2.70	2.60	2.50		

1) OAT: Outdoor Air Temperature
2) LWT: Leaving Water Temperature

R32 Hydrosplit Hydro Box

Product specification (outdoor unit)

Technical Specification			Unit	HU121MRB U30	HU141MRB U30	HU161MRB U30	HU123MRB U30	HU143MRB U30	HU163MRB U30
Operation range (outdoor temp.)	Heating	Min. - Max.	°C DB	-25 - 35					
	Cooling								
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 1" according to ISO 7-1 (tapered pipe threads)					
		Outlet	mm (inch)	Male PT 1" according to ISO 7-1 (tapered pipe threads)					
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					
Exterior	Color / RAL code		-	Warm gray / RAL 7044					
Power supply	Voltage, phase, frequency		V, Ø, Hz	220-240, 1, 50			380-415, 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					
Wiring connections	Power supply cable (included earth, H07RN-F)		mm ² x cores	6.0 x 3 C			2.5 x 5 C		

Product specification (indoor unit)

Technical specification			Unit	HN1600MC NK1
Operation range (leaving water)	Heating	Min. - Max.	°C DB	15 - 65
	Cooling			5 - 27 (16 - 27) ¹⁾
	DHW			15 - 80 ²⁾
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	Outlet to heat load	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)
		Inlet from heat load		Male PT 1" according to ISO 7-1 (tapered pipe threads)
		Outlet to outdoor unit		Male PT 1" according to ISO 7-1 (tapered pipe threads)
		Inlet from outdoor unit		Male PT 1" according to ISO 7-1 (tapered pipe threads)
Wiring connections	Power and communication cable (included earth, H07RN-F)		mm ² x cores	0.75 x 4 C
Sound power level	Heating	Rated	dB(A)	44
Dimensions	Unit	W x H x D	mm	490 x 850 x 315
Weight	Unit		kg	30.5
Exterior	Color / RAL code		-	Noble white / RAL 9016

1) When a fan coil unit is not used.

2) DHW 55 - 80°C operating is available only when the booster heater is operating.

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.

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 accordance with ISO 9614 standard.

Sound pressure level is converted from sound power level based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2.

Therefore, these values can be increased owing to ambient conditions during operation.

Rated sound power level is in accordance with EN12102-1 under condition of EN14825.

4. Performances are in accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation

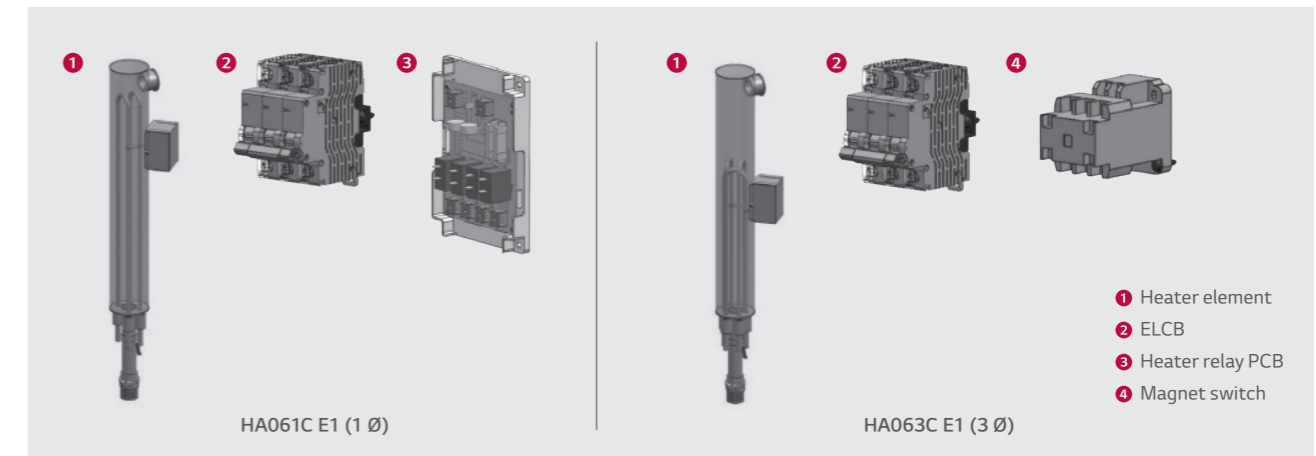
• Rated running current: Outdoor Temp. 7°C DB / 6°C WB, LWT 35°C

5. This product contains fluorinated greenhouse gases.

6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

Accessory Parts (Optional Accessory)

Backup heater

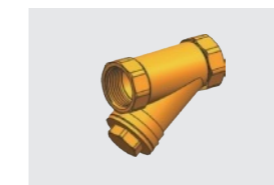


Electrical specification			HA061C E1 (1 Ø)	HA063C E1 (3 Ø)
Backup heater	Type	-	Sheath	
	No. of heating coil	EA	2	3
	Max. power consumption	kW	3.0 + 3.0	2.0 + 2.0 + 2.0
	Heating step	Step	1	1
	Power supply	V, Ø, Hz	220 - 240, 1, 50	380 - 415, 3, 50
	Current (rated)	A	24.0	8.7
	Circuit breaker (ELCB)	A	40	20
Wiring connection	Power cable (included earth, H07RN-F)	mm ² x cores	6.0 x 3 C	2.5 x 5 C

* The backup heater should be purchased and installed separately.

Accessory Parts

Strainer



Technical specification		Details
Material	Body	Brass
	Mesh	Stainless steel (STS304)
Mesh	Mesh no.	30
	Max. particle size	0.6 mm
Piping connection		Female G 1" according to ISO 228-1

* The strainer is supplied with the product, but it needs to be installed separately.

* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU121MRB U30 / HU123MRB U30 + HN1600MC NK1

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
	Capacity (kW)							
-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 / HU143MRB U30 + HN1600MC NK1

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
	Capacity (kW)							
-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 / HU163MRB U30 + HN1600MC NK1

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
	Capacity (kW)							
-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)
 2. Direct interpolation is permissible. Do not extrapolate.
 3. Measuring procedure follows EN-14511.
 • Rated values are based on standard conditions and can be found on specifications.
 • Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.
 • The rating might slightly vary depending on test standards or countries.
 4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU121MRB U30 / HU123MRB U30 + HN1600MC NK1

Outdoor temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	Capacity (kW)						
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 / HU143MRB U30 + HN1600MC NK1

Outdoor temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	Capacity (kW)						
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 / HU163MRB U30 + HN1600MC NK1

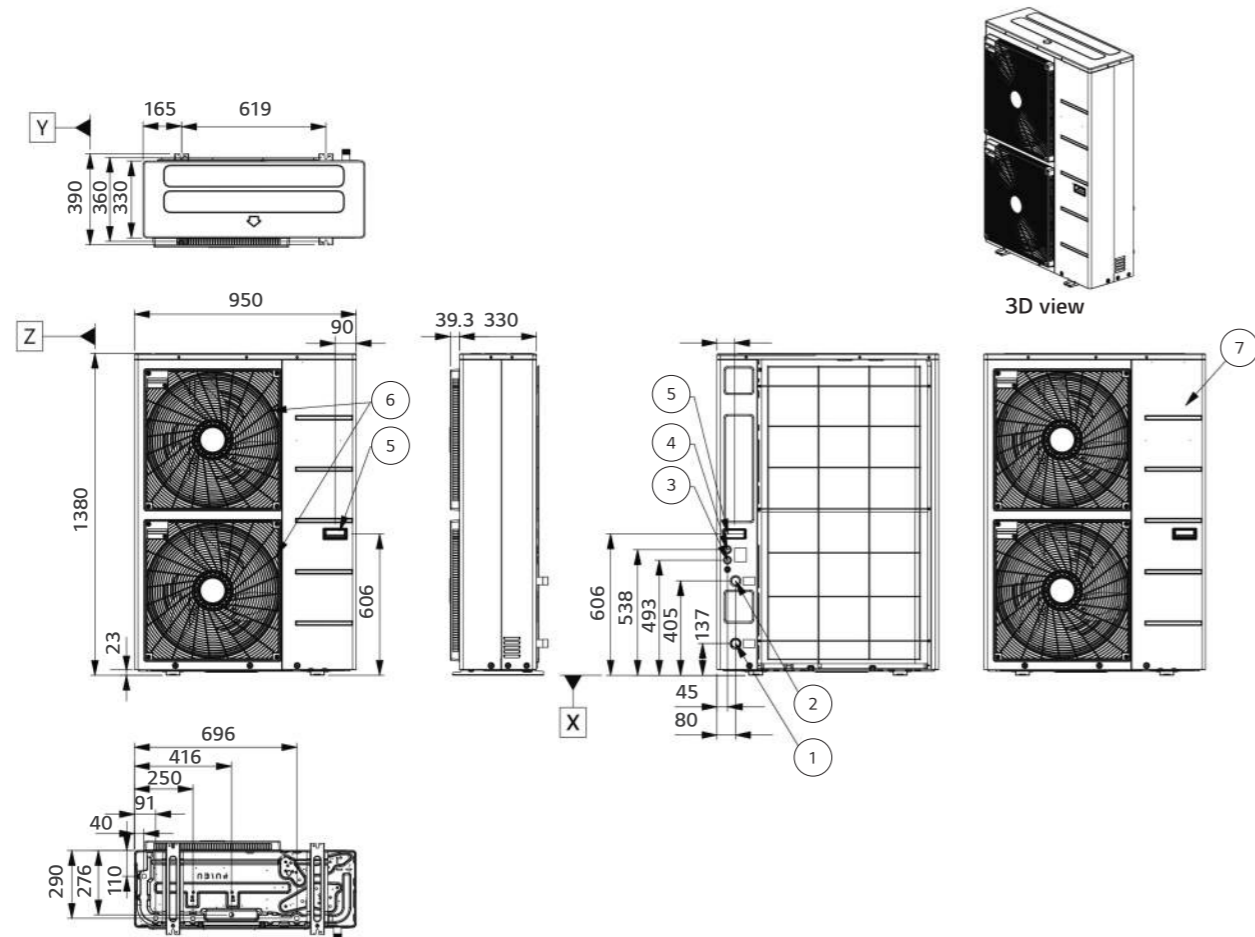
Outdoor temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	Capacity (kW)						
10°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
30°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
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)
 2. Direct interpolation is permissible. Do not extrapolate.
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 • Rated values are based on standard conditions and can be found on specifications.
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 • The rating might slightly vary depending on test standards or countries.
 4. The shaded areas are not guaranteed continuous operation.

Drawings

Category	Unit	Model name		
		Capacity (kW)		
		12.0	14.0	16.0
1 Phase model 220 - 240 V, 1 Ø, 50 Hz	Outdoor unit	HU121MRB U30	HU141MRB U30	HU161MRB U30
	Indoor unit		HN1600MC NK1	
3 Phase model 380 - 415 V, 3 Ø, 50 Hz	Outdoor unit	HU123MRB U30	HU143MRB U30	HU163MRB U30
	Indoor unit		HN1600MC NK1	

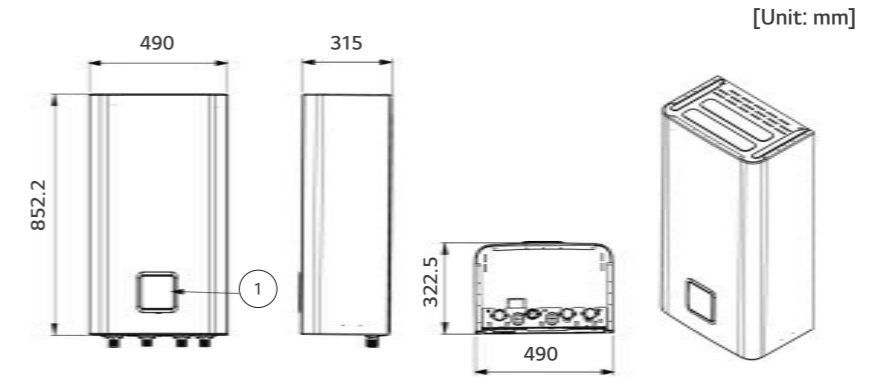
HU121MRB U30 / HU141MRB U30 / HU161MRB U30
HU123MRB U30 / HU143MRB U30 / HU163MRB U30 [Unit: mm]



No.	Part name	Description
1	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Unit power	Power cable hole
4	Low voltage	Communication cable hole
5	Handle	-
6	Air outlet	-
7	Side panel	-

