

2023 LG THERMA V. PRODUCT CATALOGUE







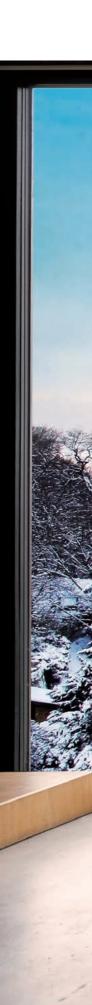


www.lg.com http://partner.lge.com

Copyright © 2023 LG Electronics. All rights reserved.

Distributed by







INTRODUCTION

LG BUSINESS PARTNERSHIP & INFRASTRUCTURE	006
HEAT PUMP TECHNOLOGY	008
REGULATIONS & CERTIFICATIONS	010
THERMA V INTRODUCTION	014
WHAT IS LG THERMA V	016
LG AIR-TO-WATER HEAT PUMP SOLUTION OVERVIEW	018
THERMA V LINE-UP OVERVIEW	020
THERMA V LINE-UP INTRODUCTION	022
PRE-SALES/ENGINEERING TOOLS	028
ThinQ SEAMLESS CONNECTIVITY	032
LG BECON CLOUD SERVICE FOR THERMA V	034
LG SMART HOME ENERGY PACKAGE	038

FEATURES

FEATURE OVERVIEW	044
EXCELLENT PERFORMANCE & EFFICIENCY	046
USER CONVENIENCE	049
EASY INSTALLATION & MAINTENANCE	053

PRODUCTS

MONOBLOC	
NEW R32 MONOBLOC S	058
HYDROSPLIT	
R32 HYDROSPLIT HYDRO BOX	076
R32 HYDROSPLIT IWT	088
SPLIT	
NEW R32 SPLIT HYDRO BOX	100
NEW R32 SPLIT IWT	118
R410A SPLIT HYDRO BOX	140
HIGH TEMPERATURE	152
WATER HEATER	
HEAT PUMP WATER HEATER	164

ACCESSORIES PROVIDED BY LG	180
LG WI-FI MODEM	184
DOMESTIC HOT WATER TANK	185
COMBINED TEST WITH DHW TANK	186



#Care For Where You Live







LG BUSINESS PARTNERSHIP & INFRASTRUCTURE

Infrastructure in Europe

LG Electronics' European Air Solution department is committed to ensuring your business success. With 16 pan-European sales offices and academies, we seek to deliver on our promise of support, efficiency and proactivity throughout each stage of our business partnership.

Our highly competitive products are delivered through our dedicated European distribution centre to ensure a steady and reliable supply of inventory.

At our European Energy Lab, LG Business Solutions is developing a heat pump technology that is optimized for the varied European climates and weather patterns along with continuous product performance verification.





LG Business Solutions Europe is based in Eschborn, Germany, with regional offices located throughout Europe. LG Europe B2B Regional Head Office is a control tower for European B2B business dealing with a wide range of products, including heat pumps and air conditioners. LG Electronics has a strong global network.



Air Conditioning Academy LG has set up 20 official heat pump and air conditioning academies in Europe, teaching much needed skills to thousands of current industry professionals including installers, consultants, designers, sales staff and service technicians. The academy program is designed to share expertise and educate these HVAC experts by providing a cutting-edge technical experience with the newest and most advanced technologies and equipment. Moreover, as LG's entire product range is installed on site, professionals can be trained in a realistic way that offers them the chance to experience the latest products first-hand.



LG Europe B2B Regional Head Office

About LG Business Solutions: http://www.lg.com/global/business/about-lg-business

LG Heat Pump and

European Distribution Center

LG's European Distribution Center is located in Oosterhout, the Netherlands. Supplying products all over Europe, this distribution hub has contributed to smooth and rapid delivery, direct shipping for smaller orders and delivery tailored to air conditioners. Inventory efficiency of the hub is secured by the LG EU's established inventory pool.

HEAT PUMP TECHNOLOGY

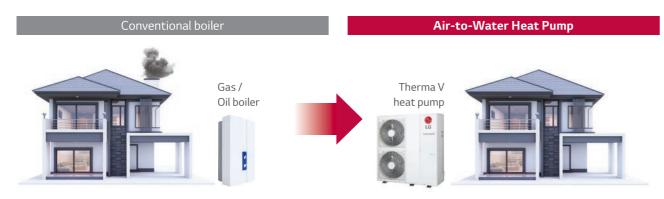
LG Electronics Leads the Way in Heat Pump Technology

As a leading HVAC supplier, LG's heating product portfolio comprises a wide range of highly energy efficient renewable energy systems, providing the right heating solution for any type of requirements and/or buildings.

What is an Air-to-Water Heat Pump System?

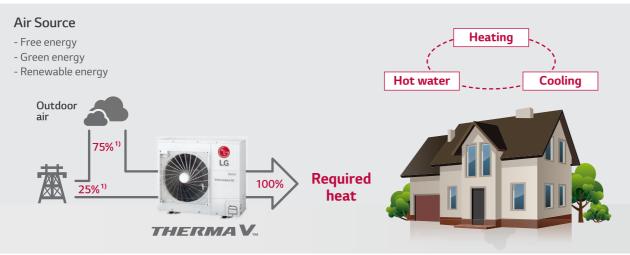
Modern Technology to Replace Conventional Boilers

Historically, conventional heating systems have used either oil or gas or have represented direct electric heaters. In such conventional heating systems, environmental aspects such as the pollution produced by fossil fuel use have been overlooked. Over the last years, the interest in these environmentally friendly devices has been increasing and in order to respond to the growing demand for eco-conscious devices, LG has further developed its heat pump technology to produce more efficient, environmentally friendly products.



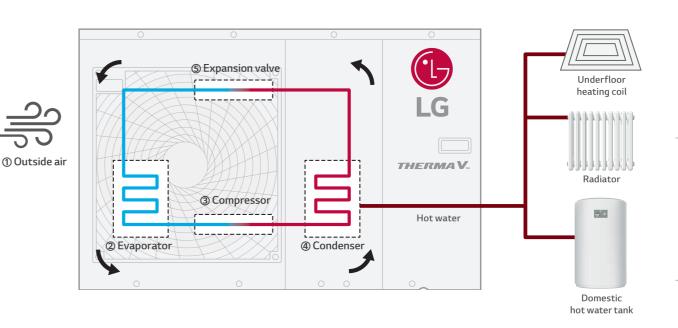
Modern Technology for Renewable Energy

The term "heat pump" refers to a technique that pumps heat from renewable energy sources, like the air, ground and water. A heat pump device transforms this energy into a usable heat source via the refrigerant cycle. With Therma V heat pump technology about 75% of the energy needed to provide heating and hot water comes from a natural air source.¹⁾



1) This is a general ratio based on LG Therma V R32 Series vs. electrical boiler under low temperature & average climate conditions, which may differ from actual operation.

How do Air-to-Water Heat Pumps Work?



① Outside air

Heat is extracted from the outside air.

② Evaporator

As low temperature liquid refrigerant absorbs heat energy from the air, it transforms from liquid to vapor phase.

③ Compressor

The vaporized refrigerant flows into the compressor. The electric energy used to operate the compressor is converted into heat and added to the refrigerant.

④ Condenser

High temperature refrigerant gas flows into the heat exchanger and conveys heat energy to water by the heat exchanged between the refrigerant and water.

(5) Expansion valve

High-pressure liquid refrigerant flows through the expansion valve to restore the refrigerant to its original condition.

MONOBLOC

REGULATIONS & CERTIFICATIONS

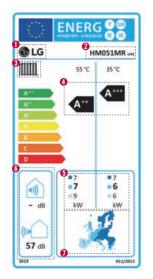
Energy Label

Energy labels

The EU energy label has been a key driver for helping consumers choose products which are more energy efficient. At the same time, it also encourages manufacturers to drive innovation by using more energy efficient technologies. The energy label was recognized by 93% of consumers and 79% considered it when buying energy efficient products, according to the special eurobarometer 492 carried out in the 28 EU member states during 2019. Starting from 2013, the regulations apply to heat pumps, as well as to water heaters since 2015. As of September 26th, 2019, the energy efficiency scale for seasonal space heating ranges from A+++ to D, with A+++ being the most efficient. The water heating energy efficiency scale for the declared load profile for combination heat pumps ranges from to A+ to F, with A+ being the most efficient.

Information on the energy label

The energy labels provide minimum necessary information such as: manufacturer's name, manufacturer's model name, seasonal space heating energy efficiency class under average climate condition from A+++ to D in medium/ low temperature applications (55°C/35°C), rated heat output under average, colder and warmer climate conditions in medium/low temperature applications (55°C/35°C), European map displaying the three temperature zones, the sound power level indoors and/or outdoors. In addition, just for combination heat pumps, the energy label also includes Water heating energy efficiency class under average climate condition from A+ to F at declared load profile, while the seasonal space heating energy efficiency class and rated heat output are indicated only for the medium temperature application (55°C).



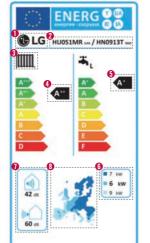
自然是

Heat pump space heaters

Manufacturer's name or trade mark 2 Manufacturer's model name 3 Space heating function 4 Seasonal space heating energy efficiency class under average climate condition from A+++ to D in medium/low temperature applications (55°C/35°C) G Rated heat output (kW) under average, colder and warmer climate conditions in medium/low temperature applications (55°C/35°C)

Operating noise for indoor and outdoor European map displaying the three temperature zones

* This energy label may differ depending on local regulations (for example in the UK)



Heat pump combination heaters

- Manufacturer's name or trade mark Manufacturer's model name
- 3 Space heating function Seasonal space heating energy efficiency
- class under average climate conditions from A+++ to D in medium temperature applications (55°C)
- Water heating energy efficiency class under average climate conditions from A+ to F
- 6 Rated heat output (kW) under average, colder and warmer climate conditions in medium temperature application (55°C) Operating noise for indoor and outdoor
- 8 European map displaying the three temperature zones

* This energy label may differ depending on local regulations (for example in the UK).

Nearly Zero Energy Building (nZEB)

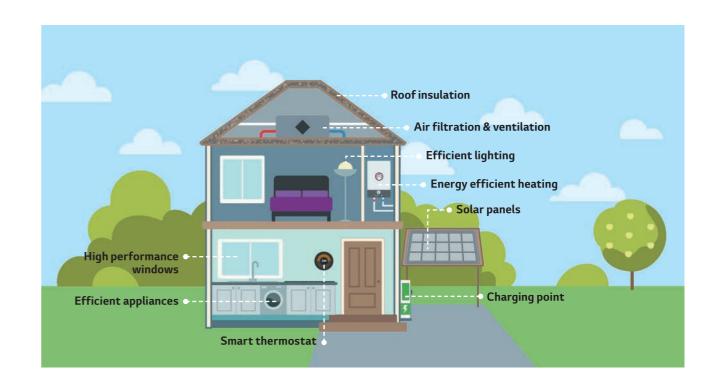
Nearly Zero Energy Building

Nearly Zero-Energy Building (nZEB) means a building that has a very high energy performance, while the nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby. The Energy Performance of Buildings Directive (EPBD) requires that EU countries ensure that all new buildings are nearly zero-energy by the end of 2020, while all new public buildings had to be nearly zero-energy after 31 December 2018.

As concrete numeric thresholds or ranges are not defined in the EPBD, each EU member state defines their Nearly Zero-Energy Buildings (nZEB) in a flexible way, taking into account their country-specific climate conditions, primary energy factors, calculation methodologies, building traditions and current ambitions.

How LG Therma V supports to Nearly Zero Energy Buildings (nZEB)

In general, consultants use software programs to evaluate nZEB satisfaction of a new building. LG has been registering Therma V products in their database so that our Therma V products can be used directly in these software programs such as BENG in Netherland, SAP in UK and RE2020 in France.



LG Therma V energy labels | Energy labels for each LG Therma V model can be found on the websites below.

LG.COM -**Compliance Information**

https://www.lg.com/global/ support/cedoc/cedoc



EPREL -European Product Registry for Energy Labelling

https://eprel.ec.europa.eu/screen/product/ snaceheaters



UK -SAP THERMA V FEATURES

MONOBLOC

HYDROSPLIT

WATER HEATER

https://www.ncm-pcdb.org.uk/sap/ pcdbsearch.jsp?type=362&pid=31





https://www.edibatec.org/ base-produits/

REGULATIONS & CERTIFICATIONS

Certifications

All heat pumps and water heaters in the European market are continuously tested by various certification schemes. These are usually the basis for qualifying for subsidy programs in each country.

Keymark

https://keymark.eu/en/products/heatpumps/certified-products



The heat pump Keymark is a voluntary, independent European certification mark (ISO type 5 certification) for all heat pumps, combination heat pumps and hot water heaters (as covered by ecodesign, EU regulation 813/2013 and 814/2013). It is based on independent, third party testing and demonstrates compliance with product requirements as set in the heat pump Keymark scheme rules and with efficiency requirements as set by ecodesign lot 1 and lot 2.

The heat pump Keymark scheme is owned by the European committee for standardization (CEN).

The certificates are granted by independent certification bodies to products fulfilling all requirements of the scheme. LG Therma V products are certified with the heat pump Keymark. Please, refer to the web page above for details.



MCS



MCS certification is a mark of quality and demonstrates compliance to industry standards. It is supported by the department for business, energy & industrial strategy of the UK. In particular, MCS certification demonstrates the quality and reliability of products in the renewable technology sector and it ensures that products are compliant with the UK regulations. LG Therma V products are certified with MCS. Please, refer to the web page above for details.

CERTIFIED

Eurovent

https://www.eurovent-certification.com/en/





Established in 1993, Eurovent certita certification is recognized as a world leader in third-party product performance certification in the heating, ventilation, air conditioning and refrigeration fields. Its major certification brand 'Eurovent Certified Performance' has become over the years a major European certification. Today over 67% of HVAC-R products sold in Europe hold this certification. LG Therma V products are certified with Eurovent. Please, refer to the web page above for details.

EHPA



The EHPA guality label is a label that shows the end-consumer a guality heat pump unit or model range on the market. The heat pumps that receive the label need to undergo tests according to the international standard EN14511 and EN16147. These tests are executed by EN17025 accredited test centres. LG Therma V products are certified with the EHPA quality label for Austria, Germany and Switzerland. Please, refer to the web page above for details.

MONOBLOC

HYDROSPLIT

SPLIT

https://mcscertified.com/product-directory/

https://www.ehpa.org/quality/quality-label/



THERMA V. INTRODUCTION

The Green Choice: THERMA V.

Discover the ultimate eco-conscious, energy efficient and convenient heating solution

Today's informed consumer will consider multiple factors when choosing a heating solution, like an Air-to-Water Heat Pump (AWHP or ASHP) to include userfriendliness, reliability and regulationcompliance. Shifting regulations year after year exceedingly impact the European customers' choice of heating products.

R32 refrigerant represents a new smart solution to the modern requirements. With a 68% reduced Global Warming Potential (GWP) from the currently widely used refrigerant, R410A, R32applied products are not only ecoconscious but also meet the consumers' needs for energy efficiency, performance and more.

LG Electronics' Therma V R32 line-up fulfills both European regulations as well as customer needs.



- Ultimate energy efficiency: A+++ in the ErP energy labelling regulation, wide operation range, reduced noise level
- Excellent performance: R1 compressor embedded, high heating capacity at low ambient temperature
- User convenience: LG ThinQ Wi-Fi control, convenient scheduler, wider connectivity, energy monitoring

THERMA V. WHAT IS LG THERMA V?



LG's Advanced Heating Technology

The LG Therma V Air-to-Water Heat Pump system boasts an advanced heating technology that can minimize energy consumption more than any other solution in the market. In addition, it has been specially designed to provide a valuable living space and domestic hot water supply to both new build and renovated homes.



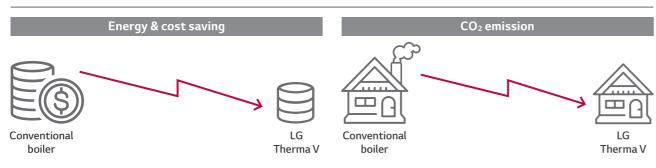
The wide span Therma V systems with high efficiency can cover heating loads of various types of houses.

more and more important, Therma V can provide an optimized solution for this.

Space cooling

Therma V is a single device that can also provide a cooling solution besides the heating and hot water provided by boilers.

High Efficiency and Low CO₂ Emission



produced PV energy

Benefits of LG Therma V



For homeowners

- Energy saving by utilizing renewable energy and high efficiency equipment
- Multiple solutions with space heating, cooling and DHW supply - Economic support through domestic renewable heat incentive programs
- Investment cost savings thanks to the compatibility with existing heating system like radiator, boiler, etc.
- Valuable space savings with the small footprint
 - No disturbing caused to neighbors with low noise
 - Low repair cost and high reliability with durable equipment
 - Convenient control by user-friendly remote controller
 - Remote connectivity for control and monitoring via LG ThinQ



For installers and service providers

- Time savings with features for quicker installation and commissioning
- Less manpower for handling with the compact size and light weight
- Less service visit with high reliability and durable equipment
- Intuitive controller interface for all LG products, requiring less training
- Clip connections for quick maintenance and no need for special tools

MONOBLOC

SPLIT

For consultants and designers

- Variety of software to support selection and designing Therma V
- Multiple solutions with space heating, cooling and DHW supply
- Wide leaving water temperature compatible with various heat emitters
- Valuable space savings with the small footprint
- Excellent heating performance even at low ambient temperature
- Optimal system interoperability open modbus with 3rd party controller
- Adapts operation to ESS battery output, maximizing self-consumption of locally

- Remote control, monitoring and diagnosis to avoid unnecessary site visits

ACCESSORIES

LG AIR-TO-WATER HEAT PUMP SOLUTION OVERVIEW

		Monobloc	Hydr	osplit
		Standalone - no indoor unit	Hydro Box (wall hung)	IWT (Integrated Water Tank)
		R32 Monobloc S	R32 Hydrosplit Hydro Box	R32 Hydrosplit IWT
Line-up		1 Ø: 5/7/9/12/14/16 kW 3 Ø: 9/12/14/16 kW	1 Ø: 12/14/16 kW 3 Ø: 12/14/16 kW	1 Ø: 12/14/16 kW 3 Ø: 12/14/16 kW
Application		Heating, cooling and DHW	Heating, cooling and DHW	Heating, cooling and DHW
Energy label		Space heating Space	35°C A*** Space heating 55°C A**	Space heating Heating Space heating Space heating Space heating Space heating Space heating Space heating Space heating Space heating
Certificatio	ns			
Operation range	Outdoor air	-25 ~ 35°C	-25 ~ 35°C	-25 - 35°C
heating)	Leaving water	15 ~ 65°C	15 ~ 65°C	15 ~ 65°C
Operation ange	Outdoor air	5 ~ 48°C	5 ~ 48°C	5 ~ 48°C
cooling)	Leaving water	5 ~ 27°C (16 ~ 27°C) ²⁾	5 ~ 27°C (16 ~ 27°C) ²⁾	5 ~ 27°C (16 ~ 27°C) ²⁾
Domestic h ncluded	ot water tank	Х	Х	O (200 ℓ)
Backup hea	ter included	X (accessory)	X (accessory)	0
-gas licens	se needed	Х	Х	х
Vi-Fi remo hinQ ¹⁾	te control via	0	0	0

1) Wi-Fi modem (PWFMDD200) should be purchased and installed separately.

When a fan coil unit is not used.
 Except for 3 Ø 9 kW model (HM093MR U44)
 5, 7, 9, 12 kW models only (HM051MR U44, HM071MR U44, HM091MR U44, HM093MR U44, HM121MR U34, HM123MR U34)

Hydro Box (wall hung)	Split IWT (Integrated Water Tank)	Floor standing	Water heater Water heater	-
					THERMA V FEATURES
R32 Split Hydro Box	R410A Split Hydro Box	R32 Split IWT	High Temperature	Heat Pump Water Heater	
1 Ø: 4/6 kW (U24A) Ø: 5/7/9 kW (U36A)	1 Ø: 12/14/16 kW 3 Ø: 12/14/16 kW	1 Ø: 4/6 kW (U24A) 1 Ø: 5/7/9 kW (U36A)	1 Ø: 16 kW	1 Ø: 200 / 270 L	
					MONOBLOC
Heating, cooli	ng and DHW	Heating, cooling and DHW	Heating and DHW	DHW	E
space heating 55°C A++	Space heating Space heating Space heating Space heating	35°C A*** Space heating Space heating Space heating DHW heating S5°C A*** DHW Profile L (4/6 kW) Profile L (2 kW) Profile KL (9 kW) A***	35°C A Space heating 55°C A	200 L 270 L Profile L Profile L DHW heating	HYDROSPLIT
A label under development kW model)	* EHPA label under development	* EHPA label under development (4, 6 kW model)			
4/6 kW: -20 ~ 35°C /7/9 kW: -25 ~ 35°C	-25 ~ 35°C	4/6 kW: -20 ~ 35℃ 5/7/9 kW: -25 ~ 35℃	-25 ~ 35°C	-5 ~ 48°C	
4/6 kW: 15 ~ 55℃ 5/7/9 kW: 15 ~ 65℃	15 ~ 57°C	4/6 kW: 15 ~ 55°C 5/7/9 kW: 15 ~ 65°C	25 ~ 80°C	35 ~ 65°C	WATER HEATER
5 ~ 48°C	5 ~ 48°C	5 ~ 48°C	-	-	HEAT
~ 27°C (16 ~ 27°C) ²⁾	5 ~ 27°C (16 ~ 27°C) ²⁾	5 ~ 27°C (16 ~ 27°C) ²⁾	-	-	ER
X	[O (200 ℓ)	Х	O (200 / 270 ℓ)	
)	0	Х	0	AC
C					
0)	0	0	Х	ACCESSORIES

INTRODUCTION

THERMA V. **LINE-UP OVERVIEW**

Line-up	Unit	Power supply ¹⁾	Appearance	4 kW	6 kW	Appearance	5 kW	7 kW
R32 Monobloc S	Set	1Ø/ 230 V				0	HM051MR U44	HM071MR U44
P.58		3Ø/ 400 V						
	Outdoor	1Ø/ 230 V						
R32 Hydrosplit Hydro Box	unit	3Ø/ 400 V						
P.76	Indoor unit	Common						
	Outdoor	1Ø/ 230 V						
R32 Hydrosplit IWT	unit	3Ø/ 400 V						
P.88	Indoor unit	Common						
R32 Split Hydro Box	Outdoor unit	1Ø/		HU041MR U20	HU061MR U20	0	HU051MR U44	HU071MR U44
P.100	Indoor unit	230 V		HN0613M NK5			HN091MR NK5	
R32 Split IWT	Outdoor unit	1Ø/		HU041MR U20	HU061MR U20		HU051MR U44	HU071MR U44
P.118	Indoor unit	230 V		HN0613T NK0)	HN0913T NK0	
	Outdoor unit	1Ø/						
R410A Split Hydro Box P.140	Indoor unit	230 V						
	Outdoor unit	3Ø/						
	Indoor unit	400 V						
High	Outdoor unit	1Ø/						
Temperature P.152	Indoor unit	230 V						

9 kW	Appearance	12 kW	14 kW	16 kW	
HM091MR U44	0	HM121MR U34	HM141MR U34	HM161MR U34	THER
HM093MR U44	0	HM123MR U34	HM143MR U34	HM163MR U34	THERMA V FEATURES
	0	HU121MRB U30	HU141MRB U30	HU161MRB U30	EATURE
	0	HU123MRB U30	HU143MRB U30	HU163MRB U30	
	-		HN1600MC NK1	·	
	0	HU121MRB U30	HU141MRB U30	HU161MRB U30	MONOBLOC
	0	HU123MRB U30	HU143MRB U30	HU163MRB U30	.0 C
			HN1616Y NB1		
HU091MR U44					НҮDI
HN091MR NK5					HYDROSPLIT
HU091MR U44					
HN0913T NK0					-
	0	HU121MA U33	HU141MA U33	HU161MA U33	SPLIT
	2		HN1616M NK5	1	-
	0	HU123MA U33	HU143MA U33	HU163MA U33	 5
			HN1636M NK5	1	WATER HEATER
	0			HU161HA U33	ATER
	•			HN1610H NK3	
				1	AC

1) The power supply is shown based on the outdoor unit.

Line-up	Power supply	Appearance	200 ℓ	270 <i>l</i>
Heat Pump Water Heater	1Ø/		WH20S	
P.164	230 V			WH27S

* Production of this product could be discontinued without prior notice considering manufacturer's circumstances.

THERMA V. **LINE-UP INTRODUCTION**



Therma V R32 Monobloc S

The Therma V R32 Monobloc S is the 2nd generation of LG's R32 Monobloc series. As implied by "silence" and "supreme, "it boasts reduced noise level and best performance in the Therma V Series. Combining the indoor and outdoor as one module, it's also connected by only water piping eliminating the need for refrigerant piping. Furthermore, hydronic components like the plate heat exchanger, expansion tank, water pump, flow sensor, pressure sensor, air vent valves, and safety valve are conveniently situated inside the unit. The R32 Monobloc S provides excellent heating performance, especially at low ambient temperature, while producing lower carbon emissions with R32.

	125	20
- 59	ė)	Ь.
	34	1÷
	68	(1 74

Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R32	1 Ø 230 V		•		•	•	•	•	•
Monobloc S	3 Ø 400 V					•	•	•	•



Therma V R32 Hydrosplit Hydro Box

The LG Therma V Hydrosplit series separates the indoor unit (IDU) and outdoor unit (ODU), connecting them via water pipes. The unit's heat exchanger is located within the ODU, reducing the risk of indoor refrigerant leakage. Therma V R32 Hydrosplit Hydro Box is a solution providing space heating, cooling and DHW supply with high installation flexibility thanks to the characteristic of being a wall mounted type. Since the indoor unit is installed on the wall rather than on the floor, space is not wasted, and the light weight enables quick installation. Also, it has good maintainability because the indoor unit is located indoors, for example in a machine room.



Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R32	1 Ø 230 V						•	•	•
Hydrosplit Hydro Box	3 Ø 400 V						•	•	•

* The power supply is shown based on the outdoor unit.

Therma V R32 Hydrosplit IWT The LG Therma V Hydrosplit series separates the indoor unit (IDU) and outdoor unit (ODU), connecting them via water pipes. The unit's heat exchanger is located within the ODU, reducing the risk of indoor refrigerant leakage. Therma V R32 Hydrosplit IWT combines an indoor unit, a water tank and complex piping into a single, space-saving solution that is able to provide space heating, cooling and DHW supply. Relatively compact and lightweight, the innovative all-in-one is easy to install and operate, and boasts the outstanding reliability and efficiency. Since there is no need to install a separate domestic hot water tank for hot water supply, space is not wasted, and the concept with all-in-one enables quick installation. Ē Water pipe

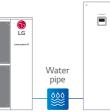
4.0 5.5 6.0 Line-up Capacity (kW) 1 Ø 230 V R32 Hydrosplit IWT 3Ø400V

* The power supply is shown based on the outdoor unit.



022

INTRODUCTION



7.0	9.0	12.0	14.0	16.0
		•	•	•
		•	•	•

MONOBLOC

HYDROSPLIT

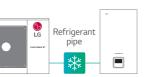
WATER HEATER

THERMA V. **LINE-UP INTRODUCTION**



Therma V R32 Split Hydro Box

The LG Therma V R32 Split Hydro Box is a hydro box type system consisting of an indoor hydro box unit and an outdoor unit. The two units are connected by refrigerant piping only, thus hydronic components such as plate heat exchanger, expansion tank and water pump are located within the indoor unit. Due to the split nature, freezing will not compromise this unit regardless of outdoor ambient temperatures. The outdoor unit is on offer in 4/6 kW and 5/7/9 kW capacity range. R32 Split 4/6 kW model is suitable for new build houses that are well insulated and require a small heating load, while R32 Split 5/7/9 kW model is adapted for both new build and renovation projects.





16.0

Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R32 Split	1 Ø 230 V	•	•	•	•	•			
Hydro Box	3 Ø 400 V								

* The power supply is shown based on the outdoor unit.



Therma V R32 Split IWT

The LG Therma V R32 Split IWT is a domestic hot water supply, space heating and cooling solution that conveniently combines an indoor hot water tank with a separate outdoor unit. Therma V R32 Split IWT is the perfect space-saving solution for residential applications because hydronic components like the Domestic Hot Water (DHW) and buffer tanks, which are typically installed separately, are fully integrated. Also, freezing will not compromise this unit regardless of outdoor ambient temperatures due to the split nature. The outdoor unit is on offer in 4/6 kW and 5/7/9 kW capacity range. R32 Split 4/6 kW model is suitable for new build houses that are well insulated and require a small heating load, while R32 Split 5/7/9 kW model is adapted for both new build and renovation projects.



			*			
4.0	5.5	6.0	7.0	9.0	12.0	14.0
•	•	•	•	•		

* The power supply is shown based on the outdoor unit.

Capacity (kW)

1 Ø 230 V

3 Ø 400 V



) 550 C				- 	Refrigera pipe	ant			
Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R410A Split	1 Ø 230 V						•	•	•
Hydro Box	3 Ø 400 V						•	•	•

•

* The power supply is shown based on the outdoor unit.



Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
High	1 Ø 230 V								•
Temperature	3 Ø 400 V								

* The power supply is shown based on the outdoor unit.

