Technical Data Table | Combi Unit

Technical specification

Efficiency data		Unit	HU121MRB U30 (1 Ø) HU123MRB U30 (3 Ø)	HU141MRB U30 (1 Ø) HU143MRB U30 (3 Ø)	HU161MRB U30 (1 Ø) HU163MRB U30 (3 Ø)
			HN1616Y NB1		
Seasonal space heating eff. class (35℃ / 55℃)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_S) (35℃ / 55℃)		%	181 / 137	180 / 136	179 / 135
SCOP (35℃ / 55℃)		-	4.60 / 3.50	4.57 / 3.47	4.55 / 3.45
Declared load profile, average climate		-	L	L	L
Water heating efficiency (η_{WH}), average climate		%	120	120	120
COP_{DHW} average climate		-	2.74	2.74	2.74
Water heating eff. class, average climate		-	A+	A+	A+
Water heating time acc. to EN 16147 (average climate)		h/mn	1h 25		
Max. usable water volume acc. to EN 16147 (average climate)		ℓ	222		
Nominal capacity and COP / EER					
Air +7℃ / water +35℃	Heating capacity / COP	kW / -	12.00 / 5.04	14.00 / 4.89	16.00 / 4.80
Air +2℃ / water +35℃	Heating capacity / COP	kW / -	11.00 / 3.65	12.00 / 3.63	13.80 / 3.60
Air +7℃ / water +55℃	Heating capacity / COP	kW / -	11.00 / 2.90	11.50 / 2.85	12.00 / 2.80
Air +35℃ / water +18℃	Cooling capacity / EER	kW / -	12.00 / 4.75	14.00 / 4.30	16.00 / 4.00
Air +35℃ / water +7℃	Cooling capacity / EER	kW / -	12.00 / 2.70	14.00 / 2.60	16.00 / 2.50
Outdoor unit			HU121MRB U30 (1 Ø) HU123MRB U30 (3 Ø)	HU141MRB U30 (1 Ø) HU143MRB U30 (3 Ø)	HU161MRB U30 (1 Ø) HU163MRB U30 (3 Ø)
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	℃	-25 ~ 35		
	Cooling (Min. ~ Max.)	℃	5 ~ 48		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	2,100		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Sound power level	Rated / low noise mode	dB (A)	61 / 60	62 / 60	63 / 60
Sound pressure level at 5 m [1]	Rated / low noise mode	dB (A)	39 / 38	40 / 38	41 / 38
Dimension	W × H × D	mm	950 × 1,380 × 330		
Weight	Empty	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		
	Recommended circuit breaker	A	1 Ø: 40 / 3 Ø: 16		
Indoor unit			HN1616Y NB1		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	℃	15 ~ 65		
	Cooling (Min. ~ Max.)	℃	5 ~ 27 (16 ~ 27) [2]		
	DHW (Min. ~ Max.)	℃	15 ~ 80 [3]		
Domestic hot water tank	Volume	ℓ	200		
	Tank material	-	Enameled steel		
Electric heater (Case 1 / Case 2 / Case 3) [4]	Capacity combination	kW	2.0 / 2.0 + 2.0 / 2.0 + 2.0 + 2.0		
	Power supply	V, Ø, Hz	220 ~ 240, 1, 50 / 220 ~ 240, 1, 50 / 380 ~ 415, 3, 50		
	Rated running current	A	8.7 / 17.4 / 8.7		
Piping connections (water)	Outlet to outdoor unit	inch	Female G1" according to ISO228-1 (parallel pipe threads)		
	Inlet from outdoor unit	inch			
	Outlet to heat load	inch			
	Inlet from heat load	inch			
	Inlet / outlet diameter for DHW	inch	Female G3/4" according to ISO228-1 (parallel pipe threads)		
	Recirculation	inch			
Sound power level	Rated	dB (A)	43		
Sound pressure level at 1 m [1]	Rated	dB (A)	35		
Dimension	W × H × D	mm	601 × 1,812 × 685		
Weight	Empty	kg	130.0		
Exterior	Color / RAL code	-	White / RAL 9002		

1) 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.
2) When a fan coil unit is not used.
3) DHW 55 ~ 80°C operating is available only when the booster heater is operating.
4) The capacity of electric heater can be adjusted by wiring.