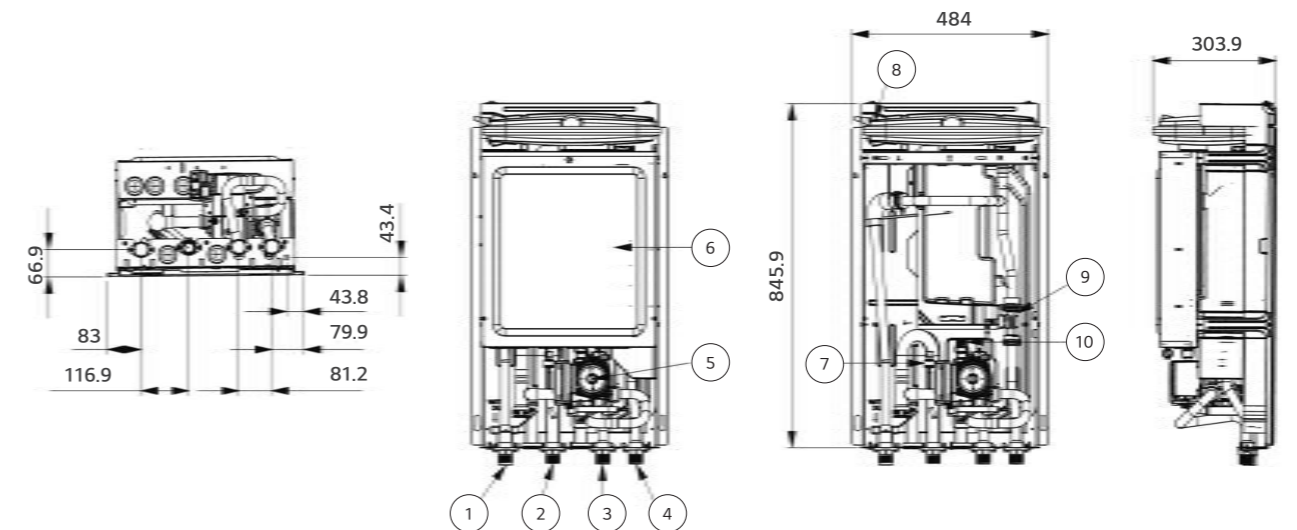
HN1600MC NK1

External



No.	Part name	Description
1	Control panel	Built-in remote controller

Internal

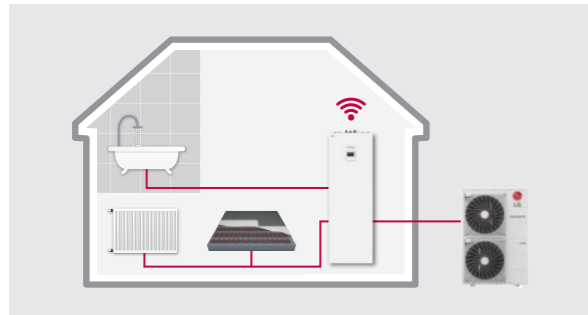


No.	Part name	Description
1	Heating circuit outlet pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Heating circuit inlet pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Outlet pipe to outdoor unit	Male PT 1" according to ISO 7-1 (tapered pipe threads)
4	Inlet pipe to outdoor unit	Male PT 1" according to ISO 7-1 (tapered pipe threads)
5	Water pump	To circulate water inside the system
6	Control box	PCB and Terminal blocks
7	Pressure sensor	To measure the water pressure (0-2MPa)
8	Expansion tank	8 Liter, 3/4" connection
9	Flow sensor	To measure the water flow rate (5-80 LPM)
10	Safety valve	Open at water pressure 3 bar



THERMA V™ R32

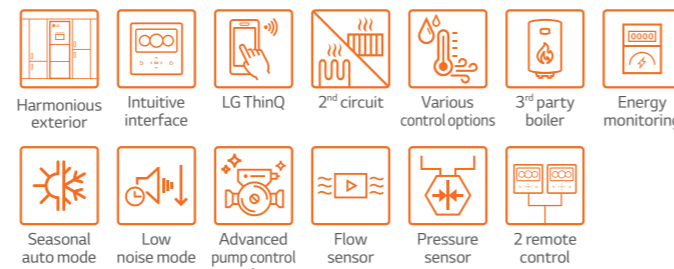
R32 HYDROSPLIT IWT



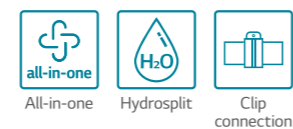
Excellent performance & efficiency



User convenience

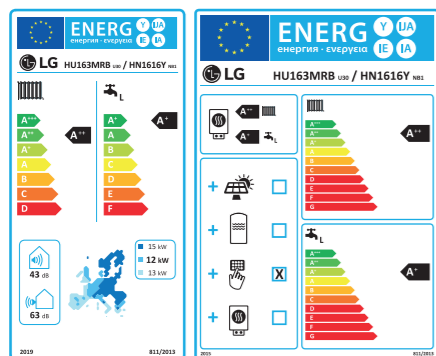


Easy installation & maintenance



* Detailed description for each function is presented on page 44 – 54.

Energy Label



* 16 kW 3 Ø model.
* A+++ to D scale.

R32 Hydrosplit IWT Introduction

Therma V R32 Hydrosplit IWT is the perfect space-saving solution for heating, cooling and hot water supply due to its fully integrated hot water tank. This all-in-one solution's hydronic and domestic hot water components are pre-wired, reducing installation time and space occupancy, making it perfect for new builds.

Key Components



- 1 DHW storage tank (200 ℓ)
 - 2 Main water pump
 - 3 Water pump for DHW charging
 - 4 Plate heat exchanger for DHW (water / DHW)
 - 5 Electric heater (max. 6 kW)
 - 6 3-way diverting valve
 - 7 Expansion vessel for heating (12 ℓ)
 - 8 Flow sensor
 - 9 Water pressure sensor
 - 10 Expansion vessel for DHW (8 ℓ, option)
 - 11 Buffer tank (40 ℓ, option)
 - 12 Standard III remote controller (attached on the front panel)
- A Inlet pipe from outdoor unit (female G1")
 - B Outlet pipe to outdoor unit (female G1")
 - C Domestic hot water outlet pipe (female G3/4")
 - D Domestic cold water outlet pipe (female G3/4")
 - E DHW recirculation pipe (female G3/4")
 - F Heating circuit inlet pipe (female G1")
 - G Heating circuit outlet pipe (female G1")

Hydrosplit Concept

The Therma V R32 Hydrosplit IWT 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.