024

Line-up

R32 Split IWT

INTRODUCTION

Therma V R410A Split Hydro Box

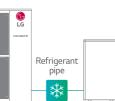
The LG Therma V R410A Split Hydro Box is a hydro box type system consisting of an indoor hydro box unit and an outdoor unit. The two units are connected by refrigerant piping only, thus hydronic components such as the plate heat exchanger, expansion tank and water pump are located within the indoor unit. Due to the split nature, freezing will not compromise this unit regardless of outdoor ambient temperatures.

LG's Therma V R410A Split Hydro Box is designed for the benefit of users and installers who want to apply a heating solution to a large capacity building or applications subject to colder climate conditions. It has a maximized energy efficiency of A++ in the mid-temperature ranges, which results in reduced operating costs.

Therma V High Temperature

The LG Therma V High Temperature is a split type that consists of a floor standing indoor unit and an outdoor unit. Thanks to cascade (2 stage) compression technology, it can supply high leaving water temperature up to 80°C with high energy efficiency.

Since Therma V High Temperature is able to produce and supply the high temperature water without electric heater, it is suitable for houses which have poor insulation, older features or have to meet sanitary water regulations, which requires a higher water temperature.





ACCESSORIES

025

THERMAV **LINE-UP INTRODUCTION**

What is a Heat Pump Water Heater?

With an increasing emphasis on eco-conscious energy solutions, the LG Heat Pump Water Heater obtains 75% of its energy from outside air. This renewable energy source produces domestic hot water using two heat exchangers, a condenser and an evaporator.

LG inverter technology

LG inverter technology can be found in many of LG's renowned devices, from refrigerators and washing machines to our air conditioner line-up. This technology allows the inverter compressor to achieve superior energy efficiency, cooling performance and comfort compared to compressors with on-off capabilities which is rare for monobloc heat pump water heaters.



Flexible Installation Locations

Line-up

Heat Pump Water Heater

3Ø400V





Storage room

Bathroom



Bathroom

* Actual product appearance may differ from the above simulated scene.



WATER HEATER

ACCESSORIES



Garage

Garage

PRE-SALES/ENGINEERING TOOLS

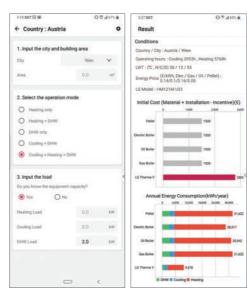
Pre-sales/Engineering Tools

LG provides a variety of software to support Therma V for all customers including designers, installers, and end users.

1. LG Therma V Selector

The LG Therma V Selector is a mobile application for designers, installers and end users, which provides various real-life simulations. An energy simulation can quickly indicate energy consumption and cost as well as CO₂ emission values that can be vastly reduced from conventional heating systems using minimal input values.

With both model selection and energy simulation tools, quick and accurate selection is made possible with detailed input values such as desired system configuration, required heating and Domestic Hot Water (DHW) load, which will calculate payback, result in a faster energy simulation and generate cost comparisons. Sound level can also be calculated through simulations based on the installation environment.



2. LATS Therma V

LATS Therma V is a PC-based model selection program of LG Therma V products, enabling an accurate and quick selection of the most suitable model in each end-user environment.

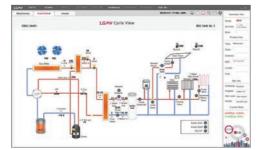
In addition to model selection, faster energy simulation and cost comparison to other systems are possible. Furthermore, customer is easily able to simulate payback compared to a conventional system such as a gas boiler, electric boiler by using LATS Therma V.



* LATS Therma V is available on the LG partner portal.

3. LGMV

LGMV is a useful engineering tool that monitors Therma V's realtime refrigerant and water cycle. It assists installers with effective and efficient start-up and commissioning after the Therma V installation. LGMV enables service/field engineers to detect the errors and troubleshooting for fast and reliable problem solving.

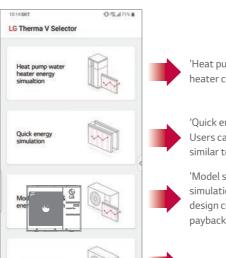


Therma V Selector

How to install?

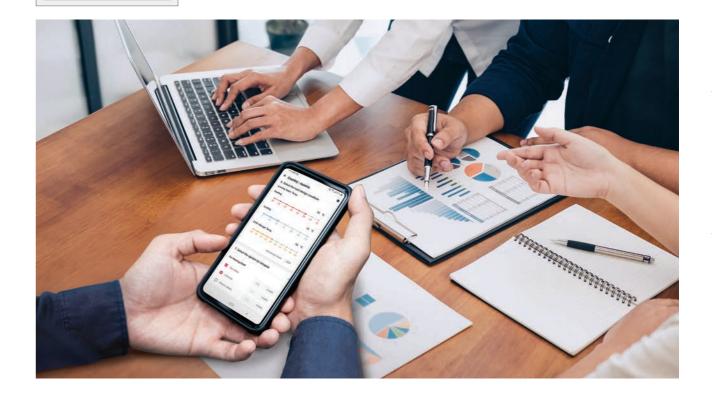
Search "LG Energy Payback" in Google Play Store or Apple App Store.

Simulation mode



'Model selection & energy simulation' is to provide more information about the model, energy simulation and payback simulation. Users can select or input more information about the site or design condition, then can see the suitable model, annual energy consumption, cost, CO₂ emission, and payback result.

Sound simulation' shows the calculated sound result.



* LGMV is available on the LG partner portal.

WATER HEATER

ACCESSORIES

Android

iOS

'Heat pump water heater energy simulation' is to provide energy simulation of a heat pump water heater compared to an electric heater based on climate condition. (colder, average, warmer)

'Quick energy simulation' is a guick & easy mode.

Users can see the annual energy consumption, cost, and CO2 emission with several inputs, which is similar to the LG Therma V website version.

PRE-SALES/ENGINEERING TOOLS

Therma V Selector

Model selection & energy simulation

•

Before choosing an Air-to-Water Heat Pump, many customers wonder how much energy costs can be saved compared to conventional heating systems, and how to select a product with the right capacity for the home. The LG Therma V selector allows you to calculate annual energy costs and payback periods as well as model selection through sophisticated simulations through simple input values.



- Operation mode selection - Load input ← Country : Austria



← Country : Austria	• +
4. Select the period Default schedule is operating 24hours	6. Le
Default 🕖 Ma	
5. Select the model type	Co
Monobioc (R32) Mon	DF
Power Supply 220-24 (V, Ø, Hz)	10.1.50 ¥ ¢ 7.
6. Select the load design condition	n Fo
Leaving Water Temp. Heating	55 °C
30 35 40 45 50 55	60 65
Pauline	10 10

- Operation period selection

- Model type selection

- Model selection

- Solid angle selection

- Distance input

← Country : Austria			4
6. Select the load desig	n condition		
Leaving Water Temp.			
Heating		55 °C	
30 35 40 45	50 55	60 65	
Cooling		13 °C	
7 10 13	15 18	20 22	
DHW Storage Temp.	60 65 7	55 °C	
35 40 45 50 55	Advanced mod	0 75 80	
35 40 45 50 55	Advanced mod	0 75 80	
7. Select the system to	Advanced mod	50 (10)	
7. Select the system to	Advanced moo	50 (10)	

- Design condition input

- System selection to be compared

Country : Austri	a	
BRANDWE	9.9	
Oil Boiler		
Material Cost	0.0	
Installation Cost	0.0	
Maintenance Cost	0.0	€/ye
Incentive	0.0	
Model Name HM051	M U43	
Material Cost	0.0	
Installation Cost	0.0	
	0.0	Cye
Maintenance Cost		

- Costs input for systems

criteria

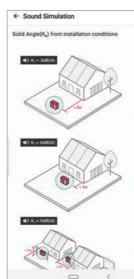
- Searching model that meets

٥

Sound simulation

Consumers are also wondering how much sound level will be after installing the Air-to-Water Heat Pump product. Using the sound simulation function of Therma V selector, you can predict the expected sound pressure values in the daytime and nighttime according to the installation distance and conditions.





- Reference for



Result & report

After the simulation, analysis results including initial investment cost, annual energy consumption, and payback period can be checked in the form of various graphs. Moreover, this report is provided in PDF format and can be shared by e-mail and messenger.

Result

- Simulation conditions summary - Initial cost - Annual energy consumption

- Annual cost - Annual CO2 emission - 10-year life cycle cost analysis

nnual Cost(€/year)

1,000 2,000 3,000

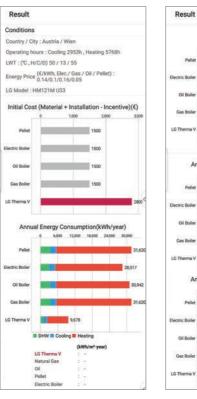
1,874

1.525

nnual CO2 Emission (kgCO2/year)

0 2,000 4,000 6,000 8,000 10,000

DHW Cooling

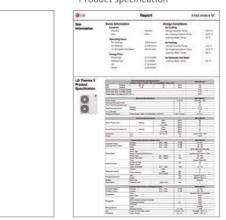


4049 6344 Annual CO2 Emission (kgCO2/yea 0 2,000 4,000 6,000 8,000 4049 1 6344 Therma V 1374

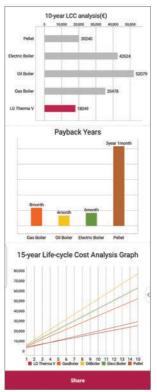
Report - Cover page

Project Name

- Site information & design condition - Product specification

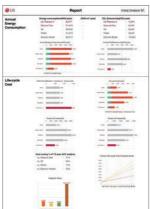


- 10-year life cycle cost analysis
- Payback year

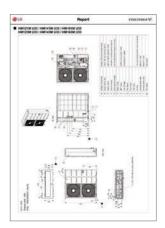


- 15-year life cycle cost analysis graph

- Annual energy consumption
- Life cycle cost



- Drawings



SPLIT

WATER HEATER

ThinQ SEAMLESS CONNECTIVITY

Smart Control, Smarter Life

LG ThinQ, a smart phone app, allows users to monitor and manage compatible LG products remotely, which means they can set the temperature and regulate the use of their Therma V anytime and anywhere.

In most EU countries, LG ThinQ technology also works with Google Assistant, letting users control their Therma V with voice commands.



Mandatory accessory:

PWFMDD200 (LG Wi-Fi Modem) / PWYREW000 (10 m extension connect cable in between Therma V indoor and LG Wi-Fi Modem) could be required depending on installation conditions

* Search "LG ThinQ" on Google market or App store, then download the app.

* Google assistant voice control may be restricted in use and language in some countries.

* Google and Google Home are trademarks of Google LLC.

* Voice-enabled smart speaker device is not included.

How to install the LG ThinQ app

Search and install for the LG ThinQ application from the Google Play or Apple App Store on a smart phone.











How to connect Therma V to the LG ThinQ app

In the video below, see how to install Wi-Fi modem and connect Therma V and ThinQ.





Connect and control from anywhere, anytime

The LG ThinQ allows you to easily control your heating system in a way you never could before. Start to experience smart control of Therma V with just the tap of a button. Even when you are outside, you can operate the Therma V remotely.

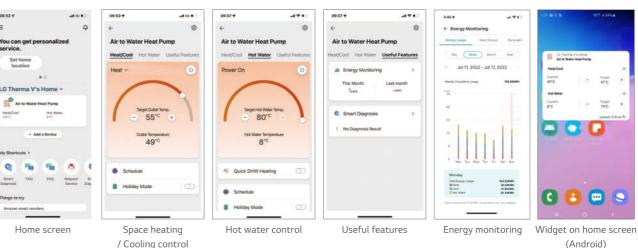


Tell your Therma V exactly what you need it. Say, "Turn on/off the Therma V" and the AI speaker will listen and turn on/off the Therma V.

Efficient energy monitoring

The LG ThinQ app continuously monitors Therma V. Whether it's everyday maintenance or something else, the app allows you to easily monitor energy usage.

ThinQ mobile app



This image is intended to help you understand, and there may be some differences in actual use. * Control via widgets is only possible with the Android app.

MONOBLOC

HYDROSPLIT

SPLIT

WATER HEATER



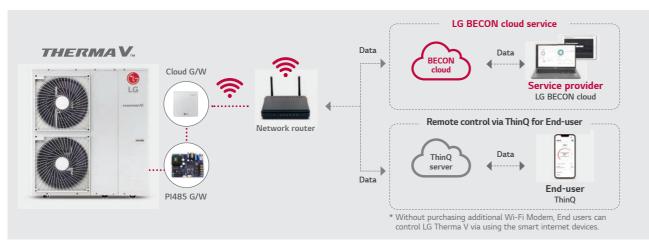


LG BECON CLOUD SERVICE for THERMAY



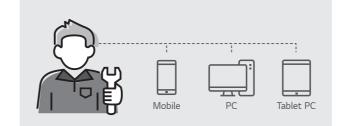
What is LG BECON Cloud Service?

LG BECON cloud service is a cloud-based service that remotely monitors a customer's heating system via PC, tablet or mobile anytime, anywhere. The operation status of the heat pump can be monitored at a glance as well as the past operation history. In the event of an issue, the cause can be identified in advance and the repair can be completed during a one-time visit. For more details and service contract, please contact your LG regional service contact.



Target Customer and Benefits

Service partners / Installers



\mathbf{V} Save time and cost

- One time visit with right parts
- No need pre-visit for diagnosis

✓ Quality of service

- Better service to end users with accurate diagnosis and fast repair

☑ Increased business opportunity

- Combine product + service offer
- Make more installation / repairs

Key Features

Management at a glance

Monitoring status of customers • Interactive map view or list view



Monitoring with visualized schematic

Examining the operating state of the heat pump
• Schematic view or table view

Cycle monitoring, sensor and actuator monitoring
Current status and historical data

Remote control via cloud

- Preventing unnecessary site visit caused by simple operation mistake
- Operation mode (heating / cooling / DHW), target temperature
- Emergency operation, low noise operation, quick DHW operation

End-users



☑ Enjoy peace of mind

- Be serviced at once or faster
- Be confident that immediate and quality of service will be provided in case of an error

𝔨 Less constraints

- No need to be at home for first diagnosis
- Monitor the operation status and control the system remotely

Energy monitoring

Providing warning if energy usage is excessively high • Display estimated power consumption by selfcalculation



Operation and error history

Providing operation data and error history to quickly identify the issue

• Operation history, error history, setting history, etc



Error notification by e-mail

Providing an e-mail notification automatically when an error occurs

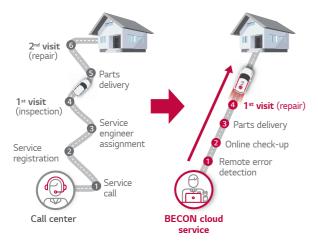
• Possible to identify immediately and take a fast action

LG BECON CLOUD SERVICE for **THERMAV**

Why LG BECON Cloud Service?

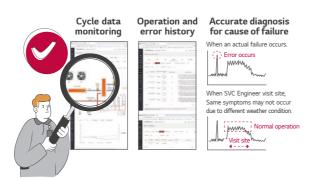
Quick service response time

Saving time and cost thanks to remote diagnosis of operation cycle without access to product.



Accurate diagnosis

Accurate diagnosis for cause of failure can be done by utilizing the error code and cycle data when an actual failure occurs.



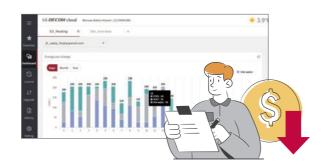
Remote device control

With single account, maintenance service provider (or installer) can control their customer's sites remotely. As a result, site visit is not needed for minor issues, such as adjusting temperature or mode.



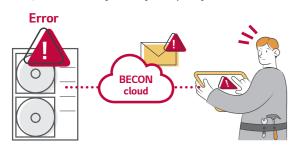
Energy monitoring

Power consumption based on self-calculation is recorded and displayed. Maintenance service provider (or installer) can provide warning if energy usage is excessively high.



Error notification by e-mail

Providing an e-mail notification automatically when an error occurs, making it possible for maintenance service provider (or installer) to immediately identify and quickly react.

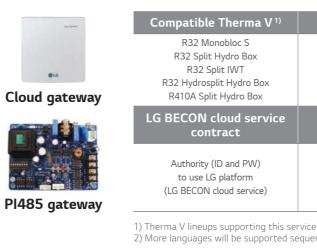


ThinQ for end-users

Without purchasing additional Wi-Fi Modem, end-users can control LG Therma V via using smart internet devices.



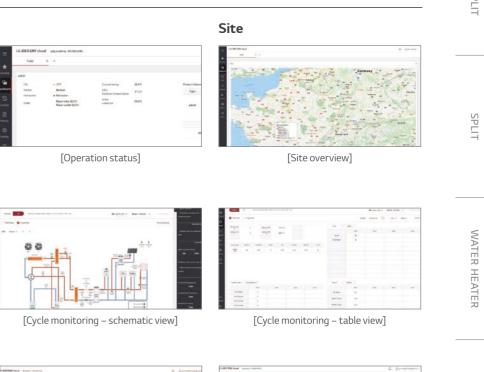
Requirements



Interface Screen

Dashboard

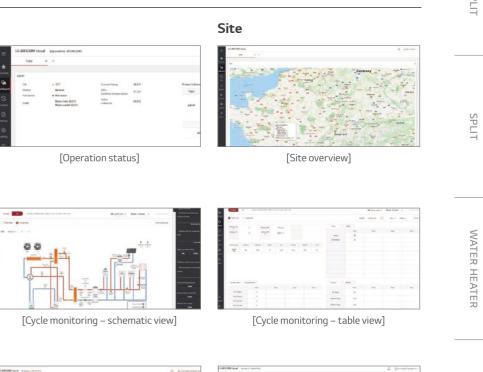




[Operation status summary]

Control





History



[Operation history]

[Error history]

Required accessory	Network router
Cloud gateway (PWFMDB200) PI485 gateway (PP485A00T)	Wireless or wired LAN
Supported device / software	Supported language ²⁾
PC, Tablet, Mobile PC or	

1) Therma V lineups supporting this service will be gradually expanded. Please consult your regional sales manager. 2) More languages will be supported sequentially. The schedule for service availability may vary by country.





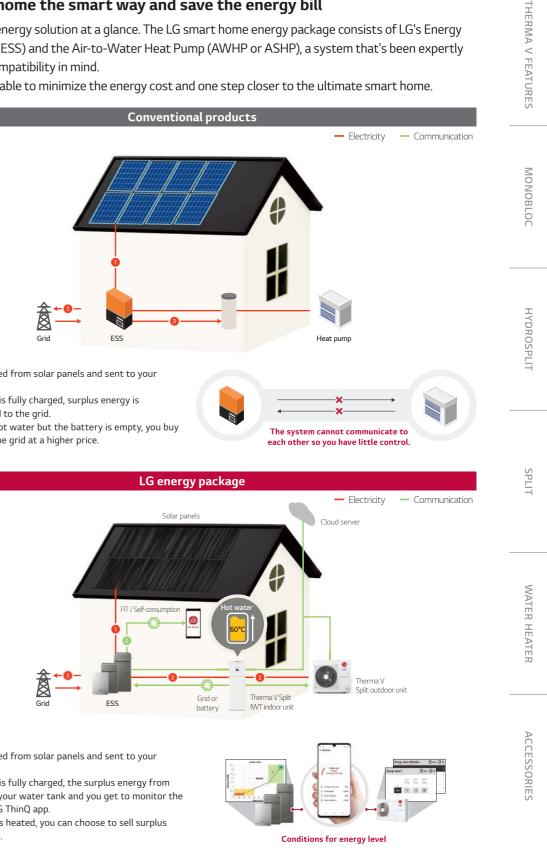
[Outdoor unit cycle history]

LG SMART HOME ENERGY PACKAGE

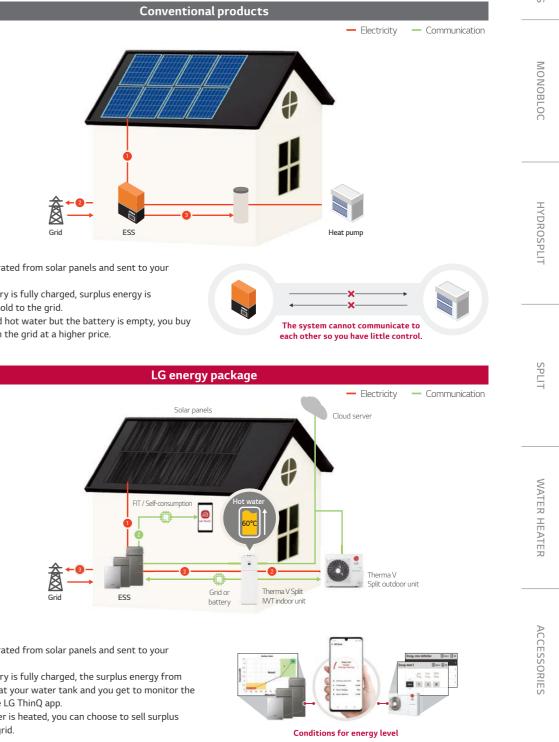


Power your home the smart way and save the energy bill

Your connected energy solution at a glance. The LG smart home energy package consists of LG's Energy Storage System (ESS) and the Air-to-Water Heat Pump (AWHP or ASHP), a system that's been expertly designed with compatibility in mind. With LG, you are able to minimize the energy cost and one step closer to the ultimate smart home.



- 01. Energy is generated from solar panels and sent to your battery.
- 02. Once the battery is fully charged, surplus energy is automatically sold to the grid.
- 03. When you need hot water but the battery is empty, you buy electricity from the grid at a higher price.



- 01. Energy is generated from solar panels and sent to your battery.
- 02. Once the battery is fully charged, the surplus energy from the ESS will heat your water tank and you get to monitor the status with the LG ThinQ app.
- 03. Once your water is heated, you can choose to sell surplus energy to the grid.

#Care For Where You Live



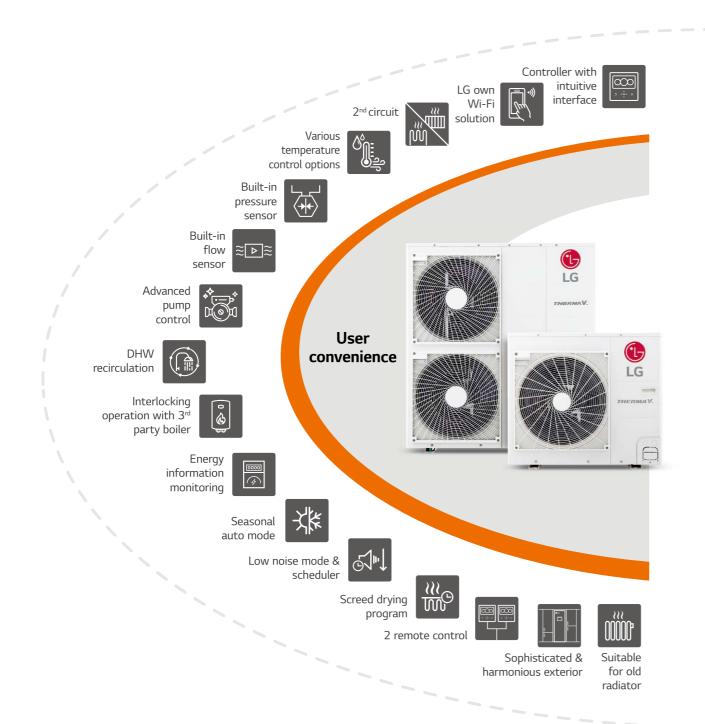




THERMAV. **FEATURE OVERVIEW**

LG Therma V's unique features

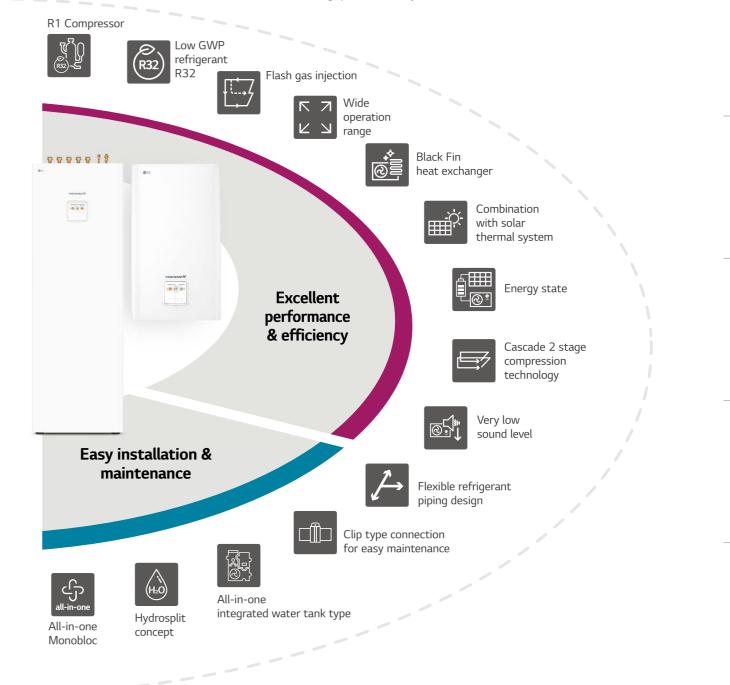
LG Therma V has been designed for providing efficient space heating and domestic hot water heating with usage convenience to the customer. To achieve this ultimate goal, LG has developed and applied core technologies and functions for heating to the LG Therma V.



User convenience

LG Therma V is equipped with various user convenience functions, which guarantee enhanced comfort and control. The textbased user-friendly interface on the remote control allows for optimized user intuition and the unit's wide connectivity also provides for user control convenience.

LG Therma V provides world-class energy efficiency by adopting LG's revolutionary technology such as the R1 Compressor and the Black Fin heat exchanger. LG products have achieved a high heating performance even in extremely cold weather conditions and LG Therma V can bring customers peace of mind through product reliability.



Excellent performance & efficiency

Easy installation & maintenance

LG Therma V offers installation and design flexibility to professional installers. The LG heating configurator also allows professionals to save time during commissioning. During maintenance, the clip type connection allows fast and easy disassembly of the components.

HYDROSPLIT

SPLIT

THERMAV **EXCELLENT PERFORMANCE & EFFICIENCY**



Background

Due to accelerated global warming and the destruction of the ozone layer, various international conventions and meetings are held to enhance restrictions to the use of refrigerant or enforce the use of eco-conscious refrigerant R32 which is internationally acclaimed as being eco-friendly. This low volume refrigerant is as efficient as any conventional refrigerant but boasts a 68 % reduced GWP (Global Warming Potential).



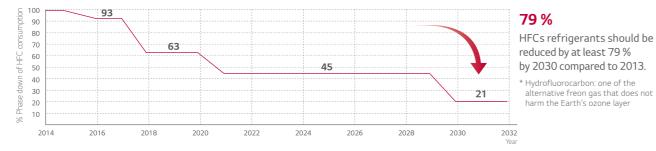
What is GWP?

Global Warming Potential is a measure that allows for an accurate comparison of the environmental impact of different gases. GWP measures how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO2).



Global trend and EU regulation for F-gas

HFC* phase down 79 % by 2030



Comparison & benefit

R32 efficiently works even in small volume compared to existing R410A refrigerant, which decreases the potential hazard of global warming. Furthermore, R32 refrigerant is easy to recycle thanks to its single composition.

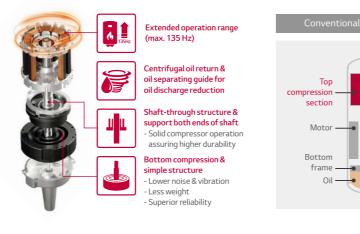
Descript	tion	R32	R410A
	Low Global Warming Potential (GWP)	675 "	2088 1)
	Lower amount of gas charge	20 Less	K ²¹
	Higher achievable water temperature	Potentially high	Relatively low compared to R32
îíÍ	Higher system performance	R32 systems also use less refrigerar	nt per kilowatt of capacity delivered.
O	Simple refrigerant recyclability	Single component	Mixture R32 50 % / R125 50 %
トコ	High capacity	High refrigerant compression rates lead to high capaci	ty as compared to existing refrigerant R22 and R410A.
1) Sourco:	global warming potential values (2007 AR4)		

ırce: global warming potential values (2007, AR4

2) This ratio is general for helping understanding, It may differ depending on the each product.

R1Compressor[™] LG's Revolutionary Technology r (iii)

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



@<u>=</u> **Black Fin Heat Exchanger**

The Therma V line-up includes a heat exchanger enhanced by black coating with enhanced epoxy resin for strong protection. This improvement in durability prolongs the product's lifespan and lowers both the operational and maintenance costs.

Black Fin		
Hydrophilic film (water flow)	-	
The hydrophilic coating minimizes moisture build up on the fin.		
Acryl + Epoxy + Melamine resin — (corrosion resistant)		9
The black coating provides strong protection from corrosion.		
Aluminum fin		

Energy States Interlock

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

- 1) Energy is generated from panels and sent to your battery.
- 2) Once the battery is fully charged, the surplus energy from ESS will heat the water tank. The user gets to monitor the status with the LG ThinQ app.
- 3) Once the water is heated, the user can choose to sell surplus energy to the grid.