LG

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Only Water Enters Your Home,
THERMA V Hydrosplit

- High level hydronic components integration for fast and clean installation
- Space-saving solution with compact and light indoor unit
- Simple installation due to no refrigerant piping work



Visit our website

LG





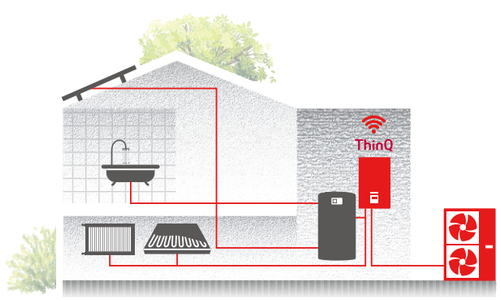
A Simple, Safe Heat Pump
with Water Piping

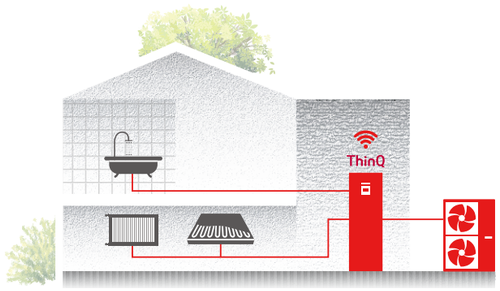
The LG THERMA V Hydrosplit series is an air-to-water heat pump in which the outdoor unit and the indoor unit are connected by water pipes, available in two different combinations (Hydro Unit or Combi Unit) depending on the specific needs of the property.

Key Features

- 12 to 16 kW for renovation and large new built
- Space heating, cooling and DHW
- Water pipe connects IDU & ODU
- Operation range down to -25℃
- Maximum flow temperature up to 65℃
- High flexibility with Hydro Unit and all-in-one Combi Unit with integrated hot water cylinder

A+++ 35℃ | A++ 55℃ | R32 | NEW | RENOVATION | 65℃

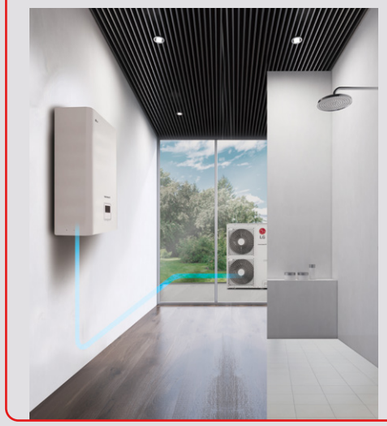




Product Range

Product	Phase	Capacity (kW)	Indoor Unit		Outdoor Unit	
R32 Hydrosplit Hydro Unit	1 Ø	12	HN1600MC NK1		HU121MRB U30	
		14			HU141MRB U30	
		16			HU161MRB U30	
	3 Ø	12			HU123MRB U30	
		14			HU143MRB U30	
		16			HU163MRB U30	
R32 Hydrosplit Combi Unit	1 Ø	12	HN1616Y NB1		HU121MRB U30	
		14			HU141MRB U30	
		16			HU161MRB U30	
	3 Ø	12			HU123MRB U30	
		14			HU143MRB U30	
		16			HU163MRB U30	

Why choose
LG THERMA V Hydrosplit?