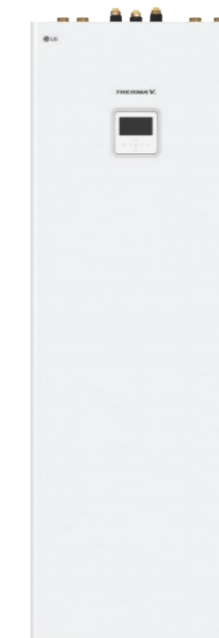


Sophisticated and Harmonious Exterior

Varied installation options due to a small, wall-mounted indoor unit, which can be easily connected to an existing third-party water tank. The indoor unit's sleek design fits into diverse indoor spaces, such as a utility or laundry room, a garage or a kitchen.

Save Space and Time

Unlike in the case of a conventional system, this all-in-one solution requires reduced installation time and saves valuable living space.



All in one

- Small footprint for product installation
- Quick & easy installation
- DHW tank (200 ℓ) & hydronic component integration
- Integrated max. 6 kW back up heater
- Integrated expansion tank for heating (12 ℓ)
- Integrated buffer tank (40 ℓ) & expansion tank for DHW circuit (8 ℓ) (optional)

R32 Hydrosplit IWT (Integrated Water Tank)



Indoor unit

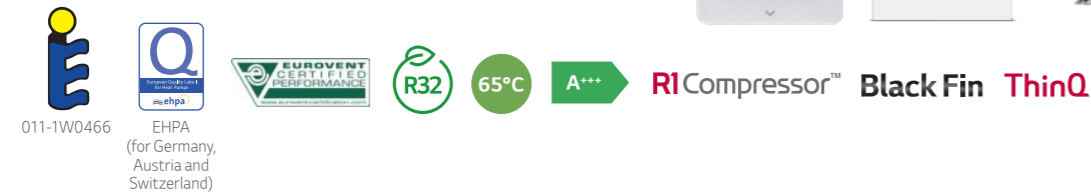
HN1616Y NB1

Outdoor unit

HN121MRB U30 / HU123MRB U30

HN141MRB U30 / HU143MRB U30

HN161MRB U30 / HU163MRB U30



Features

- Water pipes connect IDU & ODU
- SCOP up to 4.60 (average climate / low temp. application): **A+++**
- SCOP up to 3.50 (average climate / mid temp. application): **A++**
- COP_{DHW} 2.74 (water heating efficiency 120 %, profile L): **A+**
- COP up to 5.04 (outdoor air 7°C / leaving water 35°C)
- DHW tank (200 ℓ) & hydronic component integration
- Integrable buffer tank (40 ℓ) & expansion tank for DHW circuit (8 ℓ) (optional)
- 100 % heating capacity at -7°C OAT (@ LWT 35°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
- R32 refrigerant with reduced Global Warming Potential (GWP)
- R1 Compressor
- Black Fin heat exchanger
- LG ThinQ
- Keymark / EHPA (for Germany, Austria and Switzerland) / Eurovent certification

* Only the outdoor units are registered in EHPA certification.

Model line-up

Category	Unit	Model name		
		Capacity (kW)		
		12.0	14.0	16.0
1 Phase model 220 - 240 V, 1 Ø, 50 Hz	Outdoor unit	HU121MRB U30	HU141MRB U30	HU161MRB U30
	Indoor unit	HN1616Y NB1		
3 Phase model 380 - 415 V, 3 Ø, 50 Hz	Outdoor unit	HU123MRB U30	HU143MRB U30	HU163MRB U30
	Indoor unit	HN1616Y NB1		

Seasonal energy

Description		Outdoor unit	HU121MRB U30 (1 Ø)	HU141MRB U30 (1 Ø)	HU161MRB U30 (1 Ø)		
			HU123MRB U30 (3 Ø)	HU143MRB U30 (3 Ø)	HU163MRB U30 (3 Ø)		
		Indoor unit	HN1616Y NB1				
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++	
Domestic hot water efficiency (according to EN16147)	Average climate	Declared load profile	-	L	L	L	
		Water heating efficiency (η _{WH})	%	120	120	120	
		COP _{DHW}	-	2.74	2.74	2.74	
		Water heating eff. class	-	A+	A+	A+	
		Warmer climate	Declared load Profile	-	L	L	L
			Water heating efficiency (η _{WH})	%	151	151	151
	COP _{DHW}		-	3.43	3.43	3.43	
	Water heating eff. class		-	A++	A++	A++	
	Colder climate		Declared load profile	-	L	L	L
			Water heating efficiency (η _{WH})	%	101	101	101
		COP _{DHW}	-	2.34	2.34	2.34	
		Water heating eff. class	-	A	A	A	

Nominal capacity and nominal power input

Description		OAT ¹⁾ (DB)	LWT ²⁾ (DB)	Outdoor unit	HU121MRB U30 (1 Ø)	HU141MRB U30 (1 Ø)	HU161MRB U30 (1 Ø)
					HU123MRB U30 (3 Ø)	HU143MRB U30 (3 Ø)	HU163MRB U30 (3 Ø)
				Indoor unit	HN1616Y NB1		
Nominal capacity	Heating	7°C	35°C	kW	12.00	14.00	16.00
			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
			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
			35°C		3.01	3.31	3.83
		2°C	35°C		2.53	3.26	4.00
	Cooling	35°C	18°C		4.44	5.38	6.40
			7°C		5.04	4.89	4.80
		7°C	55°C		2.90	2.85	2.80
COP	Heating	7°C	55°C	W/W	3.65	3.63	3.60
			35°C		4.75	4.30	4.00
		2°C	35°C		2.70	2.60	2.50

1) OAT: Outdoor Air Temperature
2) LWT: Leaving Water Temperature

R32 Hydrosplit IWT (Integrated Water Tank)

Product specification (outdoor unit)

Technical Specification			Unit	HU121MRB U30	HU141MRB U30	HU161MRB U30	HU123MRB U30	HU143MRB U30	HU163MRB U30
Operation range (outdoor temp.)	Heating	Min. - Max.	°C DB	-25 - 35					
	Cooling								
Compressor	Quantity	EA							
	Type	Hermetic sealed scroll							
Refrigerant	Type	R32							
	GWP (Global Warming Potential)	675							
	Precharged amount	g							
	t-CO ₂ eq	1.418							
Piping connections	Water circuit	Inlet	mm (inch)						
		Outlet	Male PT 1" according to ISO 7-1 (tapered pipe threads)						
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
	Cooling	Rated		53	54	55	53	54	55
Dimensions	Unit	W x H x D	mm						
	Weight	kg							
Exterior	Color / RAL code		Warm gray / RAL 7044						
	Voltage, phase, frequency		V, Ø, Hz	220-240, 1, 50			380-415, 3, 50		
Power supply	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					
Wiring connections	Power supply cable (included earth, H07RN-F)		mm ² x cores	6.0 x 3 C			2.5 x 5 C		