* The figure on the right shows the R32 Split IWT as an example. Therma V High Temperature model does not support this function

INTRODUCTION



MONOBLOC

HYDROSPLIT

SPLIT



Botto

Compression

section

section

∩il

R1 Compressor

section of

R1 Compressor



WATER HEATER

THERMAV **EXCELLENT PERFORMANCE & EFFICIENCY**



Combination With Solar Thermal System

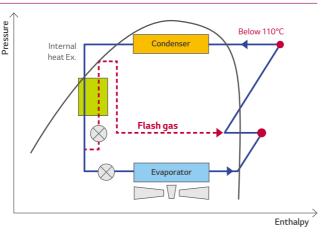
By combining the solar system with Therma V, the efficiency of DHW heating operation can be maximized. During the day when there is a lot of sunlight, heated water by solar give some help heating the DHW tank.



* Therma V IWTs and High Temperature model don't not support this function.



With the LG Therma V R32 series, flash gas injection technology is applied to control the discharge temperature of the compressor efficiently. As a result of this technology, the heating operation range is expanded and the heating performance at low ambient temperature is enhanced.





Therma V can be connected and controlled by a 3rd party control system using Modbus protocol directly, without passing Modbus RTU gateway.



* The figure on the right shows the R32 Monobloc S as an example. Therma V High Temperature model does not support this function.

THERMAV **USER CONVENIENCE**



Users can control their Therma V via smart internet devices such as Android or iOS smartphones. Moreover, LG ThinQ works with Google assistant voice control in most EU countries, making it possible to control Therma V using a voice control function.



Mandatory accessory:

PWFMDD200 (LG Wi-Fi modem) / PWYREW000 (10 m extension connect cable in between Therma V indoor and LG Wi-Fi modem) could be required depending on installation conditions

* Search "LG ThinQ" on Google market or App store, then download the app. * Google assistant voice control may be restricted in use and language in some countries



Estimated power consumption and thermal energy can be monitored on both the remote controller and LG ThinQ¹⁾ without connecting meter interface.

Target 10 kW Current 0 kW Total 16 kW 0%

- Instant power consumption
- Power consumption by period (daily, weekly, monthly, yearly):

categorized as heat, cool, and DHW - Produced heat output by period (daily,

- weekly, monthly, yearly)²⁾ - Renewable energy by period (daily,
- weekly, monthly, yearly)^{2), 3)}

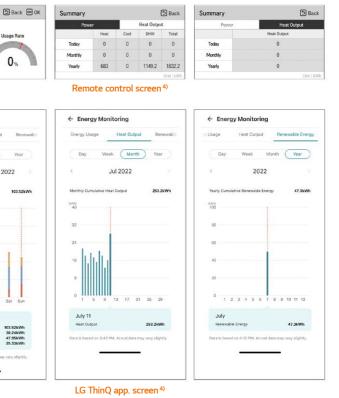
Day Week Mor
Jul 11, 2022 - Jul 1
Weekly Cumulative Usage
40
32
24
16
8
o Mon Tue Wed Thu

1) To use LG ThinQ, LG Wi-Fi modem (PWFMDD200) is required.

- 2) When using antifreeze, it will not be available. 3) This energy information is only available with LG
- ThinQ in Spain.

4) This image is intended to help you understand, and there may be some differences in actual use.





THERMAV **USER CONVENIENCE**

Intuitive Control

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

- Premium design (4.3 inch color LCD)
- User friendly interface (simple graphic, icon & text)
- Convenient functions (easy schedule setting & installer setting)

 Energy monitoring without meter interface (estimated power consumption) * Instant power consumption and cumulative power consumption



Back Select

• * • *

Target Temp.

-30 -20 -10 0 10 20 30 40 5

Back K Select

• 🔆 • 💥 Reference Temp.

Outdoor Temp.

-30 -20 -10 0 10 20 30 40 50

-X₩ **Seasonal Auto Mode**

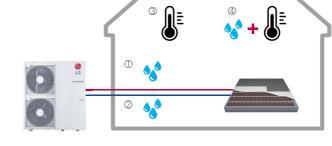
The operation mode and target temperature will be changed according to the outdoor temperature automatically. Moreover, this function can be conveniently set using visualized graphics.

* Therma V High Temperature model has slightly different function as it doesn't support the cooling operation.



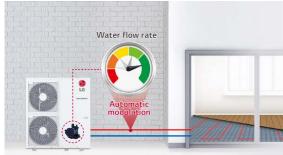
Various temperature control options are possible for the user's comfort and convenience, to include the newly added simultaneous control option (room and water temperature).

Option 1: control based on leaving water temperature Option 2: control based on entering water temperature Option 3: control based on room air temperature Option 4: control based on room air and water temperature simultaneously



Advanced Pump Control Options

Various pump control options are available for the user's convenience. Now, water flow rate can be changed according to the heat load condition, therefore making it more energy efficient under low load conditions.

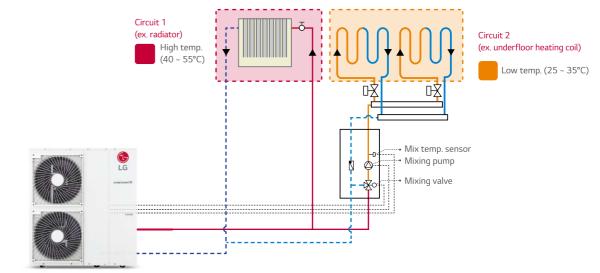


Options	Description	Water flow change as per load condition
Pump capacity	It operates with the capacity set for the water pump. (range 10 ~ 100 %)	No
Fixed flow rate	Automatically controlled to maintain the set flow rate. (5, 7, 9 kW range: 8 ~ 26 LPM / 12, 14, 16 kW range: 17 ~ 46 LPM)	No
Fixed $\Delta T^{1)}$	Automatically controlled to maintain the set ΔT . (range 5 ~ 13 °C)	Yes
Optimal flow rate (default)	∆T is changed as per target temp.	Yes

1) ∆T = temperature difference between inlet and outlet water temperature. * Therma V High Temperature model does not support this function.



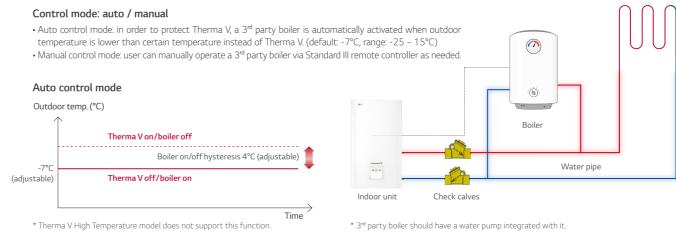
heating and comfort to the end-user.



* Mixing valve kit or mixing pump group should be purchased and installed separately. Therma V High Temperature model does not support this function.

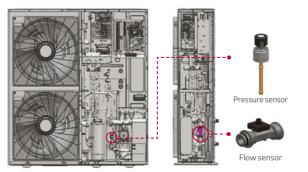
٩ Interlocking Operation with 3rd Party Boiler

A 3rd party boiler such as oil, gas or electric boiler can be activated automatically or manually by the remote controller as an auxiliary equipment of Therma V.





Not only water circuit temperature but also flow rate and pressure can be monitored via a remote controller. This information is not only useful for the installer during installation, but also helps to periodically clean the strainer during maintenance.



* Therma V High Temperature model does not support this function

It is possible to control two separate individual zones (circuit 1 & circuit 2) with different temperature using mixing valve kit. It provides adequate



Available information on the screen

- The room temperature
- The water inlet / outlet temperature
- The water pump operation
- The water flow rate
- The water pressure
- The solar heat temperature
- The outdoor temperature

MONOBLOC

INTRODUCTION

THERMA V FEATURES

WATER HEATER

THERMAV. **USER CONVENIENCE**

DHW Recirculation Pump Control

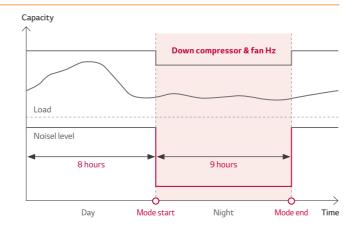
Therma V can be connected to the DHW recirculation pump, which can then be managed via the scheduling function. When a user opens the faucet, hot water is immediately accessible thanks to the DHW recirculating function. This feature also has the added advantage of preventing Legionella growth in the hot water pipe.



* Therma V High Temperature model does not support this function.



Low noise mode operation can be activated by remote controller and set on a weekly on/off schedule to reduce the unit's noise level.



2 Remote Control

Enhanced convenience with an additional control installed in another residential area.

System diagram



* Slave is for user setting.

• Therma V is operating based on the room where a slave controller is installed. om air temperature sensed by a slave remote controller ¹ 26.0° 60° ₽<u>24</u>° There is no 55 monitoring information. 40°/45°

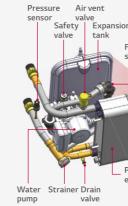
Standard III controller interface

THERMAV **EASY INSTALLATION & MAINTENANCE**

ل all-in-one **Monobloc Concept**

R32 Monobloc S is an all-in-one concept, with its reduced weight allowing guicker and easier installations.

- Additional hydronic components are included in the package
- Easier and quicker installation without refrigerant piping work
- The best solution when space heating only is needed or in case of a 3rd party DHW tank.



H2O Hydrosplit Concept

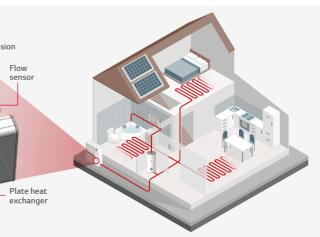
The Therma V R32 Hydrosplit series connects an IDU and ODU by water pipes due to the heat exchanger's location in the outdoor unit, thus reducing the risk of indoor refrigerant leakage.



All-in-One Solution: Integrated Water Tank Type

Therma V's IWT indoor units are the perfect spacesaving solution for residential application thanks to its fully integrated hot water tank. Unlike in the case of typical separate installation, in this all-inone solution hydronic components and Domestic Hot Water (DHW) are pre-wired, which requires reduced installation time and saves valuable living space. Therma V's IWT indoor units are easy to set up and operate while it demonstrates outstanding reliability and efficiency.



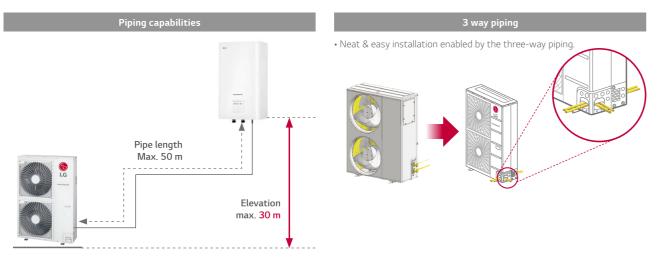


(less installation space required)

THERMAV... EASY INSTALLATION & MAINTENANCE

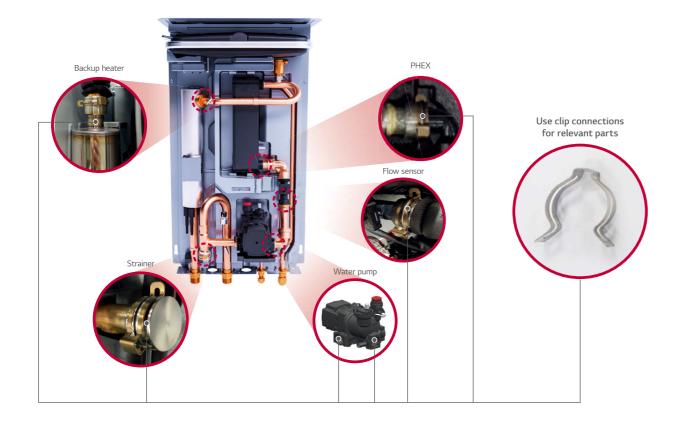
↓ Flexible Refrigerant Piping Design

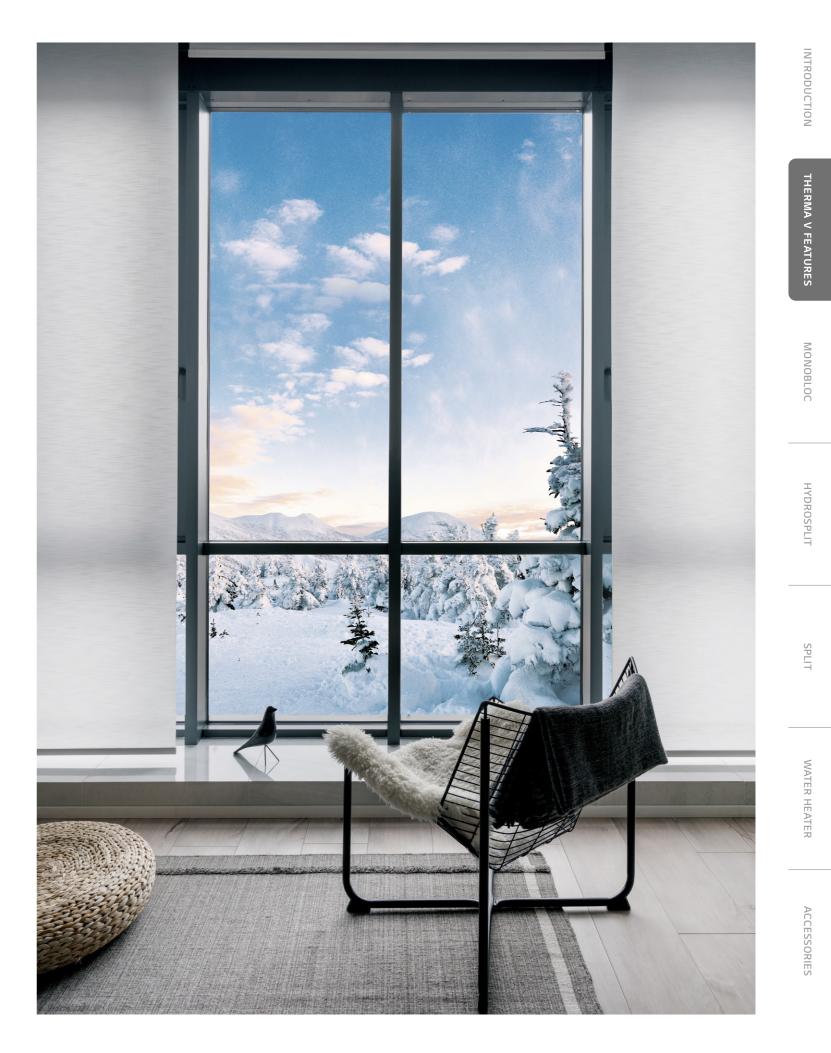
Installation flexibility is enabled by Therma V Split's long pipe length (up to 50 m) and the fact that the refrigerant piping can be connected in three directions: front, side and rear.



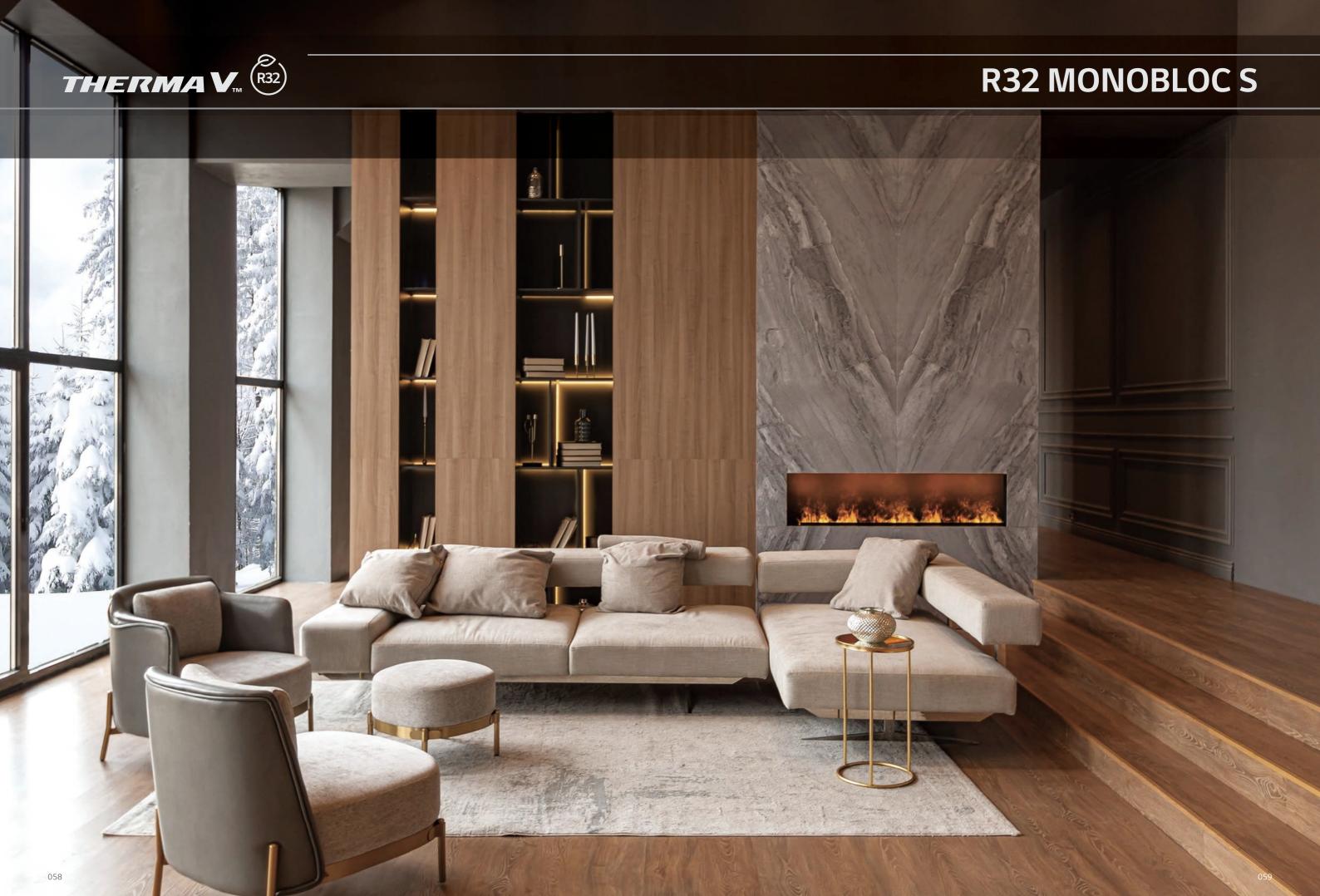
Clip Type Connection for Easy Maintenance

As a clip solution provides for easy maintenance and SVC works, maintenance for main hydronic parts can be done by hands without any special tool.

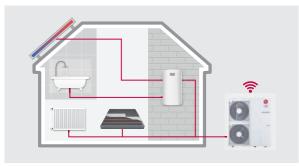




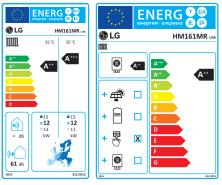




R32 MONOBLOC S



Energy label



Excellent performance & efficiency



Easy installation & maintenance



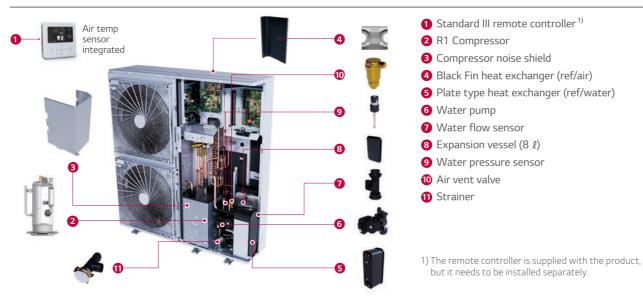
* Detailed description for each function is presented on page 44 ~ 54.

* 16 kW 1Ø model. * A+++ to D scale

R32 Monobloc S Introduction

The Therma V R32 Monobloc S is the 2nd generation of LG's R32 Monobloc series. As implied by "silence" and "supreme," it boasts reduced noise level and best performance in the Therma V series. Combining the indoor and outdoor as one module, it's also connected by only water piping eliminating the need for refrigerant piping. Furthermore, hydronic components like the plate heat exchanger, expansion tank, water pump, flow sensor, pressure sensor, air vent valves, and safety valve are conveniently situated inside the unit. The R32 Monobloc S provides excellent heating performance, especially at low ambient temperature, while producing lower carbon emissions with R32.

Key Components



Quiet Mark Certified - creating healthy soundscapes for living spaces

Quiet Mark is the international award for high-performance technologies and solutions battling everyday unwanted noise. It shows that R32 Monobloc S is one of the quietest, or most technically effective products in noise reduction or acoustic properties available on the current market in its category.

Therma V R32 Monobloc S has received the Quiet Mark certification since it has been designed to reach lower acoustic levels in order to meet homeowner expectations in urban areas.

Certified products*:

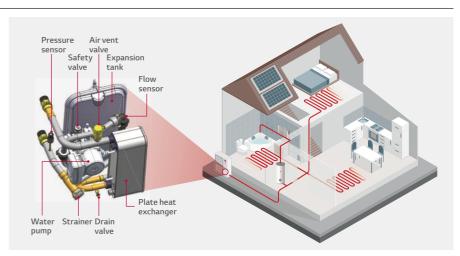
HM051MR U44 / HM071MR U44 / HM091MR U44 HM093MR U44 / HM121MR U34 / HM123MR U34

* This certification is valid for UK & EU territories only.

Monobloc Concept

R32 Monobloc S is an all-in-one concept, with its reduced weight allowing quicker and easier installations.

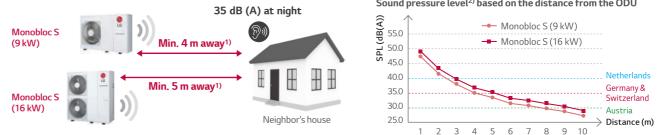
- Additional hydronic components are included in the package
- Easier and quicker installation without refrigerant piping work
- The best solution when space heating only is needed



Reduced Noise Level

R32 Monobloc S can be installed at the minimum of 4 m away¹⁾ from neighboring houses while complying with noiserelated requirements in most European countries, including Germany. (based on 9 kW model & low noise mode)

Description		Germany	Austria	Switzerland	Netherlands
Sound pressure threshold	50 dB (A) (06:00 ~ 22:00)	40 dB (A) (06:00 ~ 19:00)	40 dB (A) (07:00 ~ 19:00)	45 dB (A) (07:00 ~ 19:00)	
	Evening	-	35 dB (A) (19:00 ~ 22:00)	-	-
	Night time	35 dB (A) (22:00 ~ 06:00)	30 dB (A) (22:00 ~ 06:00)	35 dB (A) (19:00 ~ 07:00)	40 dB (A) (19:00 ~ 07:00)



1) Minimum distance to be away from a neighboring property may vary depending on installation conditions and noise regulations in individual countries. 2) Sound pressure level is converted from sound power level of low noise mode based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2.









R32 Monobloc S





÷ 🗱 😭



Features

• All-in-one outdoor unit

- SCOP up to 4.55 (average climate / low temp. application):
- SCOP up to 3.20 (average climate / mid temp. application):
- COP up to 4.70 (outdoor air 7°C / leaving water 35°C)
- 100 % heating capacity at -15°C OAT (@ LWT 35°C)
- Low sound level allowing high installation location flexibility
- 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
- Improved heat exchanger design (new Black Fin)
- LG ThinQ
- Keymark / EHPA (for Germany, Austria and Switzerland) / MCS / Eurovent / Quiet Mark certification

* The certifications for HM093MR U44 are under development except for MCS certification.

Model line-up

		Model name						
Capacity	Unit	Capacity (kW)						
		5.5	7.0	9.0				
1 Phase model 220 ~ 240 V, 1 Ø, 50 Hz	Monobloc unit	HM051MR U44	HM071MR U44	HM091MR U44				
3 Phase model 380 ~ 415 V, 3 Ø, 50 Hz		-	-	HM093MR U44				

Seasonal energy

Description				HM051MR U44	HM071MR U44	HM091MR U44 HM093MR U44
	Average	SCOP	-	4.46	4.48	4.55
	climate water	Seasonal space heating efficiency (ηs)	%	175	176	179
Space heating (according to	outlet 35°C	Seasonal space heating eff. class (A+++ to D Scale)	-	A+++	A+++	A+++
EN14825)	Average	SCOP	-	3.20	3.20	3.20
climate	climate water	Seasonal space heating efficiency (η_s)	%	125	125	125
outlet 55°C		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)	Unit	HM051MR U44	HM071MR U44	HM091MR U44
Description				Unit			HM093MR U44
		7°C	35°C		5.50	7.00	9.00
	Heating	7°C	55°C		5.50	5.50	5.50
Nominal capacity		2°C	35°C	kW	4.40	5.60	6.80
	Cooling	35°C	18°C		5.50	7.00	9.00
	Cooling	35°C	7°C	1	5.50	7.00	9.00
	Heating	7°C	35°C	kW	1.17	1.49	1.96
		7°C	55°C		2.04	2.04	2.04
Nominal power input		2°C	35°C		1.22	1.58	1.94
	Cooling	35°C	18°C		1.17	1.56	2.14
	Cooling	35°C	7°C		1.67	2.19	2.90
		7°C	35°C		4.70	4.70	4.60
COP	Heating	7°C	55°C	W/W	2.70	2.70	2.70
		2°C	35°C		3.60	3.55	3.50
EER	Cooling	35°C	18°C	W/W	4.70	4.50	4.20
EEN	Cooling	35°C	7°C	00700	3.30	3.20	3.10

1) OAT: Outdoor Air Temperature

2) LWT: Leaving Water Temperature

Product specification

Technical spe	cification			Unit	HM051MR U44	HM071MR U44	HM091MR U44 HM093MR U44	
	Operation range	Heating			15 ~ 65			
	(leaving water	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾			
Water side	temperature)	DHW				15 ~ 80 ²⁾		
vvaler side	Piping connections	Water Circuit	Inlet	inch	Male PT 1" accor	ding to ISO 7-1 (tape	ered pipe threads)	
	riping connections	water circuit	Outlet	inch	Male PT 1" accor	ding to ISO 7-1 (tape	ered pipe threads)	
	Rated water flow rate a	t LWT 35°C		LPM	15.8	20.1	25.9	
	Operation range	Heating	Min ~ Max	°C DB		-25 ~ 35		
	(outdoor temperature)	Cooling	IVIIII ~ IVIAA	CDB		5 ~ 48		
	Compressor	Quantity		EA		1		
Refrigerant	Compressor	Туре		-	ŀ	Hermetic sealed scro	oll	
side	side	Туре		-	R32			
	Refrigerant	GWP (Global W	arming Potential)	-		675		
	Nenigeranc	Precharged amo	ount	g		1,400		
		t-CO2 eq		-	0.945			
Sound power l	aval	Heating Rated		dB(A)	57			
Sound power t	evel	Heating	Low noise mode	UD(A)	54 55			
C	a laval (at E ar)	Usating	Rated		35			
Sound pressur	e level (at 5 m)	Heating	Low noise mode	dB(A)	32	3	33	
Dimensions		Unit	W×H×D	mm		1,239 × 834 × 330		
Weight		Unit		kg	89	9.5	1 Ø : 89.5 / 3 Ø : 92.5	
Exterior		Color / RAL cod	е	-	V	Varm gray / RAL 704	14	
		Voltage, phase,	frequency	V, Ø, Hz	220-24	0, 1, 50	220-240, 1, 50 380-415, 3, 50	
Power supply		Rated running	Heating	A	5.2	6.6	1 Ø : 8.7 / 3 Ø : 2.9	
			Cooling	A	5.2	6.9	1 Ø : 9.5 / 3 Ø : 3.2	
		Recommended	circuit breaker	A	16	20	1 Ø: 25 / 3 Ø: 16	
Wiring connec	tions	Power supply c (included earth		mm ² x cores	4.0 >	4.0 x 3 C 4.0 x 3 C		

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. 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).

PRODUCT SPECIFICATION



Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HM051MR U44

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C		
temperature		Capacity (kW)								
-25°C DB	5.50	5.50	5.50	5.50	-	-	-	-		
-20°C DB	5.50	5.50	5.50	5.50	5.23	-	-	-		
-15°C DB	5.50	5.50	5.50	5.50	5.23	5.23	-	-		
-7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-		
-4°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
-2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
15°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
18°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
20°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50		

HM071MR U44

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C		
temperature		Capacity (kW)								
-25°C DB	5.85	5.85	5.85	5.85	-	-	-	-		
-20°C DB	6.43	6.43	6.43	6.43	6.10	-	-	-		
-15°C DB	7.00	7.00	7.00	7.00	6.65	6.65	-	-		
-7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-		
-4°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
-2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
15°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
18°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		

HM091MR U44 / HM093MR U44

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C	
temperature		Capacity (kW)							
-25°C DB	6.20	6.20	6.20	6.20	-	-	-	-	
-20°C DB	7.60	7.60	7.60	7.60	7.22	-	-	-	
-15°C DB	9.00	9.00	9.00	9.00	8.55	8.55	-	-	
-7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-	
-4°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
-2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
15°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
18°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	

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

HM051MR U44

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
20°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
30°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
40°C DB	5.29	5.32	5.36	5.38	5.41	5.43	5.45
45°C DB	5.09	5.15	5.21	5.25	5.31	5.36	5.40

HM071MR U44

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
30°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
40°C DB	6.36	6.45	6.55	6.61	6.71	6.77	6.84
45°C DB	5.71	5.82	5.92	5.99	6.10	6.17	6.24

HM091MR U44 / HM093MR U44

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C			
temperature				Capacity (kW)	Capacity (kW)					
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00			
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00			
30°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00			
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00			
40°C DB	7.66	7.66	7.65	7.65	7.65	7.65	7.65			
45°C DB	6.31	6.35	6.39	6.42	6.45	6.48	6.51			

Note

DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C)
 Direct interpolation is permissible. Do not extrapolate.
 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.