01

Simple installation without refrigerant piping

- No need for F-gas license, because outdoor and indoor unit are connected by water pipes
- As hydronic parts are packaged inside indoor units, the installation can be realized with minimum usage of space
- Refrigerant is hermetically sealed inside outdoor unit

02

Remarkable heating performance even in cold weather

- Wide operation range down to -25℃
- 100 % heating capacity at -7℃ ambient temp. (@ LWT 35℃)
- Reduces energy bills with the highest energy efficiency of A+++ (@ 35℃)





03

All-in-one integration (Combi Unit)

all-in-one

- Integrated indoor unit with a hot water storage tank
- Saves space in the technical room with a small footprint
- Installation time reduced with pre-installed components
- Harmonized with other household appliances for a cohesive exterior

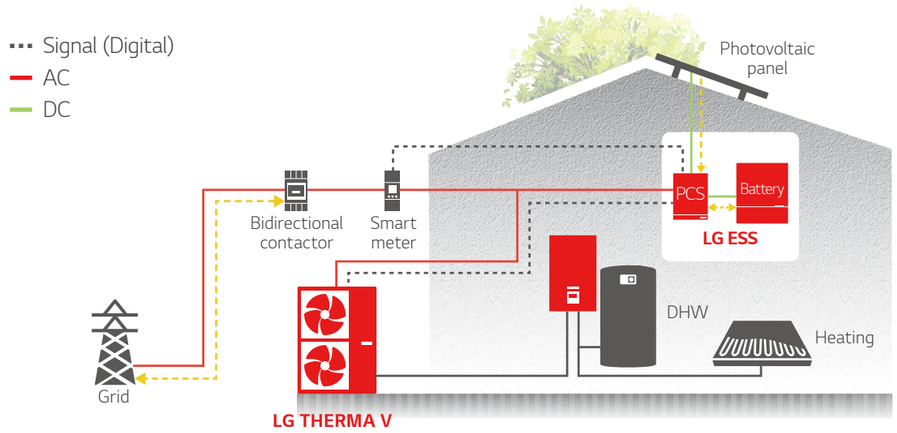


LG Smart Home Energy Package

Power your home the smart way and save the energy bill

With LG, you are able to minimize the energy cost and one step closer to the ultimate smart home.

* Availability of LG Smart Home Energy Package may vary by region.



Accessories

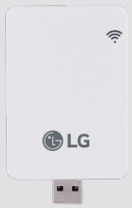
Electric backup heater



- HA061C E1 (1 Ø, 6 kW)
- HA063C E1 (3 Ø, 6 kW)

* Heater accessory for Hydro Unit

Wi-Fi modem



- PWFMDD200

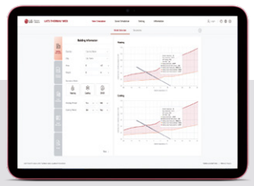
Cloud gateway



- PWFMDB200

Tools & Services

For all customers including designers, installers, and end users.



LATS THERMA V [1)]

A web based simulation tool that enables to choose optimized THERMA V model from various capacity range and simulates its energy cost comparing to other heating solutions.

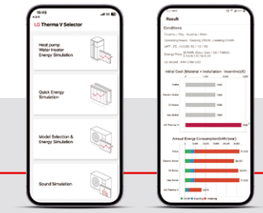
1) A web version will be available in 4Q 2023.



LG ThinQ & LG *BECON* cloud service

A cloud-based service that remotely monitors a customer's heating system via smart devices. End users can remotely control the heating system through ThinQ, and service providers can perform more detailed remote monitoring and diagnosis.

* R32 Hydrosplit Combi Unit is not supported.



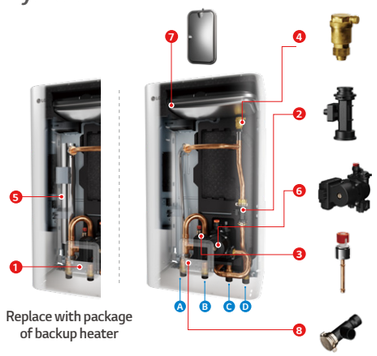
LG THERMA V selector

A mobile app. for simulating energy consumption and cost as well as CO_2 emission.