Product specification (indoor unit)

Technical Specification			Unit	HN1616Y NB1
Operation range (leaving water temperature)	Heating	Min. - Max.	°C DB	15 - 65
	Cooling			5 - 27 (16 - 27) ¹⁾
Domestic hot water tank	DHW	15 - 80 ²⁾		
	Volume	ℓ		
Flow sensor	Measuring range	Min. - Max.	LPM	5 - 80
				Water pressure sensor
Expansion vessel (heating circuit)	Volume	ℓ		
Safety valve	Heating circuit	Upper limit	bar	3
	DHW circuit	Upper limit	bar	10
Electric heater (Case 1 / Case 2 / Case 3) ³⁾	Type	-		
	Number of heating coil	EA		
	Capacity combination	kW		
	Heating step	Step		
	Power supply	V, Ø, Hz		
	Power supply cable (included earth, H07RN-F)	mm ² x cores		
Piping connections	Water circuit	Inlet	inch	
		Outlet	inch	
		Inlet from outdoor unit	inch	
		Outlet to outdoor unit	inch	
	DHW tank water circuit	Cold inlet	inch	
		Hot outlet	inch	
Wiring connections	Power and communication cable (included earth, H07RN-F)		mm ² x cores	0.75 x 4 C
	Rated running current	A		
Sound power level	Heating	Rated	dB(A)	43
Dimensions	Unit	W x H x D	mm	
Weight	kg			130.0
Exterior	Color / RAL code		-	
			White / RAL 9002	

1) When a fan coil unit is not used.

2) DHW 55 - 80°C Operating is available only when the electric heater is operating.

3) The capacity of electric heater can be adjusted by wiring.

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.

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 accordance with ISO 9614 standard.

Sound pressure level is converted from sound power level based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2.

Therefore, these values can be increased owing to ambient conditions during operation.

Rated sound power level is in accordance with EN12102-1 under condition of EN14825.

4. Performances are in accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation

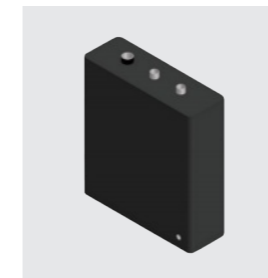
* Rated running current: Outdoor Temp. 7°C DB / 6°C WB, LWT 35°C

5. This product contains fluorinated greenhouse gases.

6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

Accessory Parts (Optional Accessory)

Buffer tank for space heating



A standard 40 ℓ buffer tank for can be installed as an optional accessory for space heating. Fitting seamlessly into the main casing, it can be attached to the backside of the indoor unit.

Buffer tank for space heating		Unit	OSHB-40KT.AEU
Water volume	ℓ		40
Dimensions (W x H x D)	mm		518 x 560 x 175
Weight (w/o water)	Product	kg	24

* The buffer tank for space heating should be purchased and installed separately.

Expansion vessel for DHW



A standard 8 ℓ DHW expansion vessel, that conveniently fits inside the indoor unit, can be installed as an optional accessory. It is provided with an accessory kit that includes a flexible connection tube.

Expansion vessel for DHW		Unit	OSHE-12KT.AEU
Expansion volume	ℓ		8
Connection	inch		3/4
Max. pressure	bar		10
Pre-charge	bar		3
Dimensions (W x H x D)	mm		416 x 238 x 502
Weight (w/o water)	Product	kg	2.5

* The expansion vessel for DHW should be purchased and installed separately.

Accessory Parts

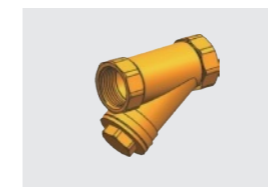
Shut-off valve



Shut-off valve with strainer



Strainer



Technical specification		Details
Material	Body	Brass
	Mesh	Stainless steel (STS304)
Mesh	Mesh no.	30
	Max. particle size	0.6 mm
Piping connection		Female G 1" according to ISO 228-1

* The strainer and valves are supplied with the product, but it need to be installed separately.

* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU121MRB U30 / HU123MRB U30 + HN1616Y NB1

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
	Capacity (kW)							
-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 / HU143MRB U30 + HN1616Y NB1

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
	Capacity (kW)							
-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 / HU163MRB U30 + HN1616Y NB1

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
	Capacity (kW)							
-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)
 2. Direct interpolation is permissible. Do not extrapolate.
 3. Measuring procedure follows EN-14511.
 • Rated values are based on standard conditions and can be found on specifications.
 • Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.
 • The rating might slightly vary depending on test standards or countries.
 4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU121MRB U30 / HU123MRB U30 + HN1616Y NB1

Outdoor temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	Capacity (kW)						
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 / HU143MRB U30 + HN1616Y NB1

Outdoor temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	Capacity (kW)						
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 / HU163MRB U30 + HN1616Y NB1

Outdoor temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	Capacity (kW)						
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