PRODUCT SPECIFICATION

INTRODUCTION

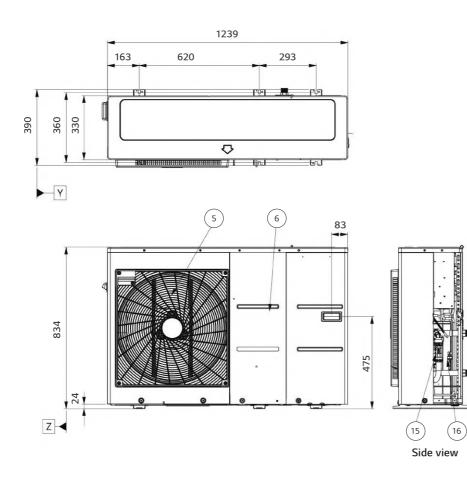


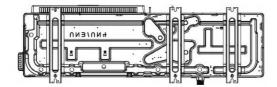
Drawings

	Unit	Model name							
Category		Capacity (kW)							
		5.5	7.0	9.0					
1 Phase model 220 ~ 240 V, 1 Ø, 50 Hz	Monobloc unit	HM051MR U44	HM071MR U44	HM091MR U44					
3 Phase model 380 ~ 415 V, 3 Ø, 50 Hz		-	-	HM093MR U44					

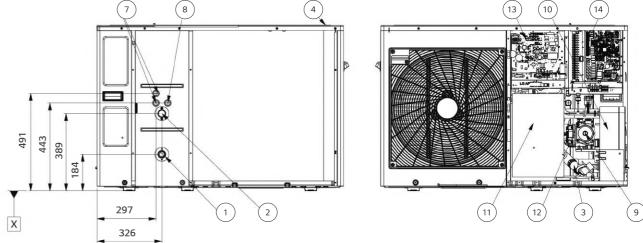
HM051MR U44 / HM071MR U44 / HM091MR U44 / HM093MR U44

[Unit: mm]





3D view (8) (7



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	Strainer	Filtering and stacking particles inside circulating water
4	Top cover	-
5	Front panel	-
6	Side panel	-
7	Low voltage	Communication cable hole
8	Unit power	Power cable hole
9	Water pump	To circulate water inside the system
10	Plate heat exchanger	Heat exchange between refrigerant and water
11	Compressor shield panel	-
12	Safety valve	Open at water pressure 3 bar
13	Indoor control box	Indoor PCB and terminal blocks
14	Outdoor control box	Outdoor PCB and terminal blocks
15	Flow sensor	To measure the water flow rate (5-80 LPM)
16	Pressure sensor	To measure the water pressure (0-2 MPa)

PRODUCT SPECIFICATION

HYDROSPLIT

SPLIT

WATER HEATER



R32 Monobloc S

HM121MR U34
HM141MR U34
HM161MR U34
HM123MR U34
HM143MR U34
HM163MR U34



-ò-) 淋 😭



Features

• All-in-one outdoor unit

- SCOP up to 4.67 (average climate / low temp. application):
- SCOP up to 3.47 (average climate / mid temp. application):
- COP up to 4.90 (outdoor air 7°C / leaving water 35°C)
- 100 % heating capacity at -15°C OAT (@ LWT 35°C, except for 16 kW model)
- Low sound level allowing high installation location flexibility
- 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
- Improved heat exchanger design (new Black Fin)
- LG ThinQ

• Keymark / EHPA (for Germany, Austria and Switzerland) / MCS / Eurovent / Quiet Mark (12 kW only) certification

Model line-up

		Model name							
Capacity	Unit	Capacity (kW)							
		12.0	14.0	16.0					
1 Phase model 220 ~ 240 V, 1 Ø, 50 Hz	Monobloc unit	HM121MR U34	HM141MR U34	HM161MR U34					
3 Phase model 380 ~ 415 V, 3 Ø, 50 Hz		HM123MR U34	HM143MR U34	HM163MR U34					

Seasonal energy

Description			Unit		HM141MR U34 (1 Ø) HM143MR U34 (3 Ø)	HM161MR U34 (1 Ø) HM163MR U34 (3 Ø)
clim	Average	SCOP	-	4.67	4.62	4.53
	climate water	Seasonal space heating efficiency (η_s)	%	184	182	178
Space heating (according to	outlet 35°C	Seasonal space heating eff. class (A+++ to D Scale)	-	A+++	A+++	A+++
EN14825)	Average	SCOP	-	3.47	3.46	3.45
, i l	climate water	Seasonal space heating efficiency (η_s)	%	136	135	135
	outlet 55°C	Seasonal space heating eff. class (A+++ to D Scale)	-	A++	A++	A++

Nominal capacity and nominal power input

Description			LWT ²⁾ (DB)	Unit	HM121MR U34 (1 Ø)	HM141MR U34 (1Ø)	HM161MR U34 (1 Ø)
Description				Unit	HM123MR U34 (3 Ø)	HM143MR U34 (3Ø)	HM163MR U34 (3 Ø)
		7°C	35°C	kW	12.00	14.00	16.00
	Heating	7°C	55°C		11.00	11.50	12.00
Nominal capacity		2°C	35°C		11.00	12.00	13.80
	Cooling	35°C	18°C		12.00	14.00	16.00
	Cooling	35°C	7°C		12.00	14.00	16.00
	Heating	7°C	35°C		2.45	2.92	3.40
		7°C	55°C	kW	3.79	4.04	4.29
Nominal power input		2°C	35°C		3.01	3.31	3.83
	Cooling	35°C	18°C		2.53	3.26	4.00
	Cooling	35°C	7°C		3.64	4.24	5.16
		7°C	35°C		4.90	4.80	4.70
COP	Heating	7°C	55°C	W/W	2.90	2.85	2.80
	-	2°C	35°C		3.65	3.63	3.60
EER	Cooling	35°C	18°C	W/W	4.75	4.30	4.00
LLN	Cooling	35°C	7°C	00700	3.30	3.30	3.10

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

Product specification

Technical s	specification			Unit	HM121MR U34	HM141MR U34	HM161MR U34	HM123MR U34	HM143MR U34	HM163MR	
	Operation range	Heating					15 -	- 65			
	(leaving water	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾						
Water	temperature)	DHW					15 ~	80 ²⁾			
side	Piping	Water	Inlet	inch		Male PT 1" ac	cording to ISC) 7-1 (tapered	pipe threads)		
	connections	circuit	Outlet	inch		Male PT 1" ac	cording to ISC) 7-1 (tapered	pipe threads)		
Rated water flow ra		v rate at LWT 35°	C	LPM	34.5	40.3	46.0	34.5	40.3	46.0	
	Operation range	Heating					-25	~ 35			
	(outdoor temp.)	Cooling	Min. ~ Max.	°C DB	5 ~ 48						
	6	Quantity		EA				1			
Refrigerant	Compressor	Туре		-			Hermetic s	ealed scroll			
side		Туре		-	R32						
	D.C.	GWP (Global Wa	ming Potential)	-	675						
Refr	Refrigerant	Precharged amou	unt	g			2,0	000			
		t-CO ₂ eq		-	1.350						
C		Heating	Rated		60	61		60	6	1	
Sound powe	erievei	Heating	Low noise mode	dB(A)	56	57		56	5	7	
C		Heating	Rated		38	3	9	38	3	9	
Sound press	ure level (at 5m)	Heating	Low noise mode	dB(A)	34	3	5	34	3	5	
Dimensions		Unit	WxHxD	mm			1,239 x 1,	380 x 330			
Weight		Unit		kg			11	9.1			
Exterior		Color / RAL cod	le	-			Warm gray	/ RAL 7044			
		Voltage, phase,	frequency	V, Ø, Hz	1	220-240, 1, 50	C	3	80-415, 3, 50)	
Douvor cumm	h.	Rated running	Heating	A	10.9	12.9	15.1	3.6	4.3	5.0	
Power supp	iy	current	Cooling	A	11.2	14.4	17.7	3.7	4.8	5.9	
		Recommended of	circuit breaker	A		40			16		
Wiring connections Power supply cable (included earth, H07RN-F)		mm ² x cores									

1) When a fan coil unit is not used.

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

1. 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. 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

This product contains fluorinated greenhouse gases.
 All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

PRODUCT SPECIFICATION

SPLIT



Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HM121MR U34 / HM123MR U34

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature								
-25°C DB	9.50	9.50	9.50	9.50	-	-	-	-
-20°C DB	10.75	10.75	10.75	10.75	10.21	-	-	-
-15°C DB	12.00	12.00	12.00	12.00	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

HM141MR U34 / HM143MR U34

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (kW)			
	10.00	10.00	10.00	10.00	-	-	-	-
-20°C DB	12.00	12.00	12.00	12.00	11.40	-	-	-
-15°C DB	14.00	14.00	14.00	14.00	13.30	13.30	-	-
-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

HM161MR U34 / HM163MR U34

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (kW)			
-25°C DB	10.50	10.50	10.50	10.50	-	-	-	-
-20°C DB	13.25	13.25	13.25	13.25	12.59	-	-	-
-15°C DB	16.00	14.40	14.40	14.40	13.68	13.68	-	-
-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

HM121MR U34 / HM123MR U34

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				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	11.05	11.19	11.33	11.43	11.57	11.67	11.76
45°C DB	10.10	10.37	10.64	10.83	11.10	11.28	11.46

HM141MR U34 / HM143MR U34

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C			
temperature	Capacity (kW)									
10°C DB	12.50	12.80	13.10	13.30	13.60	13.80	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	12.35	12.60	12.84	13.01	13.26	13.42	13.59			
45°C DB	10.69	11.19	11.69	12.02	12.51	12.84	13.17			

HM161MR U34 / HM163MR U34

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C			
temperature	Capacity (kW)									
10°C DB	13.00	13.60	14.20	14.60	15.20	15.60	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	13.60	13.96	14.32	14.56	14.92	15.16	15.40			
45°C DB	11.20	11.76	12.32	12.69	13.25	13.62	14.00			

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.

PRODUCT SPECIFICATION

MONOBLOC

INTRODUCTION

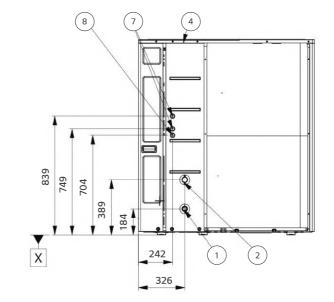
THERMA V FEATURES



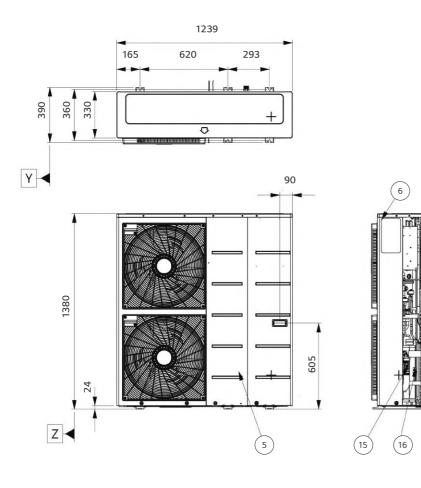
		Model name Capacity (kW)					
Category	Unit						
		12.0	14.0	16.0			
1 Phase model 220 ~ 240 V, 1 Ø, 50 Hz	Monobloc unit	HM121MR U34	HM141MR U34	HM161MR U34			
3 Phase model 380 ~ 415 V, 3 Ø, 50 Hz		HM123MR U34	HM143MR U34	HM163MR U34			

HM121MR U34 / HM141MR U34 / HM161MR U34 HM123MR U34 / HM143MR U34 / HM163MR U34 [Unit: mm]

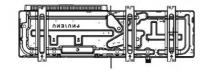




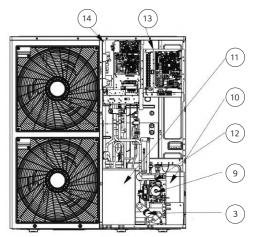
No.	Part name	Description
1	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Strainer	Filtering and stacking particles inside circulating water
4	Top cover	-
5	Front panel	-
6	Side panel	-
7	Low voltage	Communication cable hole
8	Unit power	Power cable hole
9	Water pump	To circulate water inside the system
10	Plate heat exchanger	Heat exchange between refrigerant and water
11	Compressor shield panel	
12	Safety valve	Open at water pressure 3 bar
13	Indoor control box	Indoor PCB and terminal blocks
14	Outdoor control box	Outdoor PCB and terminal blocks
15	Flow sensor	To measure the water flow rate (5-80 LPM)
16	Pressure sensor	To measure the water pressure (0-2 MPa)



Side view



PRODUCT SPECIFICATION

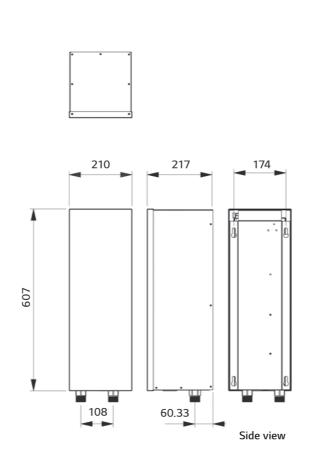




Electric Backup Heater

HA031M E1 HA061M E1 HA063M E1







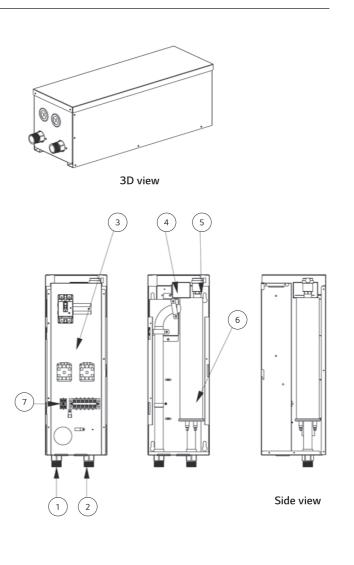
Backup	heater	specification
--------	--------	---------------

Electrical spe	cification	Unit	HA031M E1	HA061M E1	HA063M E1
	Туре	-		Sheath	
	Number of heating coil	EA	1	2	3
	Capacity combination	kW	3.0	3.0 + 3.0	2.0 + 2.0 + 2.0
Backup	Heating steps	Step	1	2	1
heater	Power supply	V, Ø, Hz	220 ~ 240, 1, 50		380 ~ 415, 3, 50
	Rated running current	A	12.5	25.0	8.7
	Dimensions (W x H x D)	mm			
	Net weight (unit)	kg	12.8	13.4	13.1
Wiring	Power supply cable (included earth, H07RN-F)	mm ² x cores	1.5 x 3 C	4.0 x 3 C	2.5 x 4 C
connections	Communication cable (H07RN-F)	mm ² x cores	0.75	x 4 C	0.75 x 2 C

No.	Part name	Description
1	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Control box	Circuit breaker, Magnetic switch, Terminal blocks
4	Thermal switch	Cut-off power input to E/heater at 90°C
5	Air vent	Air purging when charging water
6	Electric heater	Refer the related information
7	Backup heater outlet sensor	Connect to unit (heat pump)

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.

PRODUCT SPECIFICATION



SPLIT

INTRODUCTION

THERMA V FEATURES

MONOBLOC

HYDROSPLIT

WATER HEATER

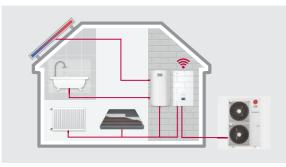
ACCESSORIES



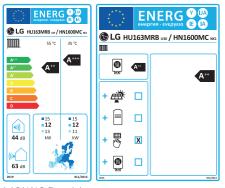
R32 HYDROSPLIT HYDRO BOX



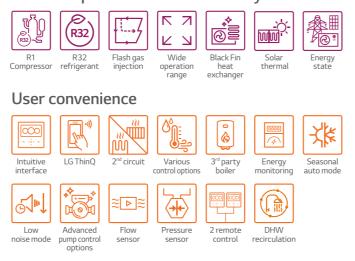
THERMA V. (R32) R32 HYDROSPLIT HYDRO BOX



Energy Label



Excellent performance & efficiency



Easy installation & maintenance



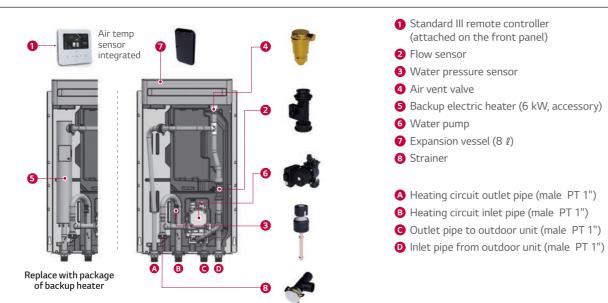
* Detailed description for each function is presented on page 44 ~ 54.

* 16 kW 3 Ø model. * A+++ to D scale.

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



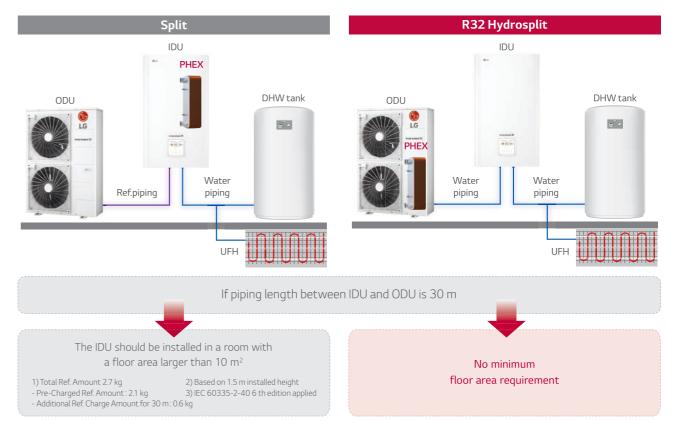
Hydrosplit Concept

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.





ACCESSORIES



R32 Hydrosplit Hydro Box

Indoor unit

HN1600MC NK1

Outdoor unit

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



÷

LG



Features

- Water pipes connect IDU & ODU
- SCOP up to 4.60 (average climate / low temp. application):
- SCOP up to 3.50 (average climate / mid temp. application):
- 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

Seasonal energy

			Outdoor unit	HU121MRB U30 (1 Ø)	HU141MRB U30 (1 Ø)	HU161MRB U30 (1 Ø)	
Description	1			HU123MRB U30 (3 Ø)	HU143MRB U30 (3Ø)	HU163MRB U30 (3Ø)	
			Indoor unit	HN1600MC NK1			
	Average	SCOP	-	4.60	4.57	4.55	
Space	climate water	Seasonal space heating efficiency (η_s)	%	181	180	179	
heating	outlet 35°C	Seasonal space heating eff. class (A+++ to D scale)	-	A+++	A+++	A+++	
(according		SCOP	-	3.50	3.47	3.45	
to EN14825)	climate water	Seasonal space heating efficiency (ηs)	%	137	136	135	
	outlet 55°C	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) HU123MRB U30 (3 Ø)	HU141MRB U30 (1 Ø) HU143MRB U30 (3 Ø)	HU161MRB U30 (1 Ø) HU163MRB U30 (3 Ø)
				Indoor unit	HN1600MC NK1		
		7°C	35°C		12.00	14.00	16.00
	Heating	7°C	55°C		11.00	11.50	12.00
Nominal capacity		2°C	35°C	kW	11.00	12.00	13.80
	Cooling	35°C	18°C		12.00	14.00	16.00
	Cooling	35°C	7°C		12.00	14.00	16.00
		7°C	35°C	kW	2.38	2.86	3.33
	Heating	7°C	55°C		3.79	4.04	4.29
Nominal power input		2°C	35°C		3.01	3.31	3.83
power input	Cooling	35°C	18°C		2.53	3.26	4.00
		35°C	7°C		4.44	5.38	6.40
		7°C	35°C		5.04	4.89	4.80
COP	Heating	7°C	55°C	W/W	2.90	2.85	2.80
		2°C	35°C		3.65	3.63	3.60
EED	Cooling	35°C	18°C	W/W	4.75	4.30	4.00
EER	Cooling	35°C	7°C	VV/ VV	2.70	2.60	2.50

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

Model line-up

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

PRODUCT SPECIFICATION



R32 Hydrosplit Hydro Box

Product specification (outdoor unit)

Technical Specification	on		Unit	HU121MRB U30	HU141MRB U30	HU161MRB U30	HU123MRB U30	HU143MRB U30	HU163MRB U30		
Operation range	Heating	Min. ~ Max.	°C DB	-25 ~ 35							
(outdoor temp.) Cooling		IVIIII. ~ IVIdX.	CDB			5 ~	48				
Quantity		EA									
Compressor	Туре		-			Hermetic s	ealed scroll				
	Туре		-			R	32				
Refrigerant	GWP (Global Warmir	ng Potential)	-			6	75				
Kenngeranc	Precharged amount		g			2,1	00				
	t-CO ₂ eq		-		1.418						
Piping connections	Water Circuit	Inlet	mm (inch)		Male PT 1" according to ISO 7-1 (tapered pipe threads)						
Fiping connections	vvaler circuit	Outlet	mm (inch)		Male PT 1" according to ISO 7-1 (tapered pipe threads)						
Rated water flow rate (a	t 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	WxHxD	mm			950 × 1,3	80 × 330	× 330			
Weight	Unit		kg			91	.7				
Exterior	Color / RAL code		-			Warm gray	/ RAL 7044				
	Voltage, phase, frequ	ency	V, Ø, Hz		220-240, 1, 5	D	3	380-415, 3, 50)		
Power supply	Rated	Heating	A	10.6	12.7	14.8	3.5	4.2	4.9		
rower supply	running current	Cooling	A	11.2	14.4	17.7	3.7	4.8	5.9		
	Recommended circuit	t breaker	A		40		16				
Wiring connections	Wiring connections Power supply cable (included earth, H07RN-F)				6.0 x 3 C			2.5 x 5 C			

Product specification (indoor unit)

Technical specification	n		Unit	HN1600MC NK1
0	Heating			15 ~ 65
Operation range (leaving water)	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾
(leaving water)	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
		Outlet to heat load	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)
Piping connections	Water circuit	Inlet from heat load		Male PT 1" according to ISO 7-1 (tapered pipe threads)
Piping connections		Outlet to outdoor unit	IIICII	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 cal	ble (included earth, H07RN-F)	mm ² x cores	0.75 x 4 C
Sound power level	Heating	Rated	dB(A)	44
Dimensions	Unit	WxHxD	mm	490 × 850 × 315
Weight	Unit		kg	30.5
Exterior	Color / RAL code			Noble white / RAL 9016

1) When a fan coil unit is not used.

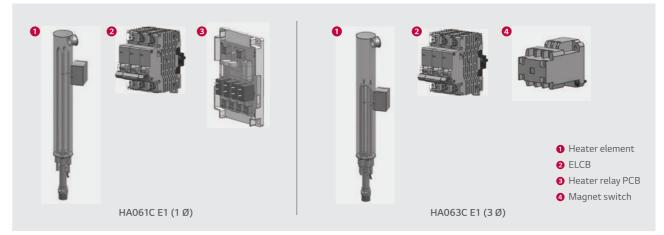
2) DHW 55 ~ 80°C operating is available only when the booster heater is operating.

Note

- 1. Due to our policy of innovation, some specifications may be changed without notification.
- 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

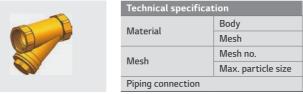


Electrical specificati	on		HA061C E1 (1 Ø)	HA063C E1 (3 Ø)
	Туре	-	She	eath
	No. of heating coil	EA	2	3
Backup heater	Max. power consumption	kW	3.0 + 3.0	2.0 + 2.0 + 2.0
	Heating step	Step	1	1
	Power supply	V, Ø, Hz	220 ~ 240, 1, 50	380 ~ 415, 3, 50
	Current (rated)	A	24.0	8.7
	Circuit breaker (ELCB)	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



* 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.

PRODUCT SPECIFICATION

	Details
	Brass
	Stainless steel (STS304)
	30
	0.6 mm
	Female G 1" according to ISO 228-1
-	

THERMA V FEATURES

WATER HEATER



Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU121MRB U30 / HU123MRB U30 + HN1600MC NK1

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C			
temperature		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	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C			
temperature		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	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (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	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				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	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				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	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				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.

PRODUCT SPECIFICATION

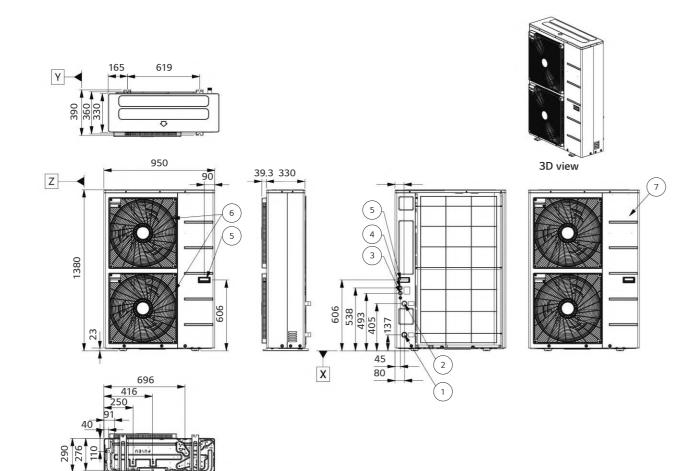
INTRODUCTION

WATER HEATER

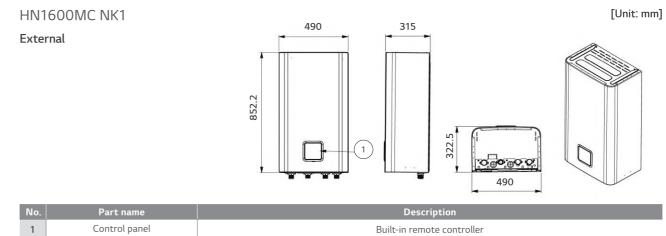


			Model name				
Category	Unit	Capacity (kW)					
		12.0	14.0	16.0			
1 Phase model	Outdoor unit	HU121MRB U30	HU141MRB U30	HU161MRB U30			
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit		HN1600MC NK1				
3 Phase model	Outdoor unit	HU123MRB U30	HU143MRB U30	HU163MRB U30			
380 ~ 415 V, 3 Ø, 50 Hz	Indoor unit		HN1600MC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

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

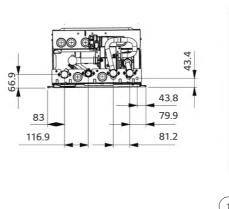


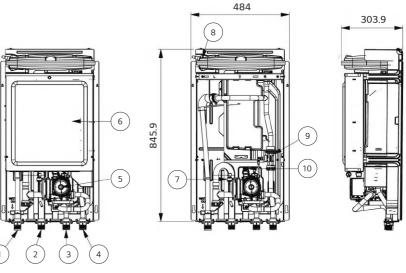
No.	Part name	Description
1	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Unit power	Power cable hole
4	Low voltage	Communication cable hole
5	Handle	-
6	Air outlet	-
7	Side panel	-



No.	Part name	
1	Control panel	

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

PRODUCT SPECIFICATION

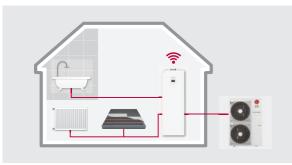




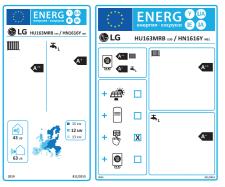


R32 HYDROSPLIT IWT

THERMAV. (R32) R32 HYDROSPLIT IWT



Energy Label



Excellent performance & efficiency



Easy installation & maintenance



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

* 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



- 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
- Expansion vessel for DHW (8 l, option)
- 1 Buffer tank (40 l, option)
- 2 Standard III remote controller (attached on the front panel)
- A Inlet pipe from outdoor unit (female G1")
- Outlet pipe to outdoor unit (female G1")
- **C** Domestic hot water outlet pipe (female G3/4")
- Domestic cold water outlet pipe (female G3/4")
- **B** DHW recirculation pipe (female G3/4")
- B 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.



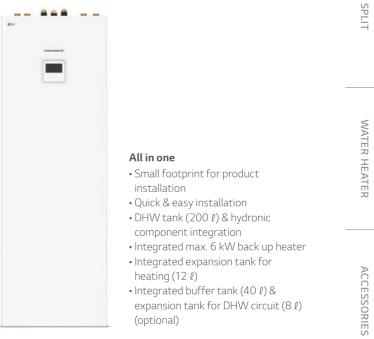
THERMA V FEATURES

MONOBLOC



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.