Android iOS

Interior & Connections

Hydro Unit



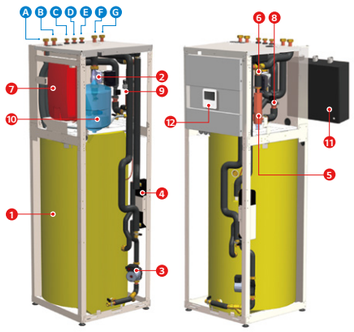
Components

1. Standard III remote controller (air temp. sensor integrated)
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

Connections

- 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")

Combi Unit



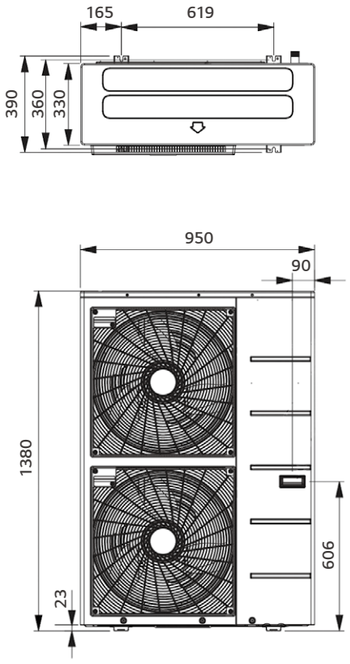
1. DHW storage tank (200 ℓ)
2. Main water pump
3. Water pump for DHW charging
4. Plate heat exchanger for DHW (water / DHW)
5. Electric heater (max. 6 kW)
6. 3-way diverting valve
7. Expansion vessel for heating (12 ℓ)
8. Flow sensor
9. Water pressure sensor
10. Expansion vessel for DHW (8 ℓ, option)
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")

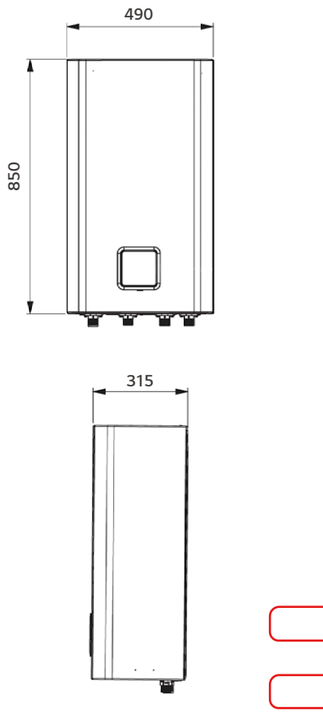
Product Dimensions

[Unit: mm]