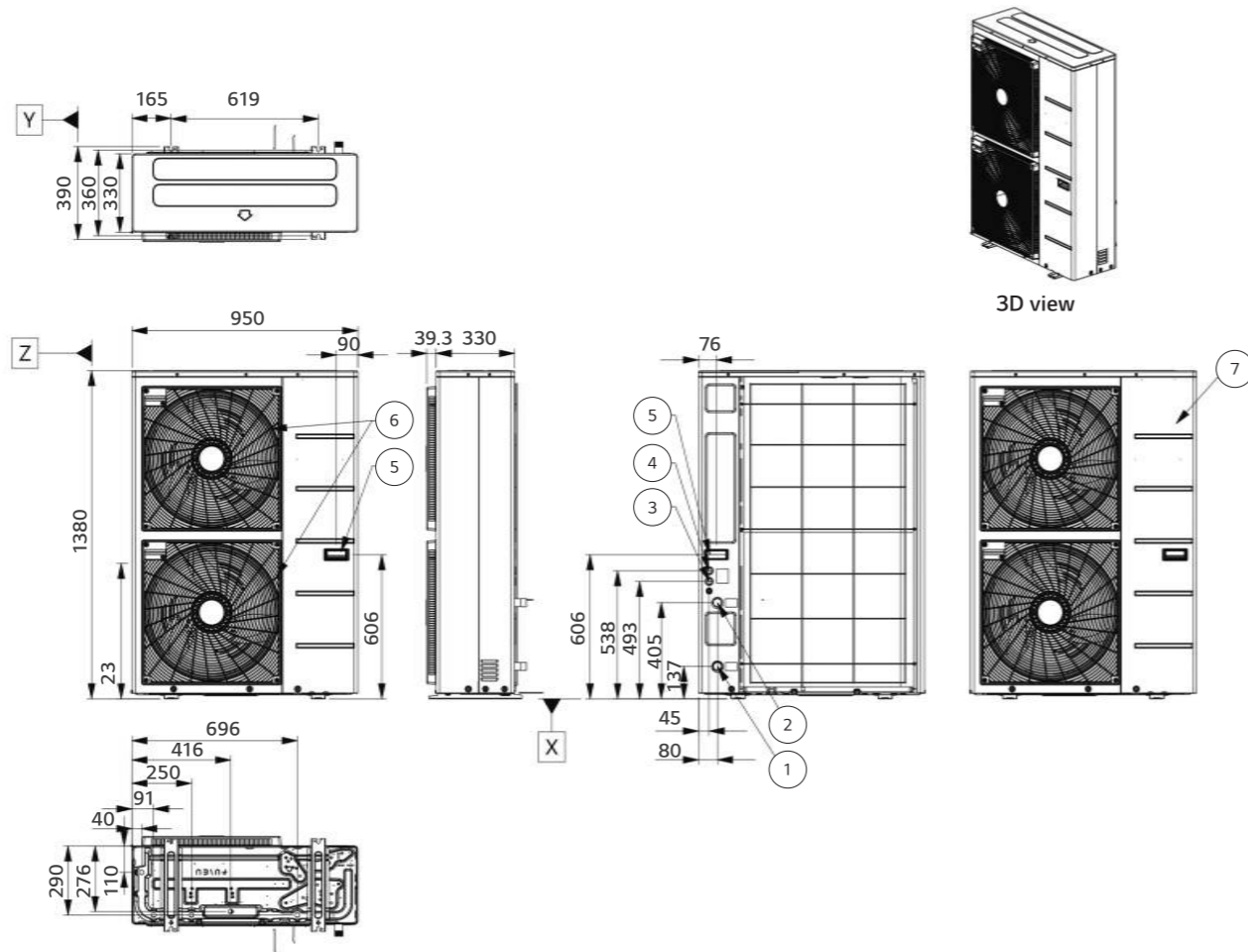
Note
 1. DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C)
 2. Direct interpolation is permissible. Do not extrapolate.
 3. Measuring procedure follows EN-14511.
 • Rated values are based on standard conditions and can be found on specifications.
 • Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.
 • The rating might slightly vary depending on test standards or countries.
 4. The shaded areas are not guaranteed continuous operation.

Drawings

Category	Unit	Model name		
		Capacity (kW)		
		12.0	14.0	16.0
1 Phase model 220 - 240 V, 1 Ø, 50 Hz	Outdoor unit	HU121MRB U30	HU141MRB U30	HU161MRB U30
	Indoor unit	HN1616Y NB1		
3 Phase model 380 - 415 V, 3 Ø, 50 Hz	Outdoor unit	HU123MRB U30	HU143MRB U30	HU163MRB U30
	Indoor unit	HN1616Y NB1		

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

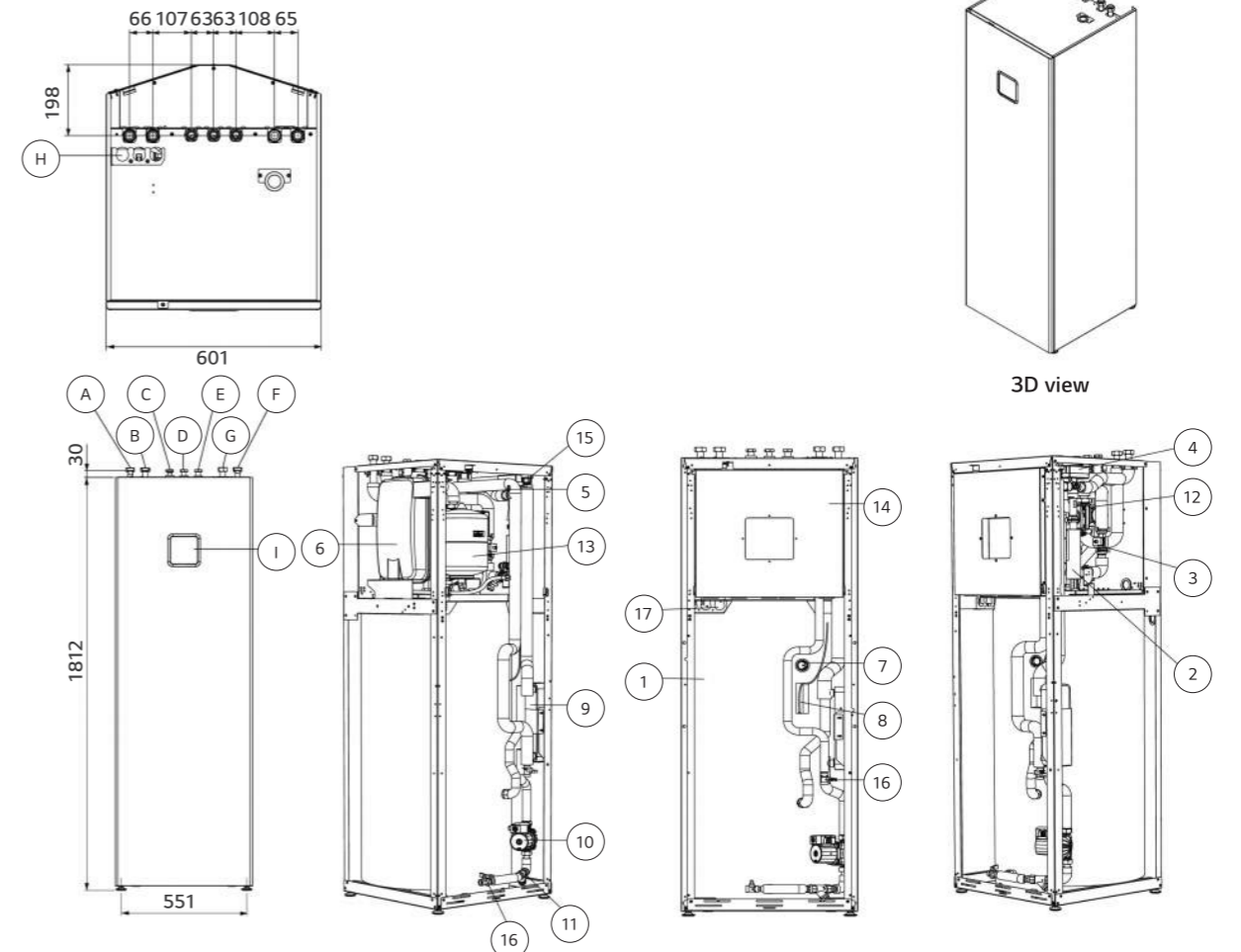
[Unit: mm]