HYDROSPLIT

R32 Hydrosplit IWT (Integrated Water Tank)

Indoor unit

-

%

-

-

%

-

-

%

-

-

-

%

-

-

%

-

4.60

181

A+++

3.50

137

A++

L

120

2.74

A+

L

151

3.43

A++

L

101

2.34

Indoor unit -- ... HN1616Y NB1 Outdoor unit HN121MRB U30 / HU123MRB U30 LG HN141MRB U30 / HU143MRB U30 HN161MRB U30 / HU163MRB U30 R R1Compressor[™] Black Fin ThinQ. **R32** 011-1W0466 EHPA (for German Austria and Switzerland **Features** • Water pipes connect IDU & ODU • SCOP up to 4.60 (average climate / low temp. application): SCOP up to 3.50 (average climate / mid temp. application): 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

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

Seasonal energy

(;;;;;) 🗱 😭

Description		
	Average	SCOP
Space	climate water	Seasonal space heating efficiency (η_s)
heating	outlet 35°C	Seasonal space heating eff. class (A+++ to D scale)
(according	Average	SCOP
to EN14825)	climate water	Seasonal space heating efficiency (η_s)
	outlet 55°C	Seasonal space heating eff. class (A+++ to D scale)
	Average climate	Declared load profile
		Water heating efficiency (η_{WH})
		COP _{DHW}
		Water heating eff. class
Domestic		Declared load Profile
hot water	Warmer	Water heating efficiency (η_{WH})
efficiency (according	climate	COP _{DHW}
to EN16147)		Water heating eff. class
		Declared load profile
	Colder	Water heating efficiency (η_{WH})
	climate	COP _{DHW}
		Water heating eff. class

Nominal capacity and nominal power input

Description	OAT ¹⁾ (DB)	LWT ²⁾ (DB)	Outdoor unit	HL HL		
				Indoor unit		
		7°C	35°C			
	Heating	7°C	55°C			
Nominal capacity		2°C	35°C	kW		
	Cooling	35°C	18°C			
	Cooling	35°C	7°C			
	Heating	7°C	35°C			
Nexted		7°C	55°C			
Nominal power input		2°C	35°C	kW		
power input	Cooling	35°C	18°C			
	Cooling	35°C	7°C			
		7°C	35°C			
COP	Heating	7°C	55°C	W/W		
		2°C	35°C	1		
EER	Cooling	35°C	18°C	10//10/		
EER	cooung	35°C	7°C	W/W		

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

PRODUCT SPECIFICATION

HU121MRB U30 (1 Ø) HU141MRB U30 (1 Ø) HU161MRB U30 (1 Ø)

HU123MRB U30 (3 Ø) HU143MRB U30 (3 Ø) HU163MRB U30 (3 Ø)

IN1616Y NB1

4.57

180

A+++

3.47

136

A++

L

120

2.74

A+

L

151

3.43

A++

L

101

2.34

4.55

179

A+++

3.45

135

A++

L

120

2.74

A+

1

151

3.43

A++

1

101

2.34

\subset
\cap
$\overline{\mathbf{O}}$
\geq
_

INTRO

3MRB U30 (3 Ø)	
16.00	
12.00	10
13.80	SPLI
16.00	-
16.00	
3.33	
4.29	
3.83	
4.00	

		-		2.0 1		2.01	
	-		А	А		А	
ļ	J121MRB U3	0 (1 Ø)	HU141MR	B U30 (1 Ø)	HU1	61MRB U30 (1	Ø)
ι	J123MRB U3(0 (3 Ø)	HU143MR	B U30 (3 Ø)	HU1	63MRB U30 (3	Ø)
			HN161	16Y NB1			
	12.00		14	1.00		16.00	
	11.00		11	1.50		12.00	
	11.00		12	2.00		13.80	
	12.00		14	4.00		16.00	
	12.00		14	4.00		16.00	
	2.38		2	.86		3.33	
	3.79		4	.04		4.29	
	3.01		3	.31		3.83	
	2.53		3	3.26		4.00	
	4.44		5	.38		6.40	
	5.04		4	.89		4.80	
	2.90		2	.85		2.80	
	3.65		3	.63		3.60	
	4.75		4	.30		4.00	
	2.70		2	.60		2.50	

093



R32 Hydrosplit IWT (Integrated Water Tank)

Product specification (outdoor unit)

Technical Specification	on		Unit	HU121MRB U30	HU141MRB U30	HU161MRB U30	HU123MRB U30	HU143MRB U30	HU163MRB U30	
Operation range	Heating Cooling Min. ~ Max.		°C DB	-25 ~ 35						
(outdoor temp.)			CDB	5 ~ 48						
Compressor	Quantity		EA				1			
Compressor	Туре		-			Hermetic s	ealed scroll			
	Туре		-			R	32			
Defrigerent	GWP (Global Warmin	ig Potential)	-			6	75			
Refrigerant	Precharged amount		g			2,1	00			
	t-CO ₂ eq	-			1.4	18				
Diping connections	Water circuit	Inlet	mm (inch)	Male PT 1" according to ISO 7-1 (tapered pipe threads)						
Piping connections		Outlet	mm (inch)	Male PT 1" according to ISO 7-1 (tapered pipe threads)						
Rated water flow rate (a	t 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	WxHxD	mm			950 × 1,3	80 × 330			
Weight	Unit		kg			91	1.7			
Exterior	Color / RAL code		-			Warm gray	/ RAL 7044			
	Voltage, phase, frequ	ency	V, Ø, Hz		220-240, 1, 5	0		380-415, 3, 50)	
Dower cumply	Rated	Heating	A	10.6	12.7	14.8	3.5	4.2	4.9	
Power supply	running current	Cooling	A	11.2	14.4	17.7	3.7	4.8	5.9	
	Recommended circuit	t breaker	A		40			16		
Wiring connections	Power supply cable (include	d earth, H07RN-F)	mm ² x cores		6.0 x 3 C			2.5 x 5 C		

Product specification (indoor unit)

Technical Specificat	ion		Unit	HN1616Y NB1	
	Heating		l l	15 ~ 65	
(leaving water	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾	
temperature)	DHW			15 ~ 80 ²⁾	
Domestic hot water	Volume		l	200	
tank	Internal thermal prote	nal thermal protect limit suring range Min. ~ Max.		85	
Flow sensor	Measuring range			5 ~ 80	
•	Measuring range	Min. ~ Max.	bar(G)	0 ~ 20	
	Volume		l	12	
Safatu valvo	Heating circuit	Upper limit	bar	3	
lectric heater Case 1 / Case 2 /	DHW circuit	Upper limit	bar	10	
	Туре		-	Sheath	
Piping connections Wiring connections Weight Exterior	Number of heating co	pil	EA	1/2/3	
	Capacity combination	1	kW	2.0 / 2.0 + 2.0 / 2.0 + 2.0 + 2.0	
	Heating step		Step	1	
	Power supply		V, Ø, Hz	220-240, 1, 50 / 220-240, 1, 50 / 380-415, 3, 50	
	Power supply cable (i	ncluded earth, H07RN-F)	mm ² x cores	4.0 x 3 C / 4.0 x 3 C / 2.5 x 5 C	
	Rated running curren	t	A	8.7 / 17.4 / 8.7	
		Inlet	inch		
	Water circuit	Outlet	inch	Female G 1" according to ISO 228-1 (parallel pipe threads)	
	vvaler circuit	Inlet from outdoor unit	inch	remate G 1 according to 150 220-1 (paratter pipe timeaus)	
Piping connections		Outlet to outdoor unit	inch		
	DHW tank water	Cold inlet	inch		
	circuit	Hot outlet	inch	Female G 3/4" according to ISO 228-1 (parallel pipe threads	
	CIICUIL	Recirculation	inch		
Wiring connections	Power and communic (included earth, H07F		mm ² x cores	0.75 x 4 C	
Sound power level	Heating	Rated	dB(A)	43	
Dimensions	Unit	W×H×D	mm	601 × 1,812 × 685	
Weight	Unit		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 1tht.
3. Sound power level is measured on the rated condition in accordance with 1SO 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 EN12102-1 under 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



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 & 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



Strainer



* 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.

094

MONOBLOC

WATER HEATER

ACCESSORIES

PRODUCT SPECIFICATION

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.

Shut-off valve with strainer



Details
Brass
Stainless steel (STS304)
30
0.6 mm
Female G 1" according to ISO 228-1



Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU121MRB U30 / HU123MRB U30 + HN1616Y NB1

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C	
temperature		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	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (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	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (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	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature							
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	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C		
temperature	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	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				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.

PRODUCT SPECIFICATION

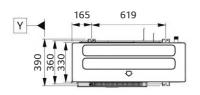
INTRODUCTION

ACCESSORIES

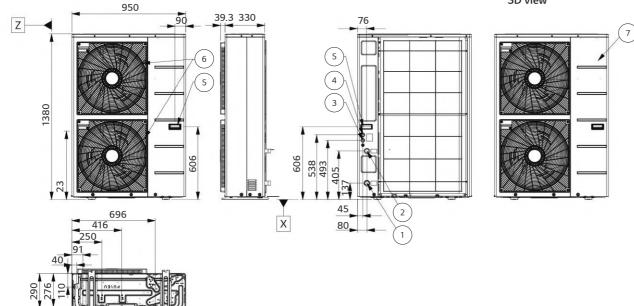


			Model name				
Category	Unit	Capacity (kW)					
		12.0	14.0	16.0			
1 Phase model	Outdoor unit	HU121MRB U30	HU141MRB U30	HU161MRB U30			
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit	HN1616Y NB1					
3 Phase model	Outdoor unit	HU123MRB U30	HU143MRB U30	HU163MRB U30			
380 ~ 415 V, 3 Ø, 50 Hz	Indoor unit		HN1616Y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

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

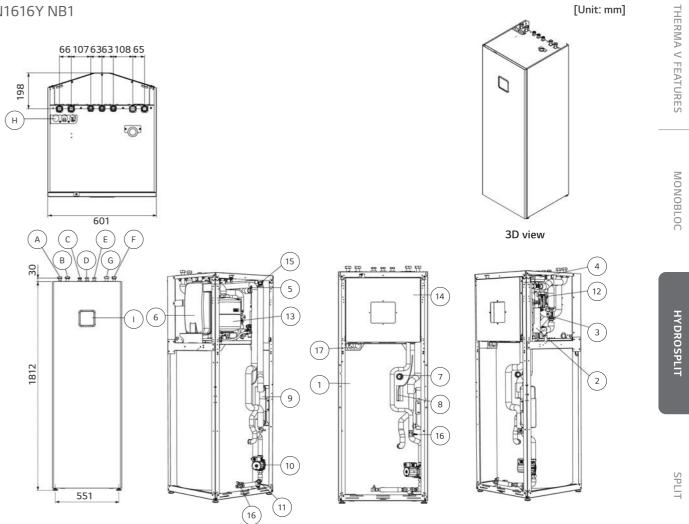






No.	Part name	Description			
1	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)			
2	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)			
3	Unit power Power cable hole				
4	Low voltage	Communication cable hole			
5	Handle	-			
6	6 Air outlet -				
7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

HN1616Y NB1



No.	Part name	Description	No.	Part name	Part name
1	Domestic hot water tank	200 ℓ		Inlet pipe from outdoor unit	Female G1"
2	Electric heater	Max 6 kW	В	Outlet pipe to outdoor unit	Female G1"
3	Flow sensor	To measure the water flow rate		Domestic hot water outlet pipe	Female G3/4"
		(5-80 LPM)	D	Domestic cold water inlet pipe	Female G3/4"
4	3 way valve	Heating / DHW circuit	Е	Domestic re-circulation pipe	Female G3/4"
5	Water pressure sensor	To measure the water pressure (0-2 MPa)	F	Heating circuit inlet pipe	Female G1"
6	Expansion vessel	12 l for heating circuit	G	Heating circuit outlet pipe	Female G1"
7	Magnesium anode	To prevent corrosion	Н	Electrical conduits	For electric wiring
8	DHW tank sensor	Temperature sensor	1	Control panel	Built-in remote controller
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			

PRODUCT SPECIFICATION

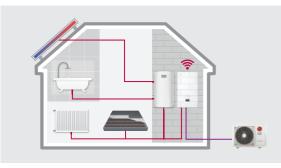
WATER HEATER



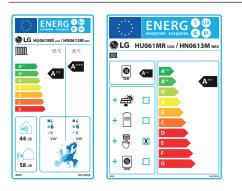




THERMAN (R32) R32 SPLIT 4/6 kW HYDRO BOX



Energy Label



Excellent performance & efficiency



Easy installation & maintenance



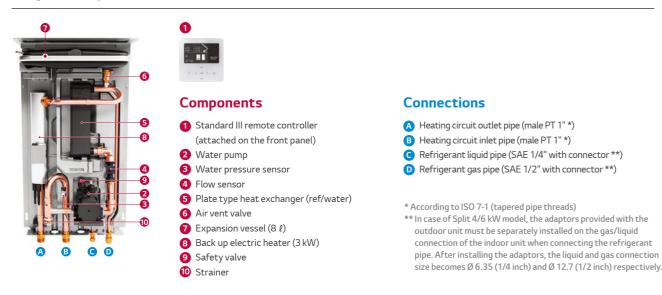
* 6 kW 1 Ø model. * A+++ to D scale.

R32 Split Hydro Box Introduction

The LG Therma V R32 Split Hydro Box is a hydro box type system consisting of an indoor hydro box unit and an outdoor unit. The two units are connected by refrigerant piping only, thus hydronic components such as plate heat exchanger, expansion tank and water pump are located within the indoor unit. Due to the split nature, freezing will not compromise this unit regardless of outdoor ambient temperatures.

The outdoor unit is on offer in 4/6 kW and 5/7/9 kW capacity range and R32 Split 4/6 kW model is suitable for new build houses that are well insulated and require a small heating load.

Key Components



Small Refrigerant Amount - free from minimum floor area requirements due to R32 refrigerant

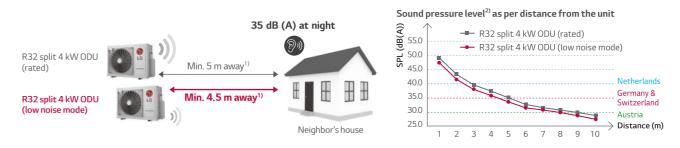
Minimum floor space requirements do not apply to R32 Split 4/6 kW, as the maximum refrigerant amount (including 30 m pipes) used in the product is smaller than the minimum set by regulation. As a result, there are more opportunities for flexible design and installation.



Reduced Noise Level

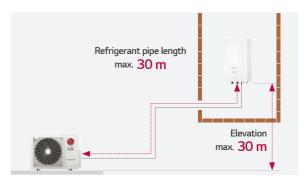
The R32 Split outdoor unit can be installed at the minimum of 4.5 m away¹⁾ from neighboring houses while complying with noise-related requirements in most European countries, including Germany. (based on 4 kW ODU & low noise mode)

Description		Germany	Austria	Switzerland	Netherlands
C	Day time	50 dB (A) (06:00 ~ 22:00)	40 dB (A) (06:00 ~ 19:00)	40 dB (A) (07:00 ~ 19:00)	45 dB (A) (07:00 ~ 19:00)
Sound pressure threshold	Evening	-	35 dB (A) (19:00 ~ 22:00)	-	-
unesnoid	Night time	35 dB (A) (22:00 ~ 06:00)	30 dB (A) (22:00 ~ 06:00)	35 dB (A) (19:00 ~ 07:00)	40 dB (A) (19:00 ~ 07:00)



Minimum distance to be away from a neighboring property may vary depending on installation conditions and noise regulations in individual countries.
 Sound pressure level is converted from sound power level of low noise mode based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2.





MONOBLOC

INTRODUCTION

THERMA V FEATURES



R32 Split 4/6 kW Hydro Box



* MCS and EHPA label under development

Features

• Answers the needs of new build houses with good insulation and a small heating demand • Demonstrates a lower noise level

(sound pressure level at 3 m: 39 dB (A) for 4 kW / 40 dB (A) for 6 kW) Enhanced installation flexibility

 Free from minimum floor area requirements due to R32 refrigerant (Max. refrigerant amount (including 30 m pipes) < 1.842 kg)

• Light weight and compact size

• Max. 30 m refrigerant piping

- Integrated 3 kW backup heater and expansion tank for heating (8 $\ell)$

Model line-up

		Model	name	
Category	Unit	Capacity (kW)		
		4.0	6.0	
1 Phase model	Outdoor unit	HU041MR U20	HU061MR U20	
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit	HN0613	3M NK5	

Seasonal energy

Description			Outdoor unit	HU041MR U20	HU061MR U20
Description			Indoor unit HN0613M		3M NK5
	Average	SCOP	-	4.65	4.65
Space	climate water	Seasonal space heating efficiency (ns)	%	183	183
heating	outlet 35°C	Seasonal space heating eff. class (A+++ to D scale)	-	A+++	A+++
(according		SCOP	-	3.23	3.23
	Seasonal space heating efficiency (ηs)	%	126	126	
	outlet 55°C	Seasonal space heating eff. class (A+++ to D scale)	-	A++	A++

Nominal capacity and nominal power input

Description				Outdoor unit	HU041MR U20	HU061MR U20
			LWT ²⁾ (DB)	Indoor unit	HN0613M NK5	
		7°C	35°C		4.00	6.00
	Heating	7°C	55°C		3.70	4.60
Nominal capacity	Heating	2°C	35°C	kW	3.60	4.80
Nominal capacity		-7°C	35°C	KVV	4.00	6.00
	Cooling	35°C	18°C		4.00	6.00
	Cooling	35°C	7°C		4.00	6.00
	Heating	7°C	35°C		0.78	1.21
		7°C	55°C	kW	1.30	1.59
Nominal		2°C	35°C		0.96	1.32
power input		-7°C	35°C	KVV	1.30	2.01
	Castina	35°C	18°C		0.83	1.25
	Cooling	35°C	7°C		1.18	1.88
		7°C	35°C		5.10	4.95
СОР	Heating	7°C	55°C	W/W	2.85	2.90
COP	Heating	2°C	35°C	VV/ VV	3.75	3.65
		-7°C	35°C		3.08	2.98
EER	Cooling	35°C	18°C	W/W	4.80	4.80
EER	Cooling	35°C	7°C	VV/ VV	3.40	3.20

1) OAT : Outdoor Air Temperature

2) LWT : Leaving Water Temperature

High efficiency & operational range SCOP up to 4.65 / 3.23 (low temp. / mid temp. application): A*** / A**

• COP up to 5.10 (outdoor air 7°C / leaving water 35°C) • Operation range (ambient: -20 ~ 35°C / water side: 15 ~ 55°C) Innovative design & technology

 Energy monitoring of estimated power consumption Control & connectivity

• LG ThinQ Wi-Fi control and monitoring solution • PV / ESS or smart grid connectivity

Product specification (outdoor unit)

Technical specification			Unit	HU041MR U20	HU061MR U20	
Operation range	Heating	Min. ~ Max.	°C DB	-20 ~ 35		
(outdoor temp.)	Cooling	IVIIII. ~ IVIdX.	CDB	5 ~ 48		
Compressor	Туре		-	Hermetic seale	d twin rotary	
Туре		-	R32			
Defricance	GWP (Global War	ming Potential)	-	675		
Refrigerant	Precharged amou	nt	g	1,10	00	
	t-CO ₂ eq		-	0.74	3	
	Outer diameter	Liquid	mm (inch)	Ø 6.35	(1/4)	
	Outer ulameter	Gas	mm (inch)	Ø 12.7 (1/2)		
	Length	Standard	m	5		
Piping connections	Length	Max.	m	30		
	Level difference Max.		m	30		
	Chargeless-pipe length		m	10		
	Additional charging volume		g/m	20		
Rated water flow rate (at L	WT 35°C)		ℓ/min	11.5 17.3		
Sound power level	Heating	Rated	dB(A)	57	58	
Sound pressure level (at 1 m)	Heating	Rated	dB(A)	49	50	
Dimensions	Unit	WxHxD	mm	870 × 650 × 330		
Weight	Unit		kg	44.	7	
Exterior	Color / RAL code		-	Warm gray /	RAL 7044	
	Voltage, phase, fr	equency	V, Ø, Hz	220-240	, 1, 50	
Dower cumply	Rated	Heating	A	3.5	5.6	
Power supply	running current	Cooling	A	3.7	5.4	
	Recommended ci		A	16	20	
Wiring connections	Power supply cabl H07RN-F)	e (included earth,	mm ² x cores	2.5 x	3 C	

Product specification (indoor unit)

Technical specification			Unit	HN0613M NK5
	Heating			15 ~ 55
Operation range	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾
(leaving water)	DHW	1		15 ~ 80 ²⁾
Flow sensor	Measuring range	Min. ~ Max.	LPM	5 ~ 80
Nater pressure sensor	Measuring range	Min. ~ Max.	bar(G)	0 ~ 20
Expansion vessel	Volume		l	8
Safety valve	Pressure limit	Upper limit	bar	3
	Туре		-	Sheath
	Number of heating coil		EA	2
	Capacity combination		kW	1.5 + 1.5
Backup heater	Heating steps		Step	2
	Power supply		V, Ø, Hz	220-240, 1, 50
	Rated running current		A	13
	Power supply cable (included earth	, H07RN-F)	mm ² x cores	2.5 x 3 C
		Inlet	inch	Male PT 1" according to ISO 7-1
	Water circuit	met	IIICII	(tapered pipe threads)
Piping connections	water circuit	Outlet	inch	Male PT 1" according to ISO 7-1
-iping connections				(tapered pipe threads)
	Refrigerant circuit	Gas (outside diameter)	mm (inch)	Ø 6.35 (1/4) ³⁾
		Liquid (outside diameter)		Ø 12.7 (1/2) ³⁾
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×H×D	mm	490 × 850 × 315
Neight	Unit		kg	37.8
Exterior	Color / RAL code		-	Noble white / RAL 9016

1) When a fan coil unit is not used.

2) DHW 50 ~ 80 $^\circ\text{C}$ operating is available only when the booster heater is operating. 3) When connecting the refrigerant pipe, the adaptors provided with the outdoor unit must be installed on the connection of the indoor unit.

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.

PRODUCT SPECIFICATION

	INTRODUCTION
	THE

THERMA V FEATURES

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), Leaving Water Temp. 35°C

• Interconnected pipe length is standard length and difference of elevation

(outdoor ~ indoor unit) is 0 m.

5. This product contains fluorinated greenhouse gases.

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



Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU041MR U20 + HN0613M NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C			
temperature	Capacity (kW)								
-20°C DB	4.00	4.00	4.00	4.00	-	-			
-15°C DB	4.00	4.00	4.00	4.00	4.00	-			
-7°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
-4°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
-2°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
2°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
7°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
10°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
15°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
18°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
20°C DB	4.00	4.00	4.00	4.00	4.00	4.00			
35°C DB	4.00	4.00	4.00	4.00	4.00	4.00			

HU061MR U20 + HN0613M NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C			
temperature	Capacity (kW)								
-20°C DB	4.92	4.78	4.64	4.50	-	-			
-15°C DB	5.56	5.52	5.48	5.44	5.40	-			
-7°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
-4°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
-2°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
2°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
7°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
10°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
15°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
18°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
20°C DB	6.00	6.00	6.00	6.00	6.00	6.00			
35°C DB	6.00	6.00	6.00	6.00	6.00	6.00			

Performance Table for Cooling Operation

Maximum cooling capacity

HU041MR U20 + HN0613M NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
20°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
30°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
35°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
40°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
45°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00

HU061MR U20 + HN0613M NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
20°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
30°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
35°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
40°C DB	5.74	5.81	5.87	5.91	6.00	6.00	6.00
45°C DB	5.48	5.61	5.73	5.81	5.94	6.00	6.00

- 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 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.

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 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.

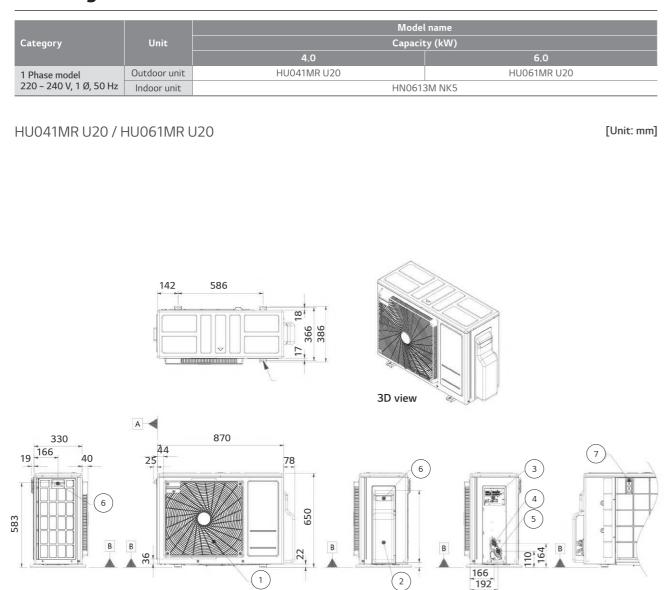
4. The shaded areas are not guaranteed continuous operation.

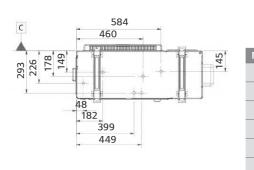
PRODUCT SPECIFICATION

INTRODUCTION

THERMA V FEATURES

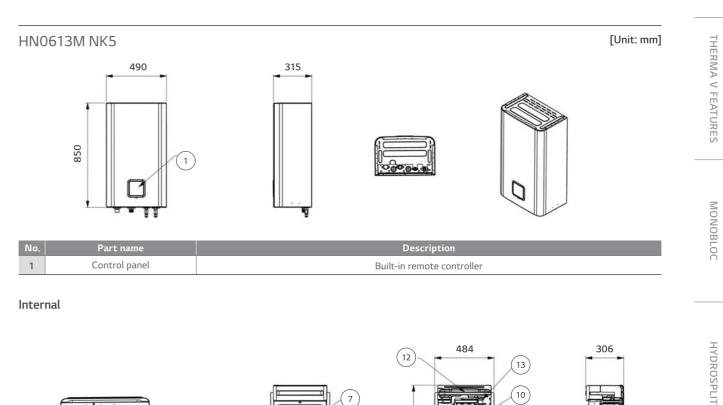






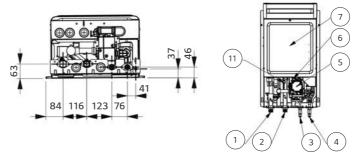
No.	Part name	Description
1	Air outlet	-
2	Control cover & SVC valve cover	-
3	Power and communication cable connection	-
4	Gas pipe connection	Flare joint
5	Liquid pipe connection	Flare joint
6	Handle	-
7	Intake air temperature sensor cover	-

Side view



8

(14

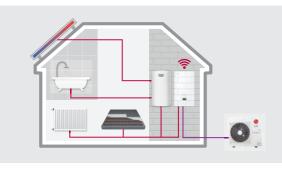


No.	Part name	Description
1	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Refrigerant piping connection	Ø 6.35 ¹⁾ (mm)
4	Refrigerant piping connection	Ø 12.7 ¹⁾ (mm)
5	Water pump	To circulate water inside the system
6	Safety valve	Open at water pressure 3 bar
7	Control box	PCB and terminal blocks
8	Thermostat	Cut-off power input to electric heater at 90°C
9	Flow sensor	To measure the water flow rate (5-80 LPM)
10	Plate heat exchanger	Heat exchange between refrigerant and water
11	Pressure sensor	To measure the water pressure (0-2 MPa)
12	Expansion tank	Absorbing volume change of heated water
13	Air vent	Air purging when charging water
14	Backup heater	3 kW
15	Strainer	Filtering and stacking particles inside circulating water

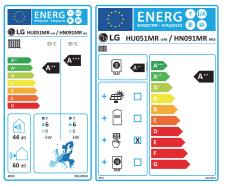
1) When connecting the refrigerant pipe, the adaptors provided with the outdoor unit must be installed on the connection of the indoor unit.

PRODUCT SPECIFICATION

R32 SPLIT 5/7/9 kW HYDRO BOX



Energy Label



Excellent performance & efficiency



Easy installation & maintenance



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

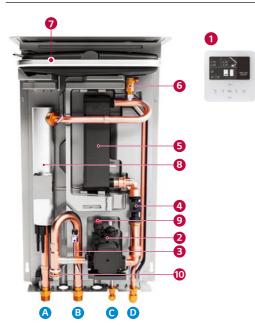
* 5 kW 1 Ø model * A+++ to D scale

R32 Split Hydro Box Introduction

The LG Therma V R32 Split Hydro Box is a hydro box type comprising a separate indoor and outdoor unit, which are connected by refrigerant piping. Hydronic components such as a plate heat exchanger, an expansion tank and a water pump are located within the indoor unit, making the unit capable of withstanding freezing outside ambient temperatures.

The outdoor unit is on offer in 4/6 kW and 5/7/9 kW capacity range and R32 Split 5/7/9 kW model is suitable for both new build and renovation projects.

