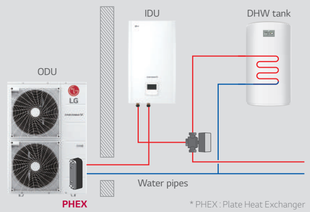
THERMA V HYDROSPLIT AT A GLANCE

CONVENIENCE MEETS PERFORMANCE

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.



* PHEX : Plate Heat Exchanger

LG THERMA V R32 HYDROSPLIT

Enhanced installation flexibility
- Water pipes connects IDU & ODU
- Hydronic components built into IDU : water pump, expansion tank, air vent
- User-friendly installation settings interface

High efficiency & operational range
- R32 Refrigerant
- SCOP up to 4.60 (Average climate / Low temp. application) : A+++
- COP up to 5.04 (Outdoor air 7℃ / Leaving water 35℃)
- Leaving water temperature up to 65℃
- Expanded operative range of solar thermal system

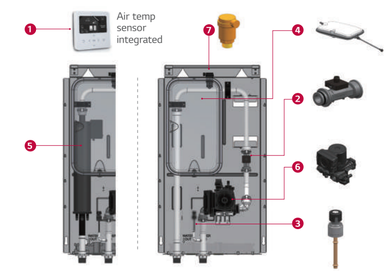
Innovative design & technology
- Built-in water flow & pressure sensors to monitor real-time water circuit
- Advanced water pump control
  (Optimal flow rate, fixed capacity, fixed flow rate, fixed △T)
- Enhanced 2nd circuit control logic

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

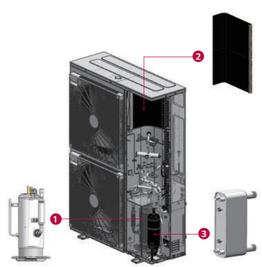
Indoor Unit
HN1600MB NK0

1) Will be acquired

KEY COMPONENTS



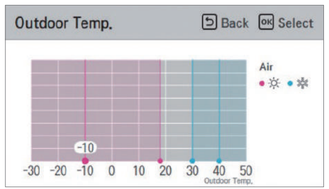
1. RS3 (Standard III) (Attached on the front panel)
2. Flow sensor (SIKA)
3. Water pressure sensor (SENSATA)
4. Expansion vessel (8ℓ)
5. Backup electric heater (6kW, accessory)
6. Water pump (GRUNDFOS)
7. Air vent valve

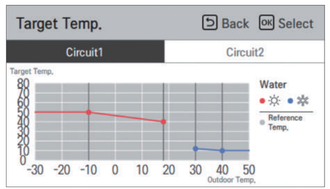


1. R1 compressor
2. Black Fin heat exchanger (Ref/air)
3. Plate type heat exchanger (Ref/water)

SEASONAL AUTO MODE

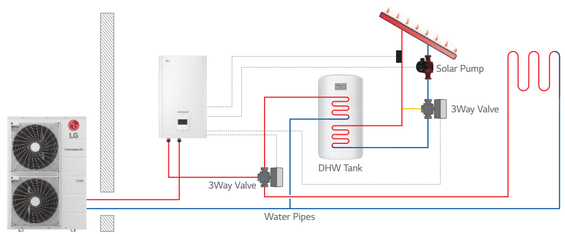
In this mode, the target temperature will vary according to the outdoor temperature automatically. This mode adds the cooling season function to the conventional weather dependent operation mode. Moreover, this function can be conveniently set using visualized graphics.





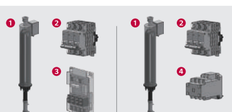
COMBINATION WITH SOLAR THERMAL SYSTEM

THERMA V can combine with the Solar thermal system enabling heats up DHW tank. It measures the temperature difference between the solar collector and DHW tank, then it starts heat up if the solar collector temperature is higher than DHW tank.



ACCESSORY PARTS (OPTIONAL ACCESSORY)

Back up heater[1)]



HA061B E1 (1Ø)　HA063B E1 (3Ø)

1. Heater element
2. ELCB
3. Heater relay PCB
4. Magnet switch

Electrical Specification			HA061B E1	HA063B E1
Backup Heater	Type	-	Sheath	
Wiring Connection	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
	Max. Current	A	26.1	8.7
	Power Cable (Included Earth, H07RN-F)	mm² x cores	4.0 x 3	2.5 x 5

1) Available from November 2020

ACCESSORY PARTS (SEPARATELY PROVIDED)

Strainer

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

LG
Life's Good

THERMA V™ R32
HYDROSPLIT

KEY ADVANTAGES

EASY INSTALLATION | **EXCELLENT PERFORMANCE & EFFICIENCY** | **USER CONVENIENCE**

Hydrosplit · LG heating configurator* · Clip connection · R1 compressor · R32 refrigerant · Flash gas injection · Wide operation range · Black Fin heat exchanger · Solar thermal · Energy state · Intuitive interface · LG ThinQ · Mixing circuit · Various control options · Flow sensor · Pressure sensor · 3rd party boiler · Energy monitoring · Seasonal auto mode · Low noise mode

* Will be supported within this year

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.