No.	Part name	Description
1	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Unit power	Power cable hole
4	Low voltage	Communication cable hole
5	Handle	-
6	Air outlet	-
7	Side panel	-

HN1616Y NB1

[Unit: mm]




No.	Part name	Description
1	Domestic hot water tank	200 l
2	Electric heater	Max 6 kW
3	Flow sensor	To measure the water flow rate (5-80 LPM)
4	3 way valve	Heating / DHW circuit
5	Water pressure sensor	To measure the water pressure (0-2 MPa)
6	Expansion vessel	12 l for heating circuit
7	Magnesium anode	To prevent corrosion
8	DHW tank sensor	Temperature sensor
9	Plate heat exchanger	Heat exchange (water / DHW tank)
10	DHW water pump	To circulate water for DHW heating
11	Strainer for DHW tank	Filtering and stacking particles
12	Main water pump	To circulate water inside the system
13	Expansion vessel	8 l For DHW circuit (accessory)
14	Control box	PCB and terminal blocks
15	Air vent	Air purging when charging water
16	Drain cock	Valve for water draining
17	Electrical conduits	For electric wiring











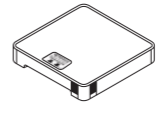
No.	Part name	Part name
A	Inlet pipe from outdoor unit	Female G1"
B	Outlet pipe to outdoor unit	Female G1"
C	Domestic hot water outlet pipe	Female G3/4"
D	Domestic cold water inlet pipe	Female G3/4"
E	Domestic re-circulation pipe	Female G3/4"
F	Heating circuit inlet pipe	Female G1"
G	Heating circuit outlet pipe	Female G1"
H	Electrical conduits	For electric wiring
I	Control panel	Built-in remote controller

THEIRMA V™ ACCESSORIES







Accessories Provided by LG








Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Sensors	Room temperature sensor	PQRSTA0		All Therma V products	Room temperature based control	To detect room air temperature for room temperature based control	• Max. wire length: 15 m
	Thermistor for 2 nd circuit or e/heater	PRSTAT5K10		All except for High Temperature	2 nd circuit (mixing circuit)	To detect 2 nd circuit temperature when using 2 nd circuit function	• 5 kΩ thermistor, 10 m
	Domestic hot water sensor	PHRSTA0		All except for R32 Split IWT and R32 Hydrosplit IWT	Domestic hot water heating	To detect DHW tank temperature	• Included in DHW tank kit
Valves	3 way valve	OSHA-3 V		All except for R32 Split IWT and R32 Hydrosplit IWT	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 OSHA-MV1		Regardless of the 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 • Size: 1" DN25 male threaded
DHW tanks	Domestic hot water tank (single coil)	OSHW-200 F OSHW-300 F OSHW-500 F		All except for R32 Split IWT and R32 Hydrosplit IWT	Domestic hot water heating	To generate and store domestic hot water	• Storage volume: 200 ℓ, 300 ℓ, 500 ℓ • Type: internal single coil • Material: stainless steel • Capacity of booster heater: 2.4 kW
	Domestic hot water tank (double coil)	OSHW-300 FD		All except for R32 Split IWT, R32 Hydrosplit IWT and High Temperature			• Storage volume: 300 ℓ • Type: internal double coil • Material: stainless steel • Capacity of booster heater: 2.4 kW
Installation kits	Domestic hot water tank kit	PHLTA		Hydro Box for Split & Hydrosplit	Domestic hot water heating	To operate with DHW tank including the booster heater	• Parts included: DHW tank sensor (thermistor), circuit breaker, relay
		PHLTC		Old Hydro Box for R410A Split - 3 Ø (HN1639 NK3 only)			• Parts included: DHW tank sensor (thermistor), circuit breaker, relay, multi harness
		PHLTB	R32 Monobloc, R32 Monobloc S				
	Solar thermal kit	PHLLA		R32 Split 4/6 kW Hydro Box (HN0613M NK5), R32 Monobloc, R410A Split Hydro Box (HN1616 NK3 / HN1639 NK3)	Solar thermal heat utilization	To operate with solar thermal system	• Length of thermistor: 12 m • Size of tube connector (W x H x D): 110 x 55 x 22