Key Components

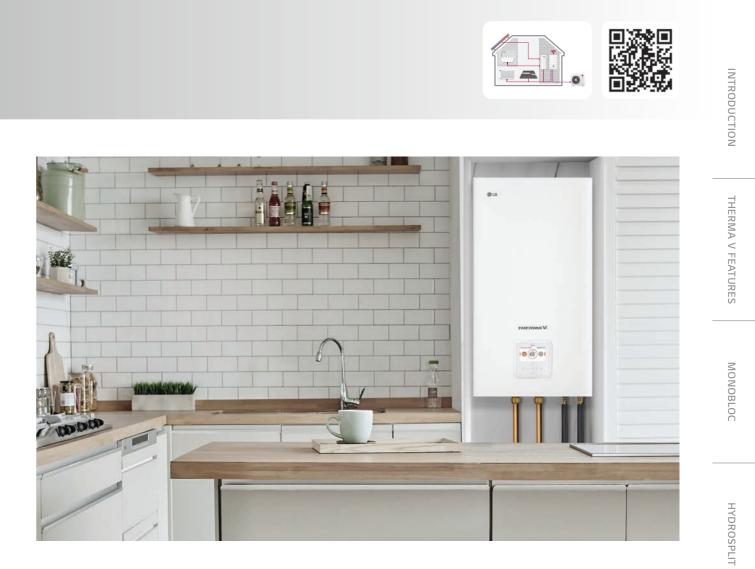


Components

- 1 Standard III remote controller
- (attached on the front panel)
- 2 Water pump 3 Water pressure sensor
- 4 Flow sensor
- **5** Plate type heat exchanger (ref/water)
- 6 Air vent valve
- Expansion vessel (8 l)
- 8 Back up electric heater (6 kW)
- 9 Safety valve
- 0 Strainer

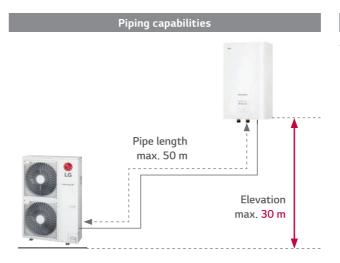
Connections

- A Heating circuit outlet pipe (male PT 1" *)
- B Heating circuit inlet pipe (male PT 1" *)
- C Refrigerant liquid pipe (SAE 3/8")
- Prefrigerant gas pipe (SAE 5/8")



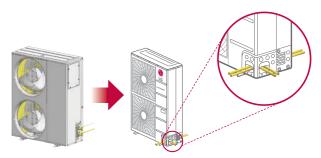
Flexible Refrigerant Piping Design

Installation flexibility is enabled by Therma V Split's long pipe length (up to 50 m) and the fact that the refrigerant piping can be connected in three directions: front, side and rear.



3 way piping

• Neat & easy installation enabled by the three-way piping.



ACCESSORIES

WATER HEATER

SPLIT

THERMAV. (R32) SPLIT 5/7/9 kW HYDRO BOX

R32 Split 5/7/9 kW Hydro Box

Indoor unit HN091MR NK5 Outdoor unit HU051MR U44 HU071MR U44 HU091MR U44 R1Compressor[™] Black Fin ThinQ **R32** EHPA 011-1W0315 (for German Austria and Switzerland

Features

- Refrigerant pipes connect IDU & ODU
- SCOP up to 4.65 (average climate / low temp. application):
- SCOP up to 3.23 (average climate / mid temp. application) A** • COP up to 4.90 (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

		Model name					
Category	Unit	Capacity (kW)					
		5.5	7.0	9.0			
1 Phase model	Outdoor unit	HU051MR U44	HU071MR U44	HU091MR U44			
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit	HN091MR NK5					

Seasonal energy

Description			Outdoor unit	HU051MR U44	HU071MR U44	HU091MR U44
Description		Indoor unit	HN091MR NK5			
	Average	SCOP	-	4.65	4.65	4.65
Space climate water	Seasonal space heating efficiency (ηs)	%	183	183	183	
heating		Seasonal space heating eff. class (A+++ to D scale)	-	A+++	A+++	A+++
		SCOP	-	3.23	3.23	3.23
to EN14825) climate water	climate water	Seasonal space heating efficiency (ŋs)	%	126	126	126
outlet 55°C		Seasonal space heating eff. class (A+++ to D scale)	-	A++	A++	A++

Nominal capacity and nominal power input

Description				Outdoor unit	HU051MR U44	HU071MR U44	HU091MR U44
Description		OAT ¹⁾ (DB)		Indoor unit		HN091MR NK5	
		7°C	35°C		5.50	7.00	9.00
	Heating	7°C	55°C		5.50	5.50	5.50
Nominal capacity		2°C	35°C	kW	3.30	4.20	5.40
	Cooling	35°C	18°C		5.50	7.00	9.00
	Cooling	35°C	7°C		5.50	7.00	9.00
		7°C	35°C	kW	1.12	1.43	1.94
Number	Heating	7°C	55°C		2.04	2.04	2.04
Nominal power input		2°C	35°C		0.94	1.20	1.54
power input	Castina	35°C	18°C		1.20	1.56	2.14
	Cooling	35°C	7°C		1.96	2.59	3.46
		7°C	35°C		4.90	4.90	4.65
COP	Heating	7°C	55°C	W/W	2.70	2.70	2.70
		2°C	35°C		3.52	3.51	3.50
EED	Cooling	35°C	18°C	W/W	4.60	4.50	4.20
EER	Cooling	35°C	7°C	VV/ VV	2.80	2.70	2.60

1) OAT : Outdoor Air Temperature

2) LWT : Leaving Water Temperature

Product specification (outdoor unit)

Technical specification					
Operation range	Heating	Min. ~ Max			
(outdoor temp.)	Cooling	IVIIII. ~ IVIdX.			
Compressor	Quantity				
Compressor	Туре				
	Туре				
Defrigerent	GWP (Global Warming Pot	ential)			
Refrigerant	Precharged amount				
	t-CO ₂ eq				
	Outside diameter	Gas			
	Outside diameter	Liquid			
Disiss	Lawath	Standard			
Piping connections	Length	Max.			
connections	Level difference	Max.			
	Chargeless-pipe length				
	Additional charging volume				
Rated water flow rate (at					
Sound power level	Heating	Rated			
Sound pressure level (at 1 m)	Heating	Rated			
Dimensions	Unit	WxHxD			
Weight	Unit	·			
Exterior	Color / RAL code				
	Voltage, phase, frequency				
Dowor cupply	Dated supping surrout	Heating			
Power supply	Rated running current	Cooling			
	Recommended circuit breaker				
Wiring connections	Power supply cable (include	ed earth, H07RN-F)			

Piping connections Water circuit Infet Infet Infet (tapered pipe threads) Refrigerant circuit Gas (outside diameter) mm (inch) Male PT 1" according to ISO 7-1 (tapered pipe threads) Liquid (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)	Product specif	fication (indoor unit))			
$\begin{tabular}{ c $	Technical specification			Unit	HN091MR NK5	
$\begin{tabular}{ c c c c c c } \hline Cooling DHW & Min. ~ Max. & CDB & 5 ~ 27 (16 ~ 27)^{\circ} \\ \hline 15 ~ 80^2 & 15 ~ 80^2 \\ \hline 15 ~ 80^2 & 15 ~ 80^2 \\ \hline 15 ~ 80^2 & 15 ~ 80^2 \\ \hline 15 ~ 80^2 & 15 ~ 80^2 \\ \hline 15 ~ 80^2 & 15 ~ 80^2 \\ \hline Measuring range & Min. ~ Max. & bar(G) & 0 ~ 20 \\ \hline Water pressure sensor & Measuring range & Min. ~ Max. & bar(G) & 0 ~ 20 \\ \hline Expansion vessel & Volume & $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$	Onemation	Heating			15 ~ 65	
Flow sensor Measuring range Min Max. LPM 15 - 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 Type - Sheath Number of heating coil EA 2 Capacity combination KW 3.0 + 3.0 Heating steps Step 2 Power supply V, Ø, Hz 220-240, 1, 50 Rated running current A 25.0 Piping connections Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads)) Piping connections Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8)	1 3	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾	
Water pressure sensor Measuring range Min Max. bar(G) 0 - 20 Expansion vessel Volume l 8 Safety valve Pressure limit Upper limit bar 3 Figure of heating coil - Sheath 3 Refrigerant circuit Upper limit bar 3 Piping connections Mumber of heating coil EA 2 Power supply KW 3.0 + 3.0 Heating steps Step 2 Power supply V, Ø, Hz 220-240, 1, 50 Rated running current A 25.0 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads) <	(leaving water)	DHW			15 ~ 80 ²⁾	
Expansion vessel Volume 0 8 Safety valve Pressure limit Upper limit bar 3 Safety valve Pressure limit Upper limit bar 3 Backup heater Type - Sheath Backup heater Rated running current EA 2 Power supply V, Ø, Hz 220-240, 1, 50 2 Power supply A 25.0 2 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Piping connections Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads)) Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8)	Flow sensor	Measuring range	Min. ~ Max.	LPM	5 ~ 80	
Safety valve Pressure limit Upper limit bar 3 Type - Sheath Number of heating coil EA 2 Capacity combination KW 3.0 + 3.0 Heating steps Step 2 Power supply V, Ø, Hz 220-240, 1, 50 Rated running current A 25.0 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Vater circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads)) Outlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads)) Male PT 1" according to ISO 7-1 (tapered pipe threads) Male PT 1" according to ISO 7-1 (tapered pipe threads)) Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8)	Water pressure sensor	Measuring range	Min. ~ Max.	bar(G)	0 ~ 20	
Backup heater Type - Sheath Backup heater Type - Sheath Heating steps KW 3.0 + 3.0 Power supply KW 3.0 + 3.0 Rated running current KW 220-240, 1, 50 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Piping connections Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Piping connections Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8)	Expansion vessel	Volume		l	8	
Number of heating coil EA 2 Capacity combination kW 3.0 + 3.0 Heating steps Step 2 Power supply V, Ø, Hz 220-240, 1, 50 Rated running current A 25.0 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Piping connections Mater circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Piping connections Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8)	Safety valve	Pressure limit	Upper limit	bar	3	
$\begin{tabular}{ c c c c } \hline Capacity combination & kW & 3.0 + 3.0 \\ \hline Heating steps & Step & 2 \\ \hline Power supply & V, \emptyset, Hz & 220-240, 1, 50 \\ \hline Rated running current & A & 25.0 \\ \hline Power supply cable (included earth, H07RN-F) & mm^2 x cores & 4.0 x 3 C \\ \hline Power supply cable (included earth, H07RN-F) & mm^2 x cores & 4.0 x 3 C \\ \hline Power supply cable (included earth, H07RN-F) & mm^2 x cores & 4.0 x 3 C \\ \hline Power supply cable (included earth, H07RN-F) & mm^2 x cores & 4.0 x 3 C \\ \hline Power supply cable (included earth, H07RN-F) & inch & Male PT 1" according to ISO 7-1 (tapered pipe threads) \\ \hline Outlet & inch & Male PT 1" according to ISO 7-1 (tapered pipe threads) \\ \hline Refrigerant circuit & Gas (outside diameter) & mm (inch) & 0 15.88 (5/8) \\\hline Liquid (outside diameter) & mm (inch) & 0 9.52 (3/8) \\ \hline \end{tabular}$		Туре	· · · ·	-	Sheath	
Backup heater Heating steps Step 2 Power supply V, Ø, Hz 220-240, 1, 50 Rated running current A 25.0 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Power supply cable (included earth, H07RN-F) inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8)		Number of heating coil		EA	2	
Power supply V, Ø, Hz 220-240, 1, 50 Rated running current A 25.0 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Piping connections Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8) Ø		Capacity combination		kW	3.0 + 3.0	
Rated running current A 25.0 Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Piping connections Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8) Ø	Backup heater	Heating steps		Step	2	
Power supply cable (included earth, H07RN-F) mm² x cores 4.0 x 3 C Piping connections Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Piping connections Outlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)	-	Power supply		V, Ø, Hz	220-240, 1, 50	
Piping connections Water circuit Inlet inch Male PT 1" according to ISO 7-1 (tapered pipe threads) Refrigerant circuit Gas (outside diameter) mm (inch) Male PT 1" according to ISO 7-1 (tapered pipe threads) Liquid (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)		Rated running current		A	25.0	
Piping connections Water circuit Infet Infet Infet (tapered pipe threads) Refrigerant circuit Gas (outside diameter) mm (inch) Male PT 1" according to ISO 7-1 (tapered pipe threads) Liquid (outside diameter) mm (inch) Ø 15.88 (5/8)		Power supply cable (included earth,	, H07RN-F)	mm ² x cores	4.0 x 3 C	
Piping connections Water circuit Outlet inch (tapered pipe threads) Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)			Inlat	inch	Male PT 1" according to ISO 7-1	
Piping connections Outlet inch Male P11" according to ISO 7-1 (tapered pipe threads) Refrigerant circuit Gas (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)		Water circuit	mer	IIICII		
Gas (outside diameter) mm (inch) Ø 15.88 (5/8) Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)	Diping connections	water circuit	Outlot	inch		
Refrigerant circuit Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)	riping connections					
Liquid (outside diameter) mm (inch) Ø 9.52 (3/8)		Refrigerant circuit				
Wiring connections Power and communication cable (included earth, H07RN-F) mm ² x cores 0.75 x 4 C		5				
	Wiring connections	Power and communication cable (i	ncluded earth, H07RN-F)	mm ² x cores		
Sound power level Heating Rated dB(A) 44		Heating	Rated	dB(A)		
Dimensions Unit W × H × D mm 490 × 850 × 315	Dimensions	Unit	W×H×D	mm	490 × 850 × 315	
Weight Unit kg 38.1	Weight			kg	38.1	
Exterior Color / RAL code - Noble white / RAL 9016	Exterior	Color / RAL code		-	Noble white / RAL 9016	

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

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. Especially the power cable and circuit breaker should be selected in accordance with that.
 Sound power level is measured on the rated condition in accordance with ISO 9614 standard.
- 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.
 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 Interconnected pipe length is standard length and difference of elevation (outdoor ~ indoor unit) is 0 m.
 This product contains fluorinated greenhouse gases.
 All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

U

°C

mm mm

dB dB

V, Ø

Α

mm² x core

PRODUCT SPECIFICATION

nit	HU051MR U44	HU071MR U44	HU091MR U44						
DB	-25 ~ 35								
DB	5 ~ 48								
A	1								
-	ŀ	Hermetic sealed scro	ll						
-		R32							
-		675							
g		1,500							
-		1.013							
(inch)	Ø 15.88 (5/8)								
(inch)	Ø 9.52 (3/8)								
m		5							
m		50							
m		30							
m		10							
/m		40							
PM	15.8	20.1	25.9						
8(A)		60							
8(A)		52							
nm		950 × 834 × 330							
kg		60.0							
-	V	Varm gray / RAL 704	4						
ð, Hz		220-240, 1, 50							

6.3

6.9

25

40x3

5.3

20



Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU051MR U44 + HN091MR NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (kW)			
-25°C DB	4.02	3.90	3.78	3.66	-	-	-	-
-20°C DB	4.64	4.51	4.38	4.26	4.13	-	-	-
-15°C DB	5.26	5.12	4.99	4.85	4.72	4.58	-	-
-7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-
-4°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-
-2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-
2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
15°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
18°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
20°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50

HU071MR U44 + HN091MR NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (kW)			
-25°C DB	5.00	4.85	4.71	4.56	-	-	-	-
-20°C DB	5.58	5.43	5.27	5.11	4.95	-	-	-
-15°C DB	6.17	6.00	5.83	5.66	5.49	5.32	-	-
-7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
-4°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
-2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
18°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

HU091MR U44 + HN091MR NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
temperature				Capacit	ty (kW)			
-25°C DB	6.40	6.20	6.00	5.80	-	-	-	-
-20°C DB	7.23	7.00	6.77	6.54	6.31	-	-	-
-15°C DB	8.06	7.80	7.54	7.28	7.02	6.76	-	-
-7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-4°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00

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

HU051MR U44 + HN091MR NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	6.42	6.95	7.49	7.85	8.39	8.75	9.11
20°C DB	6.05	6.37	6.70	6.91	7.23	7.45	7.66
30°C DB	5.68	5.79	5.90	5.97	6.08	6.15	6.22
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
40°C DB	5.32	5.34	5.35	5.37	5.38	5.40	5.41
45°C DB	5.13	5.17	5.21	5.23	5.27	5.29	5.32

HU071MR U44 + HN091MR NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C					
temperature		Capacity (kW)										
10°C DB	8.17	8.85	9.54	9.99	10.68	11.13	11.59					
20°C DB	7.70	8.11	8.52	8.80	9.21	9.48	9.75					
30°C DB	7.23	7.37	7.51	7.60	7.74	7.83	7.92					
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00					
40°C DB	6.77	6.79	6.81	6.83	6.85	6.87	6.88					
45°C DB	6.53	6.58	6.63	6.66	6.70	6.74	6.77					

HU091MR U44 + HN091MR NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	10.50	11.38	12.26	12.85	13.73	14.31	14.90
20°C DB	9.90	10.43	10.96	11.31	11.84	12.19	12.54
30°C DB	9.30	9.48	9.65	9.77	9.95	10.06	10.18
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
40°C DB	8.70	8.73	8.76	8.78	8.81	8.83	8.85
45°C DB	8.40	8.46	8.52	8.56	8.62	8.66	8.70

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.

PRODUCT SPECIFICATION

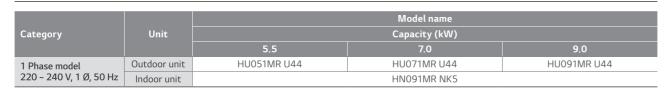
HYDROSPLIT

INTRODUCTION

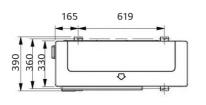
THERMA V FEATURES

MONOBLOC

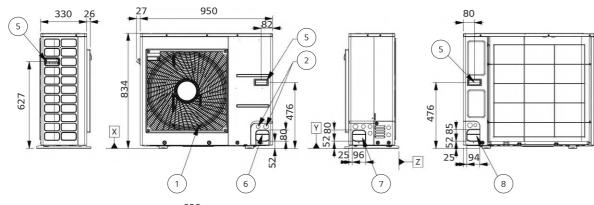


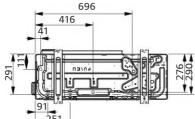


HU051MR U44 / HU071MR U44 / HU091MR U44





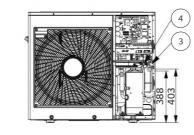




0		40
	- W	41

[Unit: mm]

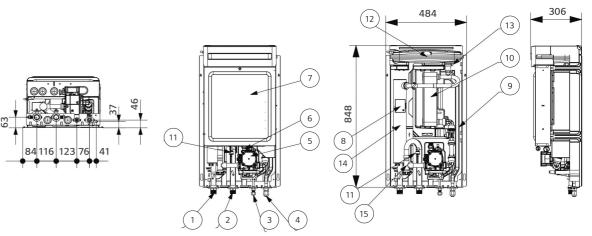
No.	Part name	Description
1	Air outlet	-
2	Power and communication cable hole	-
3	Gas pipe connection	Flare joint
4	Liquid pipe connection	Flare joint
5	Handle	-
6	Pipe routing hole (front)	-
7	Pipe routing hole (side)	-
8	Pipe routing hole (back)	-



External	Ŧ	490
	0	
	850	

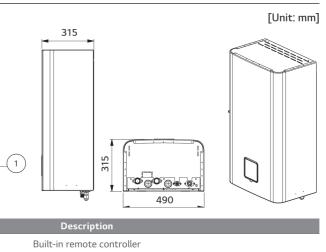
No.	Part name	
1	Control panel	

Internal



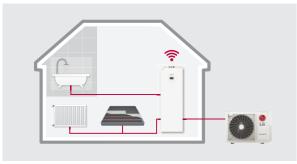
No.	Part name	Description
1	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Refrigerant pipe (liquid)	Ø 9.52 (mm)
4	Refrigerant pipe (gas)	Ø 15.88 (mm)
5	Water pump	To circulate water inside the system
6	Safety valve	Open at water pressure 3 bar
7	Control box	PCB and terminal blocks
8	Thermal switch	Cut-off power input to electric heater at 90°C
9	Flow sensor	To measure the water flow rate (5-80 LPM)
10	Plate heat exchanger	Heat exchange between refrigerant and water
11	Pressure sensor	To measure the water pressure (0-2 MPa)
12	Expansion tank	Absorbing volume change of heated water
13	Air vent	Air purging when charging water
14	Backup heater	6 kW
15	Strainer	Filtering and stacking particles inside circulating water

PRODUCT SPECIFICATION

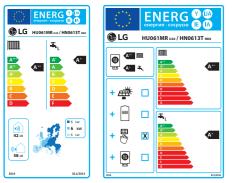




R32 SPLIT 4/6 kW IWT



Energy Label



Excellent performance & efficiency





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

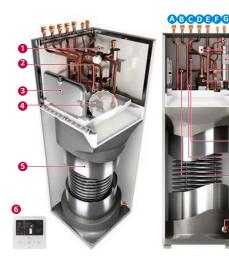
* 16 kW 3 Ø model. * A+++ to D scale

R32 Split IWT Introduction

LG Therma V Split IWT with an integrated indoor hot water tank – a domestic hot water supply, space heating and cooling solution - has reached a new era of innovation. A stainless steel water tank reduces the risk of corrosion, while an internal coil type heat exchanger contributes to higher efficiency. Compact and lightweight components allow quicker and easier installation, with various advanced control options providing for user convenience.

The outdoor unit is on offer in 4/6 kW and 5/7/9 kW capacity range and R32 Split 4/6 kW model is suitable for new build houses that are well insulated and require a small heating load.

Key Components



Components

- 1 Plate heat exchanger (ref. / water) 2 Straine 3 Expansion tank for heating (8 l)
- 4 Reserved space for DHW expansion tank
- **6** DHW storage tank (stainless steel, 200 l) **1** Heating circuit outlet pipe (female G1" *) with internal coil type heat exchanger
- (attached on front panel)
- Air vent valve
- Water flow sensor
- safety valve (water circuit, 3 bar)
- Water pressure sensor 13 Drain valve for water circuit
- 15 Drain valve for DHW tank

Connections

A DHW recirculation pipe (female G1" *) B Domestic hot water outlet pipe (female G1" *) C Domestic cold water inlet pipe (female G1" *)

* According to ISO 228-1 (parallel pipe threads) ** In case of Split 4/6 kW model, the adaptors provided

Ø 12.7 (1/2 inch) respectively.

with the outdoor unit must be separately installed on the

gas/liquid connection of the indoor unit when connecting

and gas connection size becomes Ø 6.35 (1/4 inch) and

the refrigerant pipe. After installing the adaptors, the liquid

- D Heating circuit inlet pipe (female G1" *)
- F Refrigerant liquid pipe (SAE 1/4" with connector **) G Refrigerant gas pipe (SAE 1/2" with connector **)
- 6 Standard III remote controller
- 8 3 Way diverting valve (DC)
- 9 Electric back-up heater (3 kW)
- Main water pump with air vent and
- 14 Safety valve (DHW tank, 10 bar)

saving solution for residential application thanks

to its fully integrated hot water tank. Unlike in the case of typical separate installation, in this all-inone solution hydronic components and Domestic Hot Water (DHW) are pre-wired, which requires reduced installation time and saves valuable living space. Therma V R32 Split IWT is easy to set up and operate while it demonstrates outstanding reliability and efficiency.

Therma V R32 Split IWT is the perfect space-



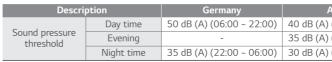
Small Refrigerant Amount - free from minimum floor area requirements due to R32 refrigerant

Minimum floor space requirements do not apply to R32 Split 4/6 kW, as the maximum refrigerant amount (including 30 m pipes) used in the product is smaller than the minimum set by regulation. As a result, there are more opportunities for flexible design and installation



Reduced Noise Level

The R32 Split outdoor unit can be installed at the minimum of 4.5 m away¹⁾ from neighboring houses while complying with noise-related requirements in most European countries, including Germany. (based on 4 kW ODU & low noise mode)





1) Minimum distance to be away from a neighboring property may vary depending on installation conditions and noise regulations in individual countries 2) Sound pressure level is converted from sound power level of low noise mode based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2.





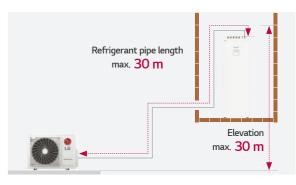


All-in-One Solution: Integrated Water Tank Type



Conventiona

LG Therma V R32 Split IWT (less installation space required)



Austria	Switzerland	Netherlands
(06:00 ~ 19:00)	40 dB (A) (07:00 ~ 19:00)	45 dB (A) (07:00 ~ 19:00)
(19:00 ~ 22:00)	-	-
(22:00 ~ 06:00)	35 dB (A) (19:00 ~ 07:00)	40 dB (A) (19:00 ~ 07:00)

Sound pressure level²⁾ as per distance from the unit

ACCESSORIES



R32 Split 4/6 kW IWT

Indoor unit HN0613T NK0 Outdoor unit HU041MR U20 HU061MR U20

Black Fin ThinQ



* Keymark, Eurovent, MCS and EHPA label under development

Features

R32

- Answers the needs of new build houses with good insulation
 Innovative design & technology and a small heating demand
- Demonstrates a lower noise level (sound pressure level at 3 m : 39 dB (A) for 4 kW / 40 dB (A) for 6 kW)

All-in-one integration

- Quick and easy installation
- DHW tank and hydronic component integration
- Integrated 3 kW backup heater and expansion tank for heating (8 ℓ)

Enhanced installation flexibility

- Free from minimum floor area requirements due to R32 refrigerant
- (max. refrigerant amount (including 30 m pipes) < 1.842 kg)
- Light weight and compact size
- Max. 30 m refrigerant piping

High efficiency & operational range

- SCOP up to 4.65 / 3.23 (low temp. / mid temp. application): A*** / A**
- Water heating efficiency 133 % (4,6 kW, profile L): A*
- COP up to 5.10 (outdoor air 7°C / leaving water 35°C)
- Operation range (ambient: -20 ~ 35°C / water side: 15 ~ 55°C)

- Duplex stainless steel water tank (200 ℓ)
- Durable stainless steel: no need to install an anode and replace it on a regular basis in the case of a magnesium anode, or no electricity consumption in the case of an impressed current anode.



Internal coil type heat exchanger

- Built-in water flow and pressure sensors to monitor the water circuit in real time
- PWM-pump with option to control by ΔT
- Energy monitoring of estimated power consumption

Control & connectivity

- LG ThinQ Wi-Fi control and monitoring solution
- PV / ESS or smart grid connectivity
- Modbus connectivity without a gateway
- Schedule-based control logic for DHW recirculation pump
- Enhanced 2nd circuit control logic

Seasonal energy

Description	Description		Outdoor unit	HU041MR U20	HU061MR U20
Description			Indoor unit	ndoor unit HN0613T NK0	
Average		SCOP	-	4.65	4.65
Space	climate water	Seasonal space heating efficiency (ηs)	%	183	183
heating	outlet 35°C	Seasonal space Heating eff. class	-	A+++	A+++
(according	Average	SCOP	-	3.23	3.23
to EN14825)	climate water	Seasonal space heating efficiency (ηs)	%	126	126
	outlet 55°C	Seasonal space heating eff. class	-	A++	A++
	Average climate	Declared load profile	-	L	L
		Water heating efficiency (η _{WH})	%	133	133
		COP _{DHW}	-	3.15	3.15
		Water heating eff. class	-	A+	A+
Domestic		Declared load profile	-	L	L
hot water	Warmer	Water heating efficiency (ŋwɨ)	%	160	160
efficiency (according	climate	COP _{DHW}	-	3.69	3.69
to EN16147)		Water heating eff. class	-	A++	A++
		Declared load profile	-	L	L
	Colder	Water heating efficiency (η_{WH})	%	110	110
	climate	COP _{DHW}	-	2.54	2.54
		Water heating eff. class	-	А	А

Nominal capacity and nominal power input

Technical specification		OAT ¹⁾	LWT ²⁾	Outdoor unit	HU041MR U20	HU061MR U20
				Indoor unit	N0613	ST NKO
		7℃	35°C	kW	4.00	6.00
	Unation	7°C	55°C	kW	3.70	4.60
Nie wie of an endine	Heating	2°C	35°C	kW	3.60	4.80
Nominal capacity		-7°C	35°C	kW	4.00	6.00
	Caeling	35°C	18°C	kW	4.00	6.00
	Cooling	35°C	7°C	kW	4.00	6.00
	Heating	7℃	35°C	kW	0.78	1.21
		7°C	55°C	kW	1.30	1.59
Newinel neuron innut		2°C	35°C	kW	0.96	1.32
Nominal power input		-7°C	35°C	kW	1.30	2.01
	Cooling	35°C	18°C	kW	0.83	1.25
		35°C	7°C	kW	1.18	1.88
		7℃	35°C	W/W	5.10	4.95
COD	Unation	7°C	55°C	W/W	2.85	2.90
COP	Heating	2°C	35°C	W/W	3.75	3.65
		-7°C	35°C	W/W	3.08	2.98
	Caeling	35°C	18°C	W/W	4.80	4.80
EER	Cooling	35°C	7°C	W/W	3.40	3.20

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

Model line-up

Category	Unit	Model Capacit		
		4.0	6.0	
1 Phase model	Outdoor unit	HU041MR U20	HU061MR U20	
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit	HN0613T NK0		



PRODUCT SPECIFICATION

\leq	2
ē	5
\geq	2
C)
α	J
Γ	ζ.
F	<
٤.	1



R32 Split 4/6 kW IWT

Product specification (outdoor unit)

Technical specification			Unit	HU041MR U20	HU061MR U20	
Operation range	Heating Cooling Min. ~ Max.		°C DB	-20 ~ 35		
(outdoor temp.)			CDB	5~4	18	
Compressor	Туре		-	Hermetic seale	d twin rotary	
	Туре		-	R32	2	
Defrigerent	GWP (Global Warm	ing Potential)	-	675	5	
Refrigerant	Precharged amount		g	1,10	0	
	t-CO ₂ eq		-	0.74	3	
	Outer diameter	Liquid	mm (inch)	Ø 6.35	(1/4)	
	Outer ulameter	Gas	mm (inch)	Ø 12.7	(1/2)	
	Length	Standard	m	5		
Piping connections	Lengen	Max.	m	30		
	Level difference	Max.	m	30		
	Chargeless-pipe length		m	10		
	Additional charging	volume	g/m	20		
Rated water flow rate (at LWT	35°C)		ℓ/min	11.5	17.3	
Sound power level	Heating	Rated	dB(A)	57	58	
Sound pressure level (at 1 m)	Heating	Rated	dB(A)	49	50	
Dimensions	Unit	WxHxD	mm	870 × 650) × 330	
Weight	Unit		kg	44.	7	
Exterior	Color / RAL code		-	Warm gray /	RAL 7044	
	Voltage, phase, freq	uency	V, Ø, Hz	220-240	, 1, 50	
Power supply	Rated	Heating	A	3.5	5.6	
rower supply	running current	Cooling	A	3.7	5.4	
	Recommended circ	uit breaker	A	16	20	
Wiring connections	Power supply cable	(included earth, H07RN-F)	mm ² x cores	2.5 x	3 C	

Product specification (indoor unit)

Technical specificati	on		Unit	HN0613T NK0
Operation range	Heating			15 ~ 55
(Leaving water	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾
temperature)	DHW	-		15 ~ 80 ²⁾
	Volume		l	200
Domestic hot water tank	Material		-	Duplex stainless steel
	Internal thermal protect lin	nit	°C	85
Flow sensor	Measuring range	Min. ~ Max.	LPM	5 ~ 80
Vater pressure sensor	Measuring range	Min. ~ Max.	bar (G)	0 ~ 20
Expansion vessel Theating circuit)	sel Volume		l	8
Safety valve	Heating circuit	Upper limit	bar	3
Salety valve	DHW circuit	Upper limit	bar	10
	Refrigerant circuit	Liquid (outside diameter)	mm (inch)	Ø 6.35 (1/4) ³⁾
	Refrigerant circuit	Gas (outside diameter)	mm (inch)	Ø 12.7 (1/2) ³⁾
	Water circuit	Inlet	inch	Female G1" according to ISO228-1 (parallel pipe threads)
Piping connections		Outlet	inch	
	DHW tank water circuit	Cold inlet	inch	
		Hot outlet	inch	Female G1" according to ISO228-1 (parallel pipe threads)
		Recirculation	inch	
Sound power level	Heating	Rated	dB(A)	42
Dimensions	Unit	W×H×D	mm	600 × 1,750 × 660
Weight	Unit		kg	118
Exterior	Color / RAL code		-	Noble white / RAL 9016
Wiring connections	Power and communication of	cable (included earth, H07RN-F)	mm ² x cores	0.75 x 4 C
	Туре		-	Sheath
	No. of heating coil		EA	2
	Capacity combination		kW	3
Electric heater	Heating step		Step	1
	Power supply		V, Ø, Hz	220-240, 1, 50
	Wiring connections power sup	ply cable (included earth, H07RN-F)	mm ² x cores	2.5 x 3 C
	Rated current		A	13

When a fan coil unit is not used.
 DHW 50 ~ 80°C operating is available only when the booster heater is operating.
 When connecting the refrigerant pipe, the adaptors provided with the outdoor unit must be installed on the connection of the indoor unit.