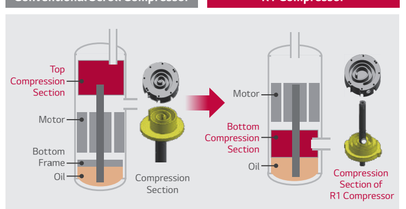
ECO-CONSCIOUS WITH R32 REFRIGERANT

Ensure regulation compliance with eco-conscious R32 refrigerant, which boasts enhanced efficiency and a 68% reduced Global Warming Potential (GWP) than the alternative.

R1 Compressor™ LG'S REVOLUTIONARY TECHNOLOGY

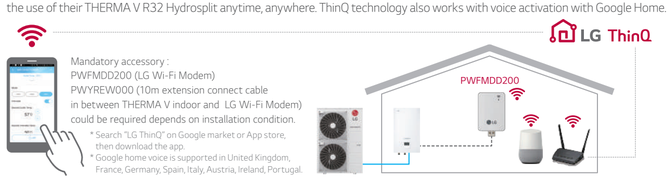
R1 Compressor™ technology offers advanced efficiency, reliability and operational range due in part to the enhanced tilting motion of the scroll.

- **Extended operation range (Max. 135Hz)**
- **Centrifugal oil return & Oil separating guide for oil discharge reduction**
- **Shaft-through structure & Support both ends of shaft**
  - Solid compressor operation assuring higher durability
- **Bottom compression & Simple structure**
  - Lower noise & vibration
  - Less weight
  - Superior reliability



LG ThinQ SEAMLESS CONNECTIVITY

LG ThinQ allows users to monitor and control compatible LG products remotely, so they can set the temperature and regulate the use of their THERMA V R32 Hydrosplit anytime, anywhere. ThinQ technology also works with voice activation with Google Home.



Mandatory accessory :
PWFMDD200 (LG Wi-Fi Modem)
PWYREW000 (10m extension connect cable in between THERMA V indoor and LG Wi-Fi Modem) could be required depends on installation condition.

* Search "LG ThinQ" on Google market or App store, then download the app.
* Google home voice is supported in United Kingdom, France, Germany, Spain, Italy, Austria, Ireland, Portugal.

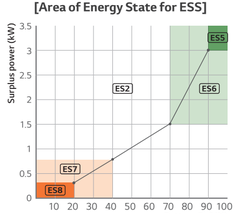
ENERGY STATES INTERLOCK

The R32 Hydrosplit provides energy state interlock function that enables customers to use as much as possible of their own renewable energy. It can shift set points depending on input signal from Energy Storage System (ESS) or any other third-party device using Modbus or Digital 230V inputs.

Energy States	Description				Operation
	Smart Grid (Contact)		ESS (Modbus)		
	Operation Mode	Power Supply Status	Operation Mode	Battery Charged Status	
ES1	Operation Off				Forced off to avoid peak load
ES2	Normal		Normal		Normal operation
ES3*	On Recommend				Changed target temperature higher (Heating : +2°C / DHW : +5°C)
ES4*	On Command				Changed target temperature higher (DHW : 80°C)
ES5**			On Command (Step2)		Changed target temperature higher (Heating : +5°C, Cooling : -5°C, DHW : +30°C)
ES6**			On Recommend (Step1)		Changed target temperature higher (Heating : +2°C, Cooling : -2°C, DHW : +10°C)
ES7**			Energy Saving		Changed target temperature lower (Heating : -2°C, Cooling : +2°C)
ES8**			Super Energy Saving		Changed target temperature lower (Heating : -5°C, Cooling : +5°C)

* Contact signal designated ES3 and ES4 can be changed to ES5 ~ ES8.
** Offset values of heating, cooling and DHW are changeable.
*** Therma V can connect not only ESS but also 3rd party controller through Modbus, in that case, ES1 to ES8 are used.

[Area of Energy State for ESS]



- SoC : State of Charge
- Surplus Power (SP) = PV Power – Load Power
- Area of Energy State for ESS can be adjusted by ESS.

INTUITIVE CONTROL

THERMA V is equipped with a new remote controller which supports various functions.

Premium Design
- New modern design 4.3 inch color LCD display
- Capacitive touch button (Especially On/Off button turn on LED)

User Friendly Interface
- Information displayed with simple graphic, icon & text
- Easy-to-use navigation

Convenient Functions
- Optimize schedule setting logic
  - Set the period, date, On/Off time, operation mode, target temp easy installation setting

Enhanced Energy Information with Simple Interface
- A clear view of instantaneous power consumption against target
- Accumulated power consumption & heat energy production weekly, monthly or annually

* Meter interface (PENKTH000) is required to see the energy information.