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Installation kits	Electric back-up heater	HA031M E1		R32 Monobloc, R32 Monobloc S	Capacity back up & emergency operation	To supplement insufficient capacity	• Heater capacity: 3 kW • Number of heating coil: 1ea (3.0 kW) • Size (W x H x D): 210 x 607 x 217 • Power: 220 - 240 V, 1 Ø	
		HA061M E1					• Heater capacity: 6 kW • Number of heating coil: 2 ea (3.0 + 3.0 kW) • Size (W x H x D): 210 x 607 x 217 • Power: 220 - 240 V, 1 Ø	
		HA063M E1					• Heater capacity: 6 kW • Number of heating coil: 3 ea (2.0 + 2.0 + 2.0 kW) • Size (W x H x D): 210 x 607 x 217 • Power: 380 - 415 V, 3 Ø	
	R32 Hydrosplit Hydro Box (HN1600MC NK1)	HA061C E1		R32 Hydrosplit Hydro Box (HN1600MC NK1)	Capacity back Up & emergency operation	To supplement insufficient capacity	• Heater capacity: 6 kW • Number of heating coil: 2 ea (3.0 + 3.0 kW) • Power: 220-240 V, 1 Ø	
HA063C E1			• Heater capacity: 6 kW • Number of heating coil: 3 ea (2.0 + 2.0 + 2.0 kW) • Power: 380-415 V, 3 Ø					
Vessel	Buffer tank for space heating	OSHB-40KT		R32 Hydrosplit IWT	-	To provide the buffer volume of water to the heating circuit	• Volume: 40 ℓ • Size (W x H x D): 518 x 560 x 175	
	Expansion vessel for DHW	OSHE-12KT		R32 Hydrosplit IWT	-	To absorb the volume changes by temperature of water for the DHW circuit	• Volume: 8 ℓ • Connection: 3/4" • Max. pressure: 10 bar • Size (W x H x D): 416 x 238 x 502	
ETC	Extension wire for a wired remote controller	PZCWRC1		All Therma V products	-	To extend the wire between the wired remote controller and the indoor unit	• Length: 10 m	
	Extension cable for Wi-Fi modem	PWYREW000		All Therma V products	Wi-Fi control via LG ThinQ	To extend a wire between the Wi-Fi modem and the indoor unit	• Length: 10 m	
	2-remote control wire	PZCWRC2		All Therma V products	2 remote control	To connect two remote controllers on one indoor unit	• Length: 0.25 m	
	Drain pan	PHDPB			R32 Split Hydro Box (NK4 suffix), R410A Split Hydro Box (NK3 suffix)	Cooling operation	To collect condensed water in the indoor unit during the cooling operation	-
		PHDPC	R32 Hydrosplit, R32 Split Hydro Box (NK5 suffix), R410A Split Hydro Box (NK5 suffix)		-			
Cover plate	PDC-HK10		R32 Hydrosplit Hydro Box, R32 Hydrosplit IWT, R32 Split Hydro Box, R32 Split IWT, R410A Split Hydro Box	-	-	To fill the blank space of the indoor unit front panel when the remote controller is relocated indoors.	-	

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Remote controller	Wired remote controller	PREMTW101		All Therma V products	2 remote control	To control the AWHP using two remote controllers (an additional remote controller)	<ul style="list-style-type: none"> 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, 10 m) and 2 remote cable (PZCWRC2, 0.25 m) are included
Central controller	AC Ez Touch ¹⁾	PACEZA000		All Therma V products	Centralized control	To control the AWHP using LG central controller	<ul style="list-style-type: none"> 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 1 ea (emergency stop only) Size (W x H x D): 137 x 121 x 25
	AC Smart 5 ¹⁾	PACSSA000 (Smart 5)					<ul style="list-style-type: none"> 10.2 inch color display User-friendly control with iconographic interface (touch screen) 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 2 ea, DO 2 ea BACnet IP/modbus TCP protocol support Size (W x H x D): 253.2 x 167.7 x 28.9
	ACP 5 ¹⁾	PACPSA000 (ACPS)					<ul style="list-style-type: none"> 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 10 ea, DO 4 ea BACnet IP/modbus TCP protocol support Lonworks protocol support* (max. 64 unit control) Size (W x H x D): 270 x 155 x 65

* For using Lonworks protocol, only ACP 5 provides interface for BMS integration, and, need to U60FT module between ACP 5 and BMS system interface between Lonworks FT-10 BMS and LG HVAC unit. U60FT should be purchased separately from 3rd party supplier. Please contact regional LG office for more detailed information.

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Gateway	Modbus RTU gateway	PMBUSB00A		All Therma V products	Centralized control	To communicate and control through the central controller (providing modbus RTU connection between the AWHP and BMS)	<ul style="list-style-type: none"> 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 12 V
	PI485 gateway for Therma V	PP485A00T				To communicate and control through the central controller (converting LG protocol to RS485 protocol)	<ul style="list-style-type: none"> 1 for each outdoor unit Power: supplied by outdoor unit
Dry contact	Simple dry contact	PDRYCB000		All Therma V products		To connect between the AWHP and external devices to control various functions	<ul style="list-style-type: none"> 1 Set per 1 unit 1 Input contact for turning on/off Input power: 220 ~ 240 V 2 output contacts <ul style="list-style-type: none"> Operation status Error status
	Dry contact for thermostat	PDRYCB320					<ul style="list-style-type: none"> 1 Set per 1 unit Non voltage or 12 ~ 24 V 8 digital input contacts for thermostat <ul style="list-style-type: none"> On/off, operation mode, DHW heating Emergency mode, silent mode 2 Output contacts <ul style="list-style-type: none"> Operation status Error status
ETC	LG Wi-Fi modem	PWFMD200		All Therma V products	Wi-Fi control via LG ThinQ	To control the AWHP via a smartphone	<ul style="list-style-type: none"> Basic control function <ul style="list-style-type: none"> On/off, operation mode, set temp DHW heating and set temp Weekly on/off schedule Error status check Frequency: 2.4 GHz IEEE 802.11b/g/n supported
	Cloud gateway ¹⁾	PWFMD200		R32 Monobloc S, R32 Split IWT, New Hydro Box for Split & Hydrosplit	LG BECON cloud service	For remote control, monitoring and diagnosis	<ul style="list-style-type: none"> Max 16 indoor units RS485: 1 channel (LGAP) Wired/wireless IAN Power: 12 V DC Size (W x H x D): 120 x 120 x 29
	Meter interface	PENKTH000		All Therma V products	Energy monitoring	To measure production / consumption power	<ul style="list-style-type: none"> Energy meter interface to monitor Electricity and Heat energy <ul style="list-style-type: none"> Max. 3 watt Hour meter Max. 1 heat meter Pulse width: 40 ms ~ 100 ms Modbus RTU comm. with Therma V <ul style="list-style-type: none"> 2 wire RS485 / 9600 bps Power: DC 12 V Size (W x H x D): 54 x 90 x 61

Note

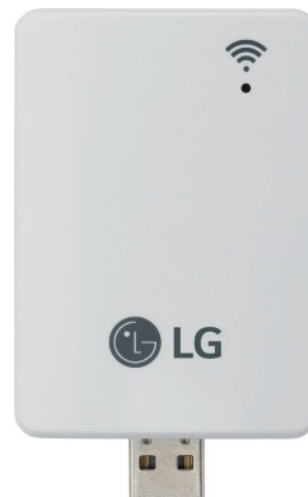
1. PI485 Gateway (PP485A00T) should be installed on outdoor unit to use the central controller and cloud gateway.

LG Wi-Fi Modem

PWFMDD200 ENCXLEU

Access LG Therma V anytime and from anywhere with a Wi-Fi equipped device. LG's exclusive home appliances control app (LG ThinQ) offers simple operation and 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
Connection type	Indoor unit 1 : 1
Communication frequency	2.4 GHz
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 (10 m 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.