- 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 EN12102-1 under conditions. Above gives the declared values at rated conditions acc. ErP regulation

 Nated running current: outdoor Temp. 7°C DB / 6°C WB, LWT 35°C
 Interconnected pipe length is standard length and difference of elevation (outdoor ~ indoor unit) is 0 m.

 5. This product contains fluorinated greenhouse gases.
 6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).







Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU041MR U20 + HN0613T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	
temperature	Capacity (kW)						
-20°C DB	4.00	4.00	4.00	4.00	-	-	
-15°C DB	4.00	4.00	4.00	4.00	4.00	-	
-7°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
-4°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
-2°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
2°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
7°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
10°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
15°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
18°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
20°C DB	4.00	4.00	4.00	4.00	4.00	4.00	
35°C DB	4.00	4.00	4.00	4.00	4.00	4.00	

HU061MR U20 + HN0613T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C		
temperature		Capacity (kW)						
-20°C DB	4.92	4.78	4.64	4.50	-	-		
-15°C DB	5.56	5.52	5.48	5.44	5.40	-		
-7°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
-4°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
-2°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
2°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
7°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
10°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
15°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
18°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
20°C DB	6.00	6.00	6.00	6.00	6.00	6.00		
35°C DB	6.00	6.00	6.00	6.00	6.00	6.00		

Performance Table for Cooling Operation

Maximum cooling capacity

HU041MR U20 + HN0613T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
20°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
30°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
35°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
40°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00
45°C DB	4.00	4.00	4.00	4.00	4.00	4.00	4.00

HU061MR U20 + HN0613T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
20°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
30°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
35°C DB	6.00	6.00	6.00	6.00	6.00	6.00	6.00
40°C DB	5.74	5.81	5.87	5.91	6.00	6.00	6.00
45°C DB	5.48	5.61	5.73	5.81	5.94	6.00	6.00

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 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.

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 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.

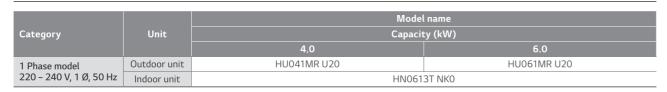
4. The shaded areas are not guaranteed continuous operation.

PRODUCT SPECIFICATION

INTRODUCTION

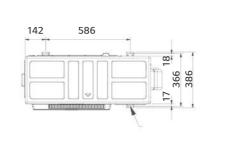
THERMA V FEATURES



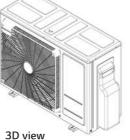


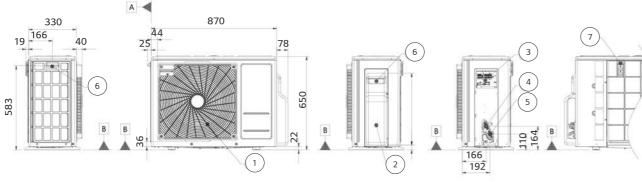
HU041MR U20 / HU061MR U20

[Unit: mm]

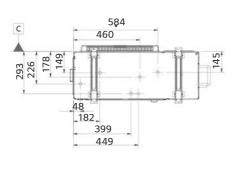


N

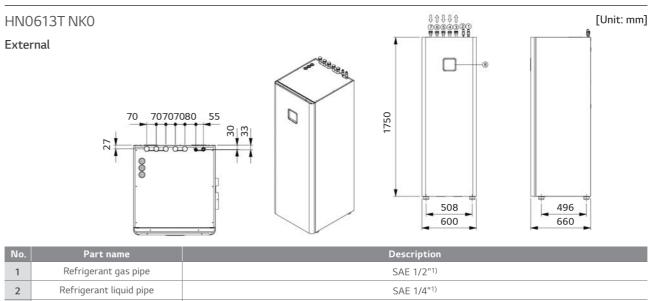






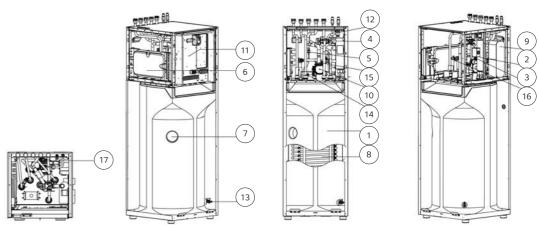


No.	Part name	Description
1	Air outlet	-
2	Control cover & SVC valve cover	-
3	Power and communication cable connection	-
4	Gas pipe connection	Flare joint
5	Liquid pipe connection	Flare joint
6	Handle	-
7	Intake air temperature sensor cover	-



No.	Part name	
1	Refrigerant gas pipe	
2	Refrigerant liquid pipe	
3	Heating circuit outlet pipe	
4	Heating circuit inlet pipe	
5	Domestic cold water inlet pipe	Female G
6	Domestic cold water outlet pipe	
7	DHW re-circulation pipe	
8	Control panel	

1) When connecting the refrigerant pipe, the adaptors provided with the outdoor unit must be installed on the connection of the indoor units.



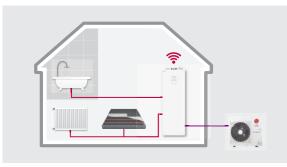
No.	Part name	Description	No.	Part name	Description
1	DHW tank	Domestic hot water tank (200 ℓ)	10	Water pump	Main circulation pump
2	Heater	Electric heater (3 kW)	11	Control box	PCB'A and terminal blocks
3	Flow sensor	Flow metering sensor	12	Air vent	For air purging
4	3 way valve	For DHW / heating	13	Drain cock 1	Valve for DHW tank drain
5	Pressure sensor	Pressure sensor	14	Drain cock 2	Valve for water circuit drain
6	Expansion vessel	8ℓ for Heating circuit	15	Strainer	For water circuit
7	DHW tank sensor	Temperature sensor	16	Safety valve	For DHW (10 bar)
8	Heat exchanger 1	Coil heat exchange (water / DHW)	17	Safety valve	For water circuit (3 bar)
9	Heat exchanger 2	Plate heat exchange (ref. / Water)			·

PRODUCT SPECIFICATION

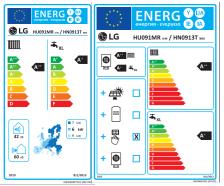
G1" according to ISO228-1 (parallel pipe threads)

Built-in remote controller

R32 SPLIT 5/7/9 kW IWT



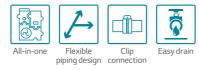
Energy Label



Excellent performance & efficiency



Easy Installation & Maintenance



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

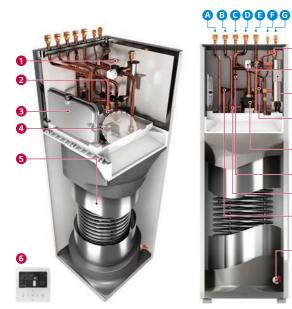
* 9 kW 1 Ø model * A+++ to D scale

R32 Split IWT Introduction

LG Therma V Split IWT with an integrated indoor hot water tank – a domestic hot water supply, space heating and cooling solution - has reached a new era of innovation. A stainless steel water tank reduces the risk of corrosion, while an internal coil type heat exchanger contributes to higher efficiency. Compact and lightweight components allow quicker and easier installation, with various advanced control options providing for user convenience.

The outdoor unit is on offer in 4/6 kW and 5/7/9 kW capacity range and R32 Split 5/7/9 kW model is suitable for both new build and renovation projects.

Key Components



Components

- 1 Plate heat exchanger (ref. / water)
- 2 Strainer 3 Expansion tank for heating (8 l)
- 4 Reserved space for DHW expansion tank
- 5 DHW storage tank (stainless steel, 200 l) with internal
- coil type heat exchangerStandard III remote controller (attached on front panel)
- Air vent valve
- **8** 3 way diverting valve (DC)
- 9 Electric back-up heater (3 kW)
- 10 Water flow sensor
- (1) Main water pump with air vent and safety valve (water circuit, 3 bar)
- Water pressure sensor
- 13 Drain valve for water circuit
- A Safety valve (DHW tank, 10 bar)
- 15 Drain valve for DHW tank

Connections

OHW recirculation pipe (female G1" *) B Domestic hot water outlet pipe (female G1" *) C Domestic cold water inlet pipe (female G1" *) D Heating circuit inlet pipe (female G1" *) • Heating circuit outlet pipe (female G1"'*) Refrigerant liquid pipe (SAE 3/8") **G** Refrigerant gas pipe (SAE 5/8")

* According to ISO 228-1 (parallel pipe threads)

All-in-One Solution: Integrated Water Tank Type

Therma V R32 Split IWT is the perfect spacesaving solution for residential application thanks to its fully integrated hot water tank. Unlike in the case of typical separate installation, in this all-inone solution hydronic components and Domestic Hot Water (DHW) are pre-wired, which requires reduced installation time and saves valuable living space. Therma V R32 Split IWT is easy to set up and operate while it demonstrates outstanding reliability and efficiency.



Energy States Interlock

Therma V R32 Split IWT provides an energy state interlock function enabling customers to use their own renewable energy as much as possible. It can shift set points depending on input signal from the Energy Storage System (ESS) or any other thirdparty device using Modbus or Digital 230 V inputs.

Ø

Grid

Electricity

1) Energy is generated from solar panels and sent to your battery

- 2) Once the battery is fully charged, the surplus energy from the ESS will heat the water tank. The user gets to monitor the status with the LG ThinQ app.
- 3) Once the water is heated, the user can choose to sell surplus energy to the grid.

Easy Draining System

It is convenient for maintenance or moving as the water inside can be easily drained through the built-in drain valve.

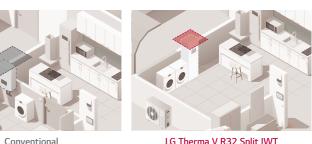




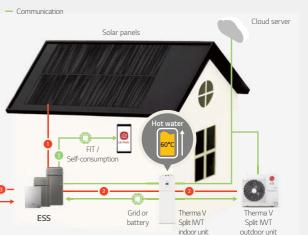








LG Therma V R32 Split IWT (less installation space required)



DHW Recirculation Pump Control

Therma V can be connected to the DHW recirculation pump, which can then be managed via the scheduling function. When a user opens the faucet, hot water is immediately accessible thanks to the DHW recirculating function. This feature also has the added advantage of preventing Legionella growth in the hot water pipe.



THERMAV. (R32) SPLIT 5/7/9 kW IWT

R32 Split IWT (Integrated Water Tank)

Indoor unit HN0913T NK0 Outdoor unit HU051MR U44 HU071MR U44 HU091MR U44



(:;;;;) 🗱 😭



P R32 011-1W0526 EHPA (for Austria and

Features

All-in-one integration

- Quick and easy installation
- DHW tank and hydronic component integration
- Integrated 3 kW backup heater and expansion tank for heating (8 ℓ)

Enhanced installation flexibility

- Refrigerant pipes connect IDU & ODU
- Light weight and compact size indoor unit
- Max. 50 m refrigerant piping and 3-way piping connection availability

High efficiency & wide operational range

• R32 Refrigerant with low GWP

Model line-up

- SCOP up to 4.65 / 3.23 (low temp. / mid temp. application): A*** / A**
- Water heating efficiency 133 % (5,7 kW, profile L) / 140 % (9 kW, profile XL): A*
- COP up to 4.90 (outdoor air 7°C / leaving water 35°C)
- Operation range (ambient: -25 ~ 35°C / water side: 15 ~ 65°C)

Innovative design & technology

R1Compressor[™] Black Fin ThinQ

• Duplex stainless steel water tank (200 ℓ) - Durable stainless steel: no need to install an anode and replace it on a regular basis in the case of a magnesium anode, or no electricity consumption in the case of an impressed current anode.



Internal coil type heat exchanger

- Built-in water flow and pressure sensors to monitor the water circuit in real time
- PWM-pump with option to control by ΔT
- Energy monitoring of estimated power consumption

Control & connectivity

- LG ThinQ Wi-Fi control and monitoring solution
- PV / ESS or smart grid connectivity
- Modbus connectivity without a gateway
- Schedule-based control logic for DHW recirculation pump
- Enhanced 2nd circuit control logic

	Unit	Model name					
Category		Capacity (kW)					
		5.0	7.0	9.0			
1 Phase model	Outdoor unit	HU051MR U44	HU071MR U44	HU091MR U44			
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit	HN0913T NK0					

Seasonal energy

Description			Outdoor unit	HU051MR U44	HU071MR U44	HU091MR U44		
Description			Indoor unit		HN0913T NK0			
	Average	SCOP	-	4.65	4.65	4.65		
Space	climate water	Seasonal space heating efficiency (ηs)	%	183	183	183		
heating	outlet 35°C	Seasonal space heating eff. Class	-	A+++	A+++	A+++		
(according	Average	SCOP	-	3.23	3.23	3.23		
to EN14825)	climate water	Seasonal space heating efficiency (ηs)	%	126	126	126		
	outlet 55°C	Seasonal space heating eff. class	-	A++	A++	A++		
	Average climate	Declared load profile	-	L	L	XL		
		Water heating efficiency (η_{WH})	%	133	133	140		
		COP _{DHW}	-	3.15	3.15	3.40		
		Water heating eff. class	-	A+	A+	A+		
Domestic		Declared load profile	-	L	L	XL		
hot water efficiency	Warmer	Water heating efficiency (η_{WH})	%	160	160	170		
(according	climate	COP _{DHW}	-	3.69	3.69	4.10		
to EN16147)		Water heating eff. class	-	A++	A++	A++		
		Declared load profile	-	L	L	XL		
	Colder	Water heating efficiency (η_{WH})	%	110	110	115		
	climate	COP _{DHW}	-	2.54	2.54	2.65		
		Water heating eff. class	-	A	A	A		

Nominal capacity and nominal power input

Description			LWT ²⁾ (DB)	Outdoor unit	HU051MR U44	HU071MR U44	HU091MR U44	
				Indoor unit		HN0913T NK0		
		7°C	35°C		5.50	7.00	9.00	
	Heating	7°C	55°C		5.50	5.50	5.50	
Nominal capacity		2°C	35°C	kW	3.30	4.20	5.40	
	Casling	35°C	18°C		5.50	7.00	9.00	
	Cooling	35°C	7°C		5.50	7.00	9.00	
		7°C	35°C	kW	1.12	1.43	1.94	
	Heating	7°C	55°C		2.04	2.04	2.04	
Nominal power input		2°C	35°C		0.94	1.20	1.54	
power input	Calling	35°C	18°C		1.20	1.56	2.14	
	Cooling	35°C	7°C		1.96	2.59	3.46	
		7°C	35°C		4.90	4.90	4.65	
COP	Heating	7°C	55°C	W/W	2.70	2.70	2.70	
		2°C	35°C		3.52	3.51	3.50	
FED	Casting	35°C	18°C	W/W	4.60	4.50	4.20	
EER	Cooling	35°C	7°C		2.80	2.70	2.60	

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

PRODUCT SPECIFICATION

WATER HEATER

THERMAV. (R32) SPLIT 5/7/9 kW IWT

R32 Split 5/7/9 kW IWT (Integrated Water Tank)

Product specification (outdoor unit)

Technical specification			Unit	HU051MR U44	HU071MR U44	HU091MR U44		
Operation range	Heating		0C DD		-25 ~ 35			
(outdoor temp.)	Cooling	Min. ~ Max.	°C DB		5 ~ 48			
Compressor	Туре		-		Hermetic sealed scroll			
· ·	Туре		-	R32				
Defrigerent	GWP (Global Warmin	ng Potential)	-		675			
Refrigerant	Precharged amount		g		1,500			
	t-CO ₂ eq		-		1.013			
	Outer diameter	Liquid	mm (inch)		Ø 9.52 (3/8)			
	Outer diameter	Gas	mm (inch)	Ø 15.88 (5/8)				
	Length	Standard	m	5				
Piping connections		Max.	m	50				
	Level difference	Max.	m		30			
	Chargeless-pipe leng		m		10			
	Additional charging v	volume	g/m	40				
Rated water flow rate (at LWT	35°C)		ℓ/min	15.8	20.1	25.9		
Sound power level	Heating	Rated	dB(A)		60			
Sound pressure level (at 1 m)	Heating	Rated	dB(A)		52			
Dimensions	Unit	W×H×D	mm		950 × 834 × 330			
Weight	Unit		kg		60.0			
Exterior	Color / RAL code		-		Warm gray / RAL 7044			
	Voltage, phase, frequ	iency	V, Ø, Hz		220-240, 1, 50			
Power supply	Rated	Heating	A	5.0	6.3	8.6		
rower supply	running current	Cooling	A	5.3	6.9	9.5		
	Recommended circui		A	20	25	30		
Wiring connections	Power supply cable (i	ncluded earth, H07RN-F)	mm ² x cores		4.0 x 3 C			

Product specification (indoor unit)

Technical specificati	on		Unit	HN0913T NK0
Operation range	Heating			15 ~ 65
(leaving water	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾
temperature)	DHW	1	-	15 ~ 80 ²⁾
	Volume	1	l	200
Domestic hot water tank	Material		-	Duplex stainless steel
	Internal thermal protect lin	iit	°C	85
Flow sensor	Measuring range	Min. ~ Max.	LPM	5 ~ 80
Water pressure sensor	Measuring range	Min. ~ Max.	bar (G)	0 ~ 20
Expansion vessel (heating circuit)	volume			8
	Heating circuit	Upper limit	bar	3
Safety valve	DHW circuit	Upper limit	bar	10
	Liquid (outside diameter)		mm (inch)	Ø 9.52 (3/8)
	Refrigerant circuit	Gas (outside diameter)	mm (inch)	Ø 15.88 (5/8)
Piping connections	Water circuit	Inlet	inch	Female G1" according to ISO228-1 (parallel pipe threads)
- iping connections		Outlet Cold inlet	inch inch	· · · · · · · · · · · · · · · · · · ·
	DHW tank water circuit	Hot outlet	inch	Female G1" according to ISO228-1 (parallel pipe threads)
		Recirculation	inch	· ····································
Sound power level	Heating	Rated	dB(A)	42
Dimensions	Unit	W×H×D	mm	600 × 1,750 × 660
Weight	Unit		kg	118
Exterior	Color / RAL code		-	White / RAL 9016
Wiring connections	Power and communication of	able (included earth, H07RN-F)	mm ² x cores	0.75 x 4 C
	Туре		-	Sheath
	No. of heating coil		EA	2
	Capacity combination		kW	3
Electric heater	Heating step		Step	1
	Power supply		V, Ø, Hz	220-240, 1, 50
	Wiring connections power sup	oly cable (included earth, H07RN-F)	mm ² x cores	2.5 x 3 C
	Rated current		A	13.0

When a fan coil unit is not used.
 DHW 55 - 80°C operating is available only when the electric heater is operating.

Note

Note

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.
Especially the power cable and circuit breaker should be selected in accordance with htat.
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 condition of EN14825.
Performances are in accordance with EN14212-1 under condition of EN14825.
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°CWB, LWT 35°C
Interconnected pipe length is standard length and difference of elevation (outdoor ~ indoor unit) is 0 m.
This product contains fluorinated greenhouse gases.
All installation sites must be equipped with an earth leakage circuit breaker (ELCB).



PRODUCT SPECIFICATION

THERMA V FEATURES

MONOBLOC

HYDROSPLIT

SPLIT

WATER HEATER

ACCESSORIES

THERMAV. (R32) SPLIT 5/7/9 kW IWT

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU051MR U44 + HN0913T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C			
temperature	Capacity (kW)										
-25°C DB	4.02	3.90	3.78	3.66	-	-	-	-			
-20°C DB	4.64	4.51	4.38	4.26	4.13	-	-	-			
-15°C DB	5.26	5.12	4.99	4.85	4.72	4.58	-	-			
-7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-			
-4°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-			
-2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-			
2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50			
7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50			
10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50			
15°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50			
18°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50			
20°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50			
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50			

HU071MR U44 + HN0913T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C		
temperature	Capacity (kW)									
-25°C DB	6.40	6.20	6.00	5.80	-	-	-	-		
-20°C DB	7.23	7.00	6.77	6.54	6.31	-	-	-		
-15°C DB	8.06	7.80	7.54	7.28	7.02	7.10	-	-		
-7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	8.60	-		
-4°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-		
-2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-		
2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00		
7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00		
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00		
15°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00		
18°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00		
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00		
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	7.95		

HU091MR U44 + HN0913T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C	
temperature	Capacity (kW)								
-25°C DB	6.40	6.20	6.00	5.80	-	-	-	-	
-20°C DB	7.23	7.00	6.77	6.54	6.31	-	-	-	
-15°C DB	8.06	7.80	7.54	7.28	7.02	7.10	-	-	
-7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	8.60	-	
-4°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-	
-2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-	
2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
15°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
18°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	7.95	

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

HU051MR U44 + HN0913T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
20°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
30°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
40°C DB	5.32	5.34	5.35	5.37	5.38	5.40	5.41
45°C DB	5.13	5.17	5.21	5.23	5.27	5.29	5.32

HU071MR U44 + HN0913T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature				Capacity (kW)			
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
30°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
40°C DB	6.50	6.63	6.81	7.00	7.00	7.00	7.00
45°C DB	6.43	6.48	6.63	6.66	6.70	6.74	6.77

HU091MR U44 + HN0913T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature Capacity (k			Capacity (kW)				
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
30°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
40°C DB	8.10	8.10	8.70	9.00	9.00	9.00	9.00
45°C DB	7.50	7.70	7.80	7.90	8.00	8.10	8.20

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.

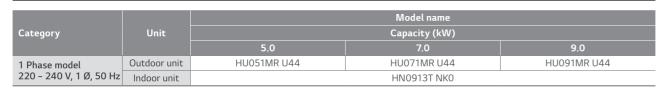
• The rating might slightly vary depending on test standards or countries.

4. The shaded areas are not guaranteed continuous operation.

PRODUCT SPECIFICATION

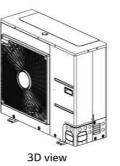
INTRODUCTION

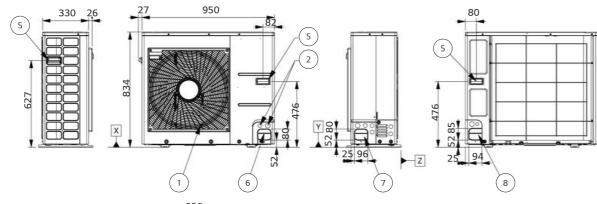


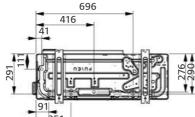


HU051MR U44 / HU071MR U44 / HU091MR U44

165 619 IT 360 , 1 1



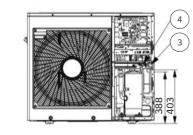




0		40
	7 IN	41
	0	

[Unit: mm]

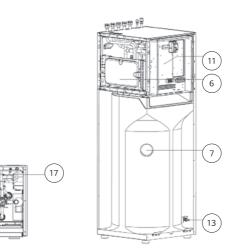
No.	Part name	Description
1	Air outlet	-
2	Power and communication cable hole	-
3	Gas pipe connection	Flare joint
4	Liquid pipe connection	Flare joint
5	Handle	-
6	Pipe routing hole (front)	-
7	Pipe routing hole (side) -	
8	Pipe routing hole (back) -	



HN(0913T NKO	
Exte	rnal	
		0.0000 ***
		8
		·
No.	Part name	
1	Refrigerant gas pipe	
2	Refrigerant liquid pipe	

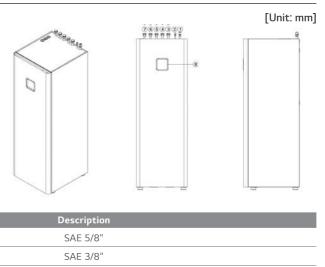
	i al e fiance	
1	Refrigerant gas pipe	
2	Refrigerant liquid pipe	
3	Heating circuit outlet pipe	
4	Heating circuit inlet pipe	
5	Domestic cold water inlet pipe	Female G
6	Domestic cold water outlet pipe	
7	DHW re-circulation pipe	
8	Control panel	

Internal



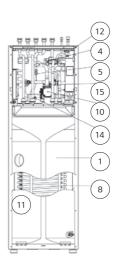
No.	Part name	Description	
1	DHW tank	Domestic hot water tank (200 ℓ)	
2	Heater	Electric heater (3 kW)	
3	Flow sensor	Flow metering sensor	
4	3 way valve	For DHW / heating	
5	Pressure sensor	Pressure sensor	
6	Expansion vessel	8 ℓ for heating circuit	
7	DHW tank sensor	Temperature sensor	
8	Heat exchanger 1	Coil heat exchange (water / DHW)	
9	Heat exchanger 2	Plate heat exchange (ref. / water)	

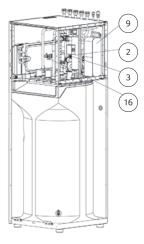
PRODUCT SPECIFICATION



G1" according to ISO228-1 (parallel pipe threads)







No.	Part name	Description
10	Water pump	Main circulation pump
11	Control box	PCB'A and terminal blocks
12	Air vent	For air purging
13	Drain cock 1	Valve for DHW tank drain
14	Drain cock 2	Valve for water circuit drain
15	Strainer	For water circuit
16	Safety valve	For DHW (10 bar)
17	Safety valve	For water circuit (3 bar)

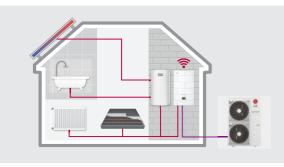




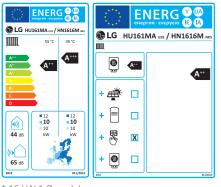


R410A SPLIT HYDRO BOX

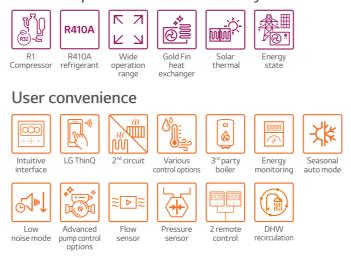
R410A SPLIT HYDRO BOX



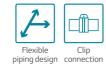
Energy Label



Excellent performance & efficiency



Easy installation & maintenance



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

* 16 kW 1 Ø model. * A+++ to D scale.