Display information in detail

PRODUCT SPECIFICATION

INDOOR UNIT

Indoor Unit				HN1600MB NK0
Operation Range (Leaving Water)	Heating	Min.~Max.	℃	15 ~ 65
	Cooling	Min.~Max.	℃	5 ~ 27
	Domestic Hot Water	Min.~Max.	℃	15 ~ 80[1]
Water Flow Rate		Min.	ℓ/min	15
		Rated[1] (12 / 14 / 16kW)	ℓ/min	34.5 / 40.3 / 46.0
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)		mm² x cores	0.75 x 4
Sound Power Level	Heating	Rated	dB(A)	44
Dimensions	Unit	W × H × D	mm	490 × 850 × 315
Weight	Unit		kg	30.3

OUTDOOR UNIT

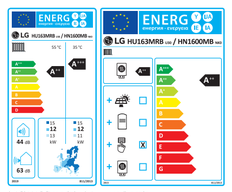
Description		OAT	LWT	Indoor Unit	HN1600MB NK0		
				Outdoor Unit	HU121MRB U30 (1Ø) HU123MRB U30 (3Ø)	HU141MRB U30 (1Ø) HU143MRB U30 (3Ø)	HU161MRB U30 (1Ø) HU163MRB U30 (3Ø)
Nominal Capacity	Heating	7 ℃	35 ℃	kW	12.00	14.00	16.00
		7 ℃	55 ℃	kW	11.00	11.50	12.00
		2 ℃	35 ℃	kW	11.00	12.00	13.80
	Cooling	35 ℃	18 ℃	kW	12.00	14.00	16.00
		35 ℃	7 ℃	kW	12.00	14.00	16.00
Nominal Power Input	Heating	7 ℃	35 ℃	kW	2.38	2.86	3.33
		7 ℃	55 ℃	kW	3.79	4.04	4.29
		2 ℃	35 ℃	kW	3.01	3.31	3.83
	Cooling	35 ℃	18 ℃	kW	2.53	3.26	4.00
		35 ℃	7 ℃	kW	4.44	5.38	6.40
COP	Heating	7 ℃	35 ℃	W/W	5.04	4.89	4.80
		7 ℃	55 ℃	W/W	2.90	2.85	2.80
		2 ℃	35 ℃	W/W	3.65	3.63	3.60
EER	Cooling	35 ℃	18 ℃	W/W	4.75	4.30	4.00
		35 ℃	7 ℃	W/W	2.70	2.60	2.50
Operation Range (Outdoor Temperature)	Heating	Min. ~ Max.		°C DB	-25 ~ 35		
	Cooling	Min. ~ Max.		°C DB	5 ~ 48		
Refrigerant	Type			-	R32		
	GWP (Global Warming Potential)			-	675		
	Factory Charge			g	2,100		
				t-CO2 eq.	1.418		
Compressor	Type			-	Hermetic Sealed Scroll		
Dimensions	Unit	W x H x D		mm	950 × 1,380 × 330		
Weight	Unit			kg	91.7		
Sound Power Level	Heating	Rated		dB(A)	61.0	62.0	63.0
Sound Pressure Level (at 1m)	Heating	Rated		dB(A)	53.0	54.0	55.0
Power Supply	Voltage, Phase, Frequency			V, Ø, Hz	220~240, 1, 50 / 380~415, 3, 50		
	Maximum Running Current			A	1Ø : 33.0, 3Ø : 12.0	1Ø : 34.0, 3Ø : 12.5	1Ø : 35.0, 3Ø : 13.0
	Recommended Circuit Breaker			A	1Ø : 40, 3Ø : 16		
Wiring Connections	Power Supply Cable (Included Earth, H07RN-F)			mm² x cores	1Ø : 6.0 x 3, 3Ø : 2.5 x 5		

1) DHW 58~80 Operating is available only when the booster heater is operating.
2) Rated conditions for Low temperature (A7/W35 -> 30)
* Due to our policy of innovation some specifications may be changed without notification.
* 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.

* LWT : Leaving Water Temperature, OAT : Outdoor Air Temperature.
* Sound level values are measured at anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
* Performances are accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation.

SEASONAL ENERGY EFFICIENCY

Description			Indoor Unit / Outdoor Unit	HN1600MB NK0 HU121MRB U30 / HU123MRB U30	HU141MRB U30 / HU143MRB U30	HU161MRB U30 / HU163MRB U30
Space Heating (According to EN14825)	Average Climate Water Outlet 35°C	SCOP	-	4.60	4.57	4.55
		Seasonal Space Heating Efficiency (ηs)	%	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 (ηs)	%	137	136	135
		Seasonal Space Heating Eff. Class (A+++ to D Scale)	-	A++	A++	A++



1) Will be acquired

* 16kW 3Ø model. * A+++ to D scale.

LG Life's Good

www.lg.com http://partnerlge.com

Iris Hellas Technology Innovations www.irishellas.com