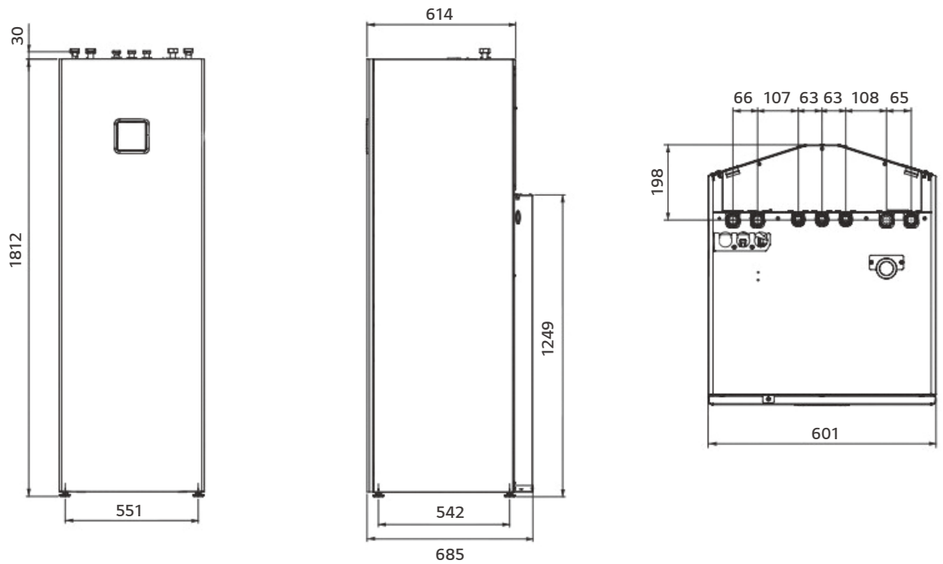
Outdoor Unit



Hydro Unit



Combi Unit



Technical Data Table | Hydro Unit

Technical specification

Efficiency data		Unit	HU121MRB U30 (1 Ø) HU123MRB U30 (3 Ø)	HU141MRB U30 (1 Ø) HU143MRB U30 (3 Ø)	HU161MRB U30 (1 Ø) HU163MRB U30 (3 Ø)
			HN1600MC NK1		
Seasonal space heating eff. class (35℃ / 55℃)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35℃ / 55℃)		%	181 / 137	180 / 136	179 / 135
SCOP (35℃ / 55℃)		-	4.60 / 3.50	4.57 / 3.47	4.55 / 3.45
Nominal capacity and COP / EER					
Air +7℃ / water +35℃	Heating capacity / COP	kW / -	12.00 / 5.04	14.00 / 4.89	16.00 / 4.80
Air +2℃ / water +35℃	Heating capacity / COP	kW / -	11.00 / 3.65	12.00 / 3.63	13.80 / 3.60
Air +7℃ / water +55℃	Heating capacity / COP	kW / -	11.00 / 2.90	11.50 / 2.85	12.00 / 2.80
Air +35℃ / water +18℃	Cooling capacity / EER	kW / -	12.00 / 4.75	14.00 / 4.30	16.00 / 4.00
Air +35℃ / water +7℃	Cooling capacity / EER	kW / -	12.00 / 2.70	14.00 / 2.60	16.00 / 2.50
Outdoor unit			HU121MRB U30 (1 Ø) HU123MRB U30 (3 Ø)	HU141MRB U30 (1 Ø) HU143MRB U30 (3 Ø)	HU161MRB U30 (1 Ø) HU163MRB U30 (3 Ø)
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	℃	-25 ~ 35		
	Cooling (Min. ~ Max.)	℃	5 ~ 48		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	2,100		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Sound power level	Rated / low noise mode	dB (A)	61 / 60	62 / 60	63 / 60
Sound pressure level at 5 m [1]	Rated / low noise mode	dB (A)	39 / 38	40 / 38	41 / 38
Dimension	W × H × D	mm	950 × 1,380 × 330		
Weight	Empty	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		
	Recommended circuit breaker	A	1 Ø: 40 / 3 Ø: 16		
Indoor unit			HN1600MC NK1		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	℃	15 ~ 65		
	Cooling (Min. ~ Max.)	℃	5 ~ 27 (16 ~ 27) [2]		
	DHW (Min. ~ Max.)	℃	15 ~ 80 [3]		
Piping connections (water)	Outlet to outdoor unit	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
	Inlet from outdoor unit	inch			
	Outlet to heat load	inch			
	Inlet from heat load	inch			
Sound power level	Rated	dB (A)	44		
Sound pressure level at 1 m [1]	Rated	dB (A)	36		
Dimension	W × H × D	mm	490 × 850 × 315		
Weight	Empty	kg	30.5		
Exterior	Color / RAL code	-	Noble white / RAL 9016		

1) 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.
2) When a fan coil unit is not used.
3) DHW 55 ~ 80°C operating is available only when the booster heater is operating.

Accessory backup heater

		Unit	HA061C E1	HA063C E1
Backup heater	Capacity combination	kW	3.0 + 3.0	2.0 + 2.0 + 2.0
	Power supply	V, Ø, Hz	220 ~ 240, 1, 50	380 ~ 415, 3, 50
	Rated running current	A	24.0	8.7