R410A Split Hydro Box Introduction

The LG Therma V R410A Split Hydro Box is a hydro box type comprising a separate indoor and outdoor unit, which are connected by refrigerant piping. Hydronic components such as a plate heat exchanger, an expansion tank and a water pump are located within the indoor unit, making the unit capable of withstanding freezing outside ambient temperatures.

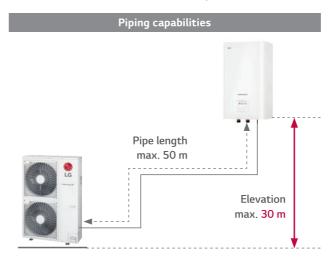
Key Components





Flexible Refrigerant Piping Design

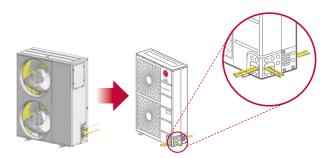
Installation flexibility is enabled by Therma V Split's long pipe length (up to 50 m) and the fact that the refrigerant piping can be connected in three directions: front, side and rear.





3 way piping

• Neat & easy installation enabled by the three-way piping.





Indoor unit

-

%

-

-

%

-

4.65

183

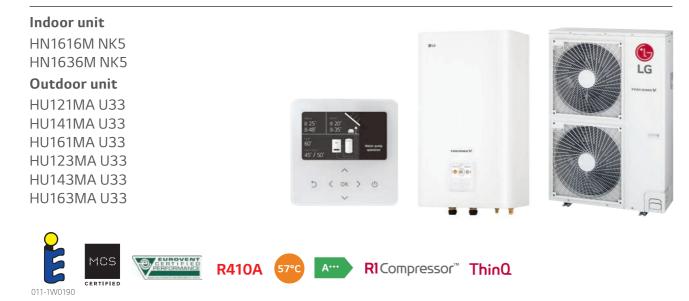
A+++

3.36

131

A++

R410A Split Hydro Box



Features

- Refrigerant pipes connect IDU & ODU
- SCOP up to 4.65 (average climate / low temp. application): A***
- SCOP up to 3.37 (average climate / mid temp. application):
- COP up to 4.55 (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 ~ 57°C) • Built-in water flow & pressure sensors to monitor real-time water circuit
- R1 Compressor
- Gold Fin heat exchanger
- LG ThinQ
- Keymark / MCS / Eurovent certification
- * EHPA label under development

Model line-up

			Model name				
Category	Unit	Capacity (kW)					
		12.0	14.0	16.0			
1 Phase model	Outdoor unit	HU121MA U33	HU141MA U33	HU161MA U33			
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit		HN1616M NK5				
3 Phase model	Outdoor unit	HU123MA U33	HU143MA U33	HU163MA U33			
380 ~ 415 V, 3 Ø, 50 Hz	Indoor unit		HN1636M NK5				

Seasonal energy

* *

Description		
	Average	SCOP
Space	climate water outlet 35°C Average climate water	Seasonal space heating efficiency (η_s)
heating		Seasonal space heating eff. class (A+++ to D scale)
(according		SCOP
to EN14825)		Seasonal space heating efficiency (η_s)
	outlet 55°C	Seasonal space heating eff. class (A+++ to D scale)

Nominal capacity and nominal power input

Description		LWT ²⁾ (DB)	Outdoor unit	HU1211 HU123	
Description			Indoor unit		
		7°C	35°C		
	Heating	7°C	55°C		
Nominal capacity		2°C	35°C	kW	
	Cooling	35°C	18°C	-	
	Cooling	35°C	7°C		
		7°C	35°C	kW	
	Heating	7°C	55°C		
Nominal power input		2°C	35°C		
power input	Cooling	35°C	18°C		
	Cooling	35°C	7°C		
		7°C	35°C		
COP	Heating	7°C	55°C	W/W	
		2°C	35°C		
EER	Cooling	35°C	18°C	W/W	
LEN	cooling	35°C	7°C	00700	

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

PRODUCT SPECIFICATION

HU121MA U33 (1 Ø) HU141MA U33 (1 Ø) HU161MA U33 (1 Ø)

HU123MA U33 (3 Ø) HU143MA U33 (3 Ø) HU163MA U33 (3 Ø)

HN1616M NK5 (1 Ø)

HN1636M NK5 (3Ø)

4.61

182

A+++

3.37

132

A++

4.56

179

A+++

3.32

130

A++

_	ī.
ㅈ	J
C)
C	7
C)
=	1
C	5
Ξ	5

ļ	\leq	2	
(С)	
ŝ	2	2	
(C	5	
ţ	ū	Ĵ	
I		-	
(С)	
(r	2	

HYDROSPLIT

SPLIT

ut		
HU121MA U33 (1 Ø)	HU141MA U33 (1 Ø)	HU161MA U33 (1 Ø)
HU123MA U33 (3 Ø)	HU143MA U33 (3 Ø)	HU163MA U33 (3 Ø)
	HN1616M NK5 (1 Ø)	
	HN1636M NK5 (3 Ø)	
12.00	14.00	16.00
11.00	11.50	12.00
11.00	12.00	13.80
10.40	12.00	13.00
7.94	8.50	8.92
2.64	3.17	3.76
4.31	4.51	4.71
3.04	3.32	3.83
2.60	3.08	3.60
2.66	3.02	2.53
4.55	4.41	4.26
2.55	2.55	2.55
3.62	3.61	3.60
4.00	3.90	3.61
2.98	2.81	3.53

145

THERMAV. (R410A) SPLIT HYDRO BOX

R410A Split Hydro Box

Product specification (outdoor unit)

Technical specifi	cation		Unit	HU121MA U33	HU141MA U33	HU161MA U33	HU123MA U33	HU143MA U33	HU163MA U33
Operation range	Heating Min. ~ Max.					-25	- 35		
(outdoor temp.) Cooling		IVIIN. ~ IVIAX.	°C DB			5 ~	48		
6	Quantity		EA			1			
Compressor	Туре		-			Hermetic s	ealed scroll		
	Туре		-			R41	0A		
Defiinement	GWP (Global Wa	rming Potential)	-			2,0	88		
Refrigerant	Precharged amo	unt	g			2,5	00		
	t-CO ₂ eq		-			5.2	19		
	Outside	Gas	mm (inch)			Ø 15.8	8 (5/8)		
diameter	diameter	Liquid	mm (inch)			Ø 9.52	(3/8)		
	Longth	Standard	m	7.5					
connections	Length	Max.	m	50					
	Level difference	Max.	m	30					
	Chargeless-pipe	length	m	7.5					
	Additional charg	jing volume	g/m	40					
Rated water flow	rate (at LWT 35°0	2)	LPM	34.5	40.3	46.0	34.5	40.3	46.0
Sound power level	Heating	Rated	dB(A)	63	64	65	63	64	65
Sound pressure level (at 1 m)	Heating	Rated	dB(A)	55	56	57	55	56	57
Dimensions	Unit	WxHxD	mm			950 x 1,3	80 x 330		
Weight	Unit		kg		84.8			85.4	
Exterior	Color / RAL cod	e	-			Warm gray	/ RAL 7044		
	Voltage, phase,	frequency	V, Ø, Hz		220-240, 1, 50	D		380-415, 3, 50	
Power supply	Rated running	Heating	A	11.5	13.8	16.3	6.6	8.0	9.4
Fower suppry	current	Cooling	A	11.3	13.4	15.7	6.5	7.7	9.0
	Recommended c	ircuit breaker	A		40			20	
Wiring connections	Power supply ca (included earth,		mm ² x cores		6.0 x 3 C		2.5 x 5 C		

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

• Interconnected pipe length is standard length and difference of elevation (outdoor ~ indoor unit) is 0 m.

This product contains fluorinated greenhouse gases.
 All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

Product specification (indoor unit)

Technical specification			Unit	HN1616M NK5	HN1636M NK5
	Heating			15 ~ 57	
Operation range (leaving water)	Cooling Min. ~ Max.		°C DB	5 ~ 27 (1	(6 ~ 27) ¹⁾
(leaving water)	DHW			15 ~	802)
Flow sensor	Measuring range Min. ~ Max.		LPM	5 ~	80
Water pressure sensor	Measuring range	Min. ~ Max.	bar(G)	0 ~	20
Expansion vessel	Volume		l	8	3
Safety valve	Pressure limit	Upper limit	bar	:	3
	Туре	· · · · · · · · · · · · · · · · · · ·	-	Sheath	Sheath
Backup heater	Number of heating coil		EA	2	3
	Capacity combination	kW	3.0 + 3.0	2.0 + 2.0 + 2.0	
	Heating steps	Step	2	2	
	Power supply	V, Ø, Hz	220-240, 1, 50	380-415, 3, 50	
	Rated running current	A	25.0	8.7	
	Power supply cable (included e	arth, H07RN-F)	mm ² x cores	4.0 x 3 C	2.5 x 4 C
	Water circuit	Inlet	Inlet inch Male PT 1" according to (tapered pipe three		pe threads)
Piping connections	Water circuit	Outlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
	Refrigerant circuit	Gas (outside diameter)	mm (inch)	mm (inch) Ø 15.88 (5/8)	
	Kerngerant circuit	Liquid (outside diameter)	mm (inch)	Ø 9.52	2 (3/8)
Wiring connections	Power and communication cal	ole (included earth, H07RN-F)	mm ² x cores	0.75	x 4 C
Sound power level	Heating	Rated	dB(A)	4	4
Dimensions	Unit	W × H × D	mm	490 × 8	50 × 315
Weight	Unit		kg	40.0	41.0
Exterior	Color / RAL code		-	Noble white	/ RAL 9016

1) When a fan coil unit is not used.

2) DHW 50 ~ 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

• Interconnected pipe length is standard length and difference of elevation (outdoor ~ indoor unit) is 0 m.

5. This product contains fluorinated greenhouse gases. 6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

PRODUCT SPECIFICATION



Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU121MA U33 + HN1616M NK5 / HU123MA U33 + HN1636M NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C		
temperature		Capacity (kW)						
-20°C DB	11.25	10.95	10.22	9.85	-	-		
-15°C DB	12.00	11.32	10.90	10.32	-	-		
-7°C DB	12.00	11.66	11.45	11.16	11.13	-		
-4°C DB	12.00	12.00	12.00	12.00	12.00	11.24		
-2°C DB	12.00	12.00	12.00	12.00	12.00	11.98		
2°C DB	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		
10°C DB	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		
18°C DB	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		
35°C DB	12.00	12.00	12.00	12.00	12.00	12.00		

HU141MA U33 + HN1616M NK5 / HU143MA U33 + HN1636M NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	
temperature	Capacity (kW)						
-20°C DB	11.25	11.17	10.79	10.32	-	-	
-15°C DB	12.11	11.98	11.54	10.90	-	-	
-7°C DB	13.06	12.99	12.77	12.27	12.42	-	
-4°C DB	14.00	14.00	14.00	13.64	13.09	11.67	
-2°C DB	14.00	14.00	14.00	14.00	14.00	12.67	
2°C DB	14.00	14.00	14.00	14.00	14.00	13.98	
7°C DB	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	
15°C DB	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	
20°C DB	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	

HU161MA U33 + HN1616M NK5 / HU163MA U33 + HN1636M NK5

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C		
temperature	Capacity (kW)							
-20°C DB	12.27	12.01	11.48	10.86	-	-		
-15°C DB	13.11	12.90	12.62	12.30	-	-		
-7°C DB	13.73	13.70	13.46	13.16	12.42	-		
-4°C DB	14.36	14.50	14.30	14.01	13.40	12.50		
-2°C DB	15.20	14.80	14.50	14.25	14.00	13.50		
2°C DB	16.00	16.00	16.00	16.00	16.00	14.51		
7°C DB	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		
15°C DB	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		
20°C DB	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		

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

HU121MA U33 + HN1616M NK5 / HU123MA U33 + HN1636M NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
temperature	Capacity (kW)						
20°C DB	7.60	8.55	9.51	10.33	11.19	11.98	-
30°C DB	8.62	9.05	9.78	10.67	10.90	11.37	-
35°C DB	7.94	8.66	9.33	10.10	10.40	10.75	11.16
40°C DB	7.56	8.02	8.81	9.36	9.54	9.89	10.28
45°C DB	6.38	7.08	7.79	8.44	9.14	9.44	9.78

HU141MA U33 + HN1616M NK5 / HU143MA U33 + HN1636M NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C		
temperature		Capacity (kW)							
20°C DB	8.13	9.87	10.97	11.92	12.91	13.82	-		
30°C DB	9.24	10.44	11.29	12.31	12.58	13.12	-		
35°C DB	8.50	9.99	10.76	11.65	12.00	12.40	12.88		
40°C DB	8.10	9.25	10.17	10.80	11.01	11.42	11.86		
45°C DB	7.17	8.17	8.99	9.73	10.55	10.89	11.23		

HU161MA U33 + HN1616M NK5 / HU163MA U33 + HN1636M NK5

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C		
temperature		Capacity (kW)							
20°C DB	8.54	10.69	11.89	12.91	13.98	14.97	-		
30°C DB	9.70	11.31	12.22	13.34	13.63	14.21	-		
35°C DB	8.92	10.82	11.66	12.63	13.00	13.43	13.96		
40°C DB	8.51	10.03	11.02	11.70	11.93	12.37	12.85		
45°C DB	7.52	8.85	9.73	10.55	11.42	11.80	12.16		

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.
The shaded areas are not guaranteed continuous operation.

PRODUCT SPECIFICATION

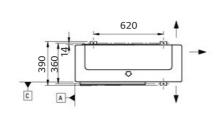
INTRODUCTION



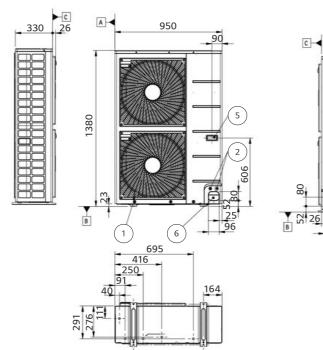
Drawings

		Model name Capacity (kW)				
Category	Unit					
		12.0	14.0	16.0		
1 Phase model	Outdoor unit	HU121MA U33	HU141MA U33	HU161MA U33		
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit		HN1616M NK5			
3 Phase model	Outdoor unit	HU123MA U33	HU143MA U33	HU163MA U33		
380 ~ 415 V, 3 Ø, 50 Hz	Indoor unit		HN1636M NK5			

HU121MA U33 / HU141MA U33 / HU161MA U33 / HU123MA U33 / HU143MA U33 / HU163MA U33

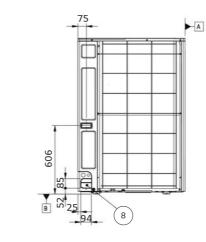




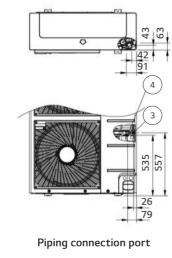


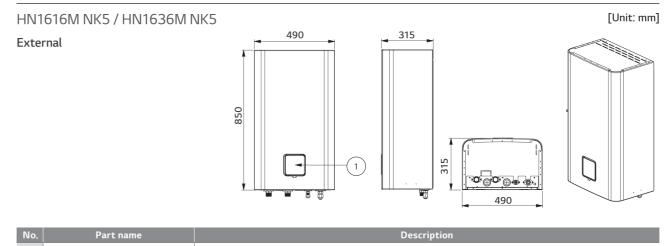
No.	Part name	Description
1	Air outlet	-
2	Power and communication cable hole	-
3	Gas pipe connection	Flare joint
4	Liquid pipe connection	Flare joint
5	Handle	-
6	Pipe routing hole (front)	-
7	Pipe routing hole (side)	-
8	Pipe routing hole (back)	-

3D view



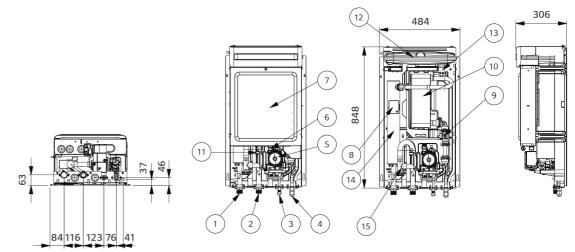
[Unit: mm]





No.	Part name	
1	Control panel	

Internal

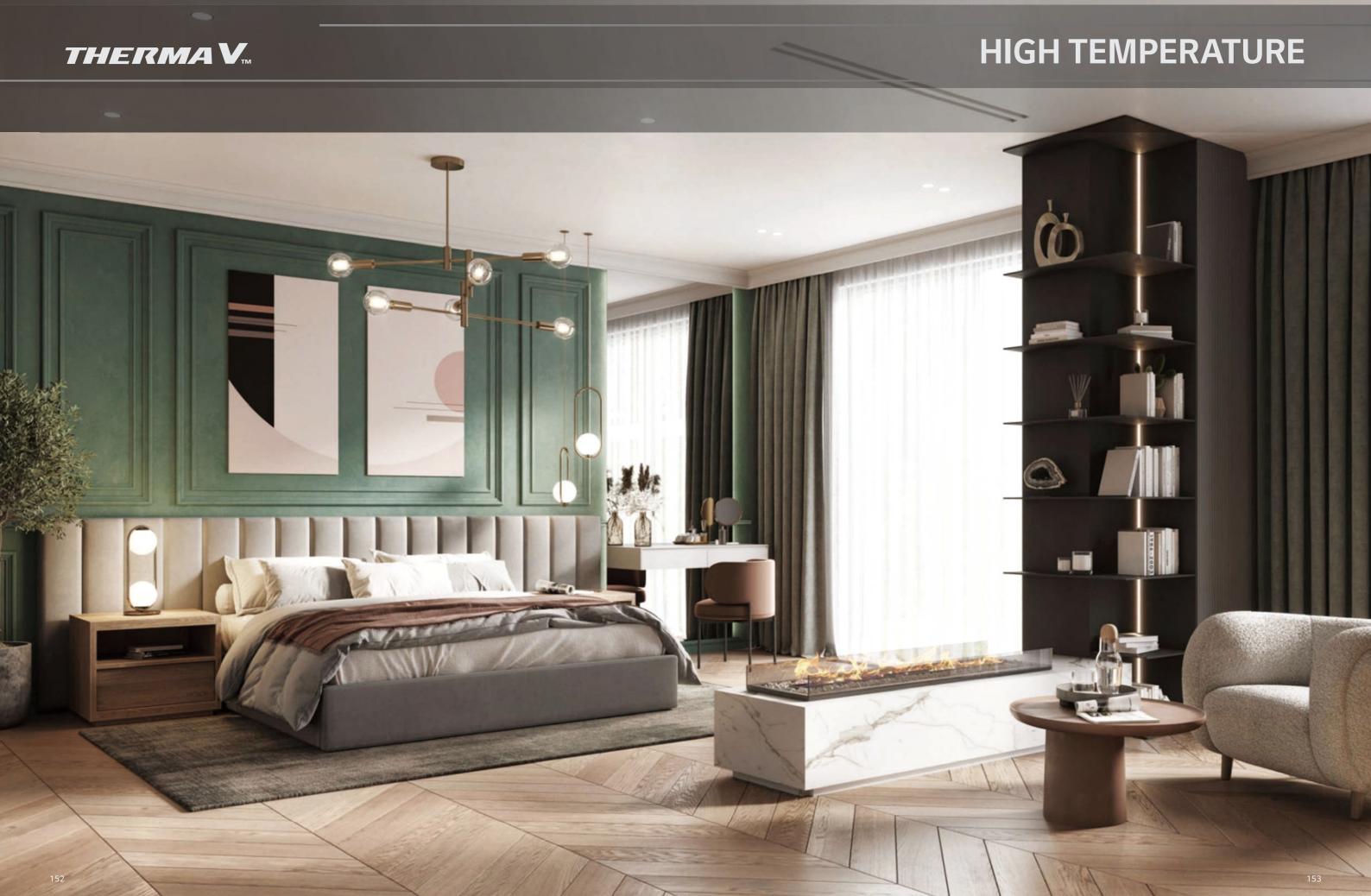


No.	Part name	Description				
1	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)				
2	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)				
3	Refrigerant pipe (liquid)	Ø 9.52 (mm)				
4	Refrigerant pipe (Gas)	Ø 15.88 (mm)				
5	Water pump	To circulate water inside the system				
6	Safety valve	Open at water pressure 3 bar				
7	Control box	PCB and terminal blocks				
8	Thermal switch	Cut-off power input to electric heater at 90°C				
9	Flow sensor	To measure the water flow rate (5-80 LPM)				
10	Plate heat exchanger	Heat exchange between refrigerant and water				
11	Pressure sensor	To measure the water pressure (0-2 MPa)				
12	Expansion tank	Absorbing volume change of heated water				
13	Air vent	Air purging when charging water				
14	Backup heater	6 kW				
15	Strainer	Filtering and stacking particles inside circulating water				

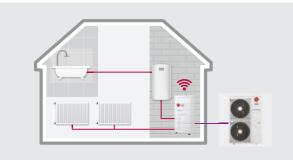
PRODUCT SPECIFICATION

Built-in remote controller

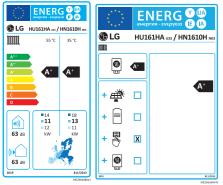
INTRODUCTION



THERMAV. HIGH TEMPERATURE



Energy Label



Excellent performance & efficiency



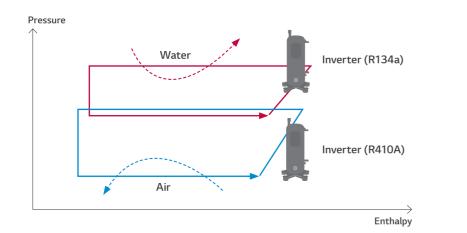
Easy installation & maintenance



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

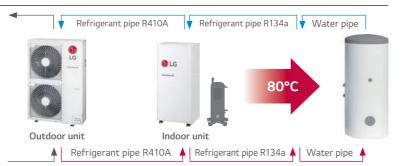
* 16 kW 1 Ø model. * A+++ to D scale.

THERMA V High Temperature Cycle



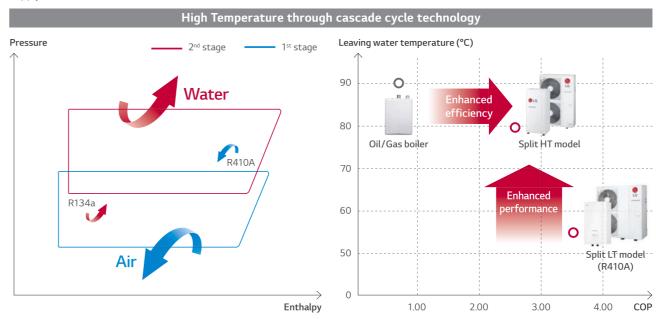
High Temperature Introduction

The LG Therma V High Temperature is a split type unit that consists of a separate indoor and outdoor unit. With cascade 2 stage compression technology, it can supply a high leaving water temperature of up to 80°C, while maintaining high energy efficiency.



Cascade 2 Stage Compression Technology

The Therma V High Temperature unit can produce up to 80°C hot water with high efficiency through cascade 2 stage compression (from R410A to R134a) technology, making it an optimized replacement for a boiler heating system which demands hot water supply.



* Condition for HT model: outdoor air temp. 18°C, entering water temp. 70°C * Condition for LT model: outdoor air temp. 18°C, entering water temp. 55°C

1. OAT: Outdoor Air Temperature, EWT: Entering Water Temperature, LWT: Leaving Water Temperature

Suitable for Old Radiator

The LG Therma V High Temperature product is suitable for houses with poor insulation, an existing radiator heating system, or are required to meet sanitary water regulation needs at high temperatures.







THERMAV. HIGH TEMPERATURE

High Temperature

Indoor unit HN1610H NK3 Outdoor unit HU161HA U33		GLG	LG Preserve
011-1W0336	R410A/ R134a	THERMAY	
R1 Compressor [™]	Black Fin ThinQ	N N	

Features

- Maximum 80°C leaving water temperature
- Cascade 2 stage compression
- Only for heating (no cooling)
- Suitable for old radiator
- SCOP up to 3.23 (average climate / low temp. application):
- SCOP up to 3.01 (average climate / mid temp. application):
- COP up to 3.27 (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: 25 ~ 80°C)

Model line-up

		Model name
Category	Unit	Capacity (kW)
		16.0
1 Phase model	Outdoor unit	HU161HA U33
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit	HN1610H NK3

Seasonal energy

Description		Outdoor unit	HU161HA U33	
		Indoor unit	HN1610H NK3	
	Average	SCOP	-	3.23
C 1	Space heating (according to EN14825) climate water outlet 35°C Average climate water	Seasonal space heating efficiency (ηs)	%	126
		Seasonal space heating eff. class (A+++ to D scale)	-	A+
		SCOP	-	3.01
LIN14023)		Seasonal space heating efficiency (ηs)	%	117
	outlet 55°C	Seasonal space heating eff. class (A+++ to D scale)	-	A+

Nominal capacity and nominal power input

Description			LWT ²⁾ (DB)	Outdoor unit	HU161HA U33
				Indoor unit	HN1610H NK3
		7°C	35°C		16.00
Nominal capacity	Heating	7°C	55°C	kW	14.00
		2°C	35°C		16.00
Newinel		7°C	35°C		4.89
Nominal power input	Heating	7°C	55°C	kW	5.00
		2°C	35°C		4.92
		7°C	35°C		3.27
COP	Heating	7°C	55°C	W/W	2.78
		2°C	35°C		3.25

1) OAT: Outdoor Air Temperature

2) LWT: Leaving Water Temperature

- R1 Compressor (for outdoor unit)
- Black Fin heat exchanger
- LG ThinQ
- Keymark / MCS / Eurovent certification

Product specification (outdoor unit)

Technical specification			Unit	HU161HA U33
Operation range (outdoor temp.)	Heating	Min. ~ Max.	°C DB	-25 ~ 35
Compressor	Quantity		EA	1
compressor	Туре		-	Hermetic sealed scroll
	Туре		-	R410A
Refrigerant	GWP (Global Warming F	Potential)	-	2,088
Reffigeranc	Precharged amount		g	3,800
	t-CO ₂ eq		-	7.933
	Outside diameter	Gas	mm (inch)	Ø 15.88 (5/8)
	Outside diameter	Liquid	mm (inch)	Ø 9.52 (3/8)
Dining	Length	Standard	m	7.5
Piping connections	Length	Max.	m	50
connections	Level difference	Max.	m	30
	Chargeless-pipe length		m	7.5
	Additional charging volume		g/m	40
Rated water flow rate	at LWT 35°C		LPM	46.0
Sound power level	Heating	Rated	dB(A)	63
Sound pressure level (at 1 m)	Heating	Rated	dB(A)	55
Dimensions	Unit	WxHxD	mm	950 × 1,380 × 330
Weight	Unit		kg	89.0
Exterior	Color / RAL code		-	Warm gray / RAL 7044
	Voltage, phase, frequen	су	V, Ø, Hz	220-240, 1, 50
Power supply	Rated running current	Heating	A	8.4
	Recommended circuit b	reaker	A	20
Wiring connections	Power cable (included e	arth)	mm ² x cores	4.0 x 3 C

Technical specification			Unit	HN1610H NK3	
Operation range (leaving water temp.)	Heating	Min. ~ Max.	°C DB	25 ~ 80	
Compressor	Quantity		EA	1	
Compressor	Туре		-	Hermetic sealed twin rotary	
	Туре		-	R134a	
Refrigerant	GWP (Global Warm	ing Potential)	-	1,430	
Reifigerand	Precharged amount		g	1,800	
	t-CO ₂ eq		-	2.574	
	Water circuit	Inlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
	vvaler circuit	Outlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
Piping connections	Defiinement simulit	Gas (outside diameter)	mm (inch)	Ø 15.88 (5/8)	
	Refrigerant circuit	Liquid (outside diameter)	mm (inch)	Ø 9.52 (3/8)	
Rated water flow rate (at LWT 35°	C)		LPM	46.0	
Sound power level	Heating	Rated	dB(A)	58 / 63 ¹⁾	
Sound pressure level (at 1 m)	Heating	Rated	dB(A)	50	
Dimensions	Unit	WxHxD	mm	520 x 1,080 x 330	
Weight	Unit		kg	84.0	
Exterior	Color / RAL code		-	Morning gray / RAL 7030	
	Voltage, phase, frequency		V, Ø, Hz	220 ~ 240, 1, 50	
Power supply	Rated running current	Heating	A	9.8	
	Recommended circuit	it breaker	A	25	
M/ining and atting	Power cable (includ	ed earth)	mm ² x cores	4.0 x 3 C (H07RN-F)	
Wiring connections	Communication cabl	e (included earth)	mm ² x cores	1.0 ~ 1.5 x 2 C (VCTF-SB)	
Accessory kit of the indoor unit			Unit	HN1610H NK3	
Remote controller			-	Standard III	
Water tank temperature	Sensor size		Ø	7	
sensor with holder	Resistance		kΩ	5	
Strainer	Mesh size / materia	l	-	28 mesh / stainless steel	

1) This sound power level (63 dB(A)) is when AC cooling fan is operated. Note

- 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 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
 Interconnected pipe length is standard length and difference of elevation (outdoor ~ indoor unit) is 0 m.
 This product contains fluorinated greenhouse gases.
 All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

PRODUCT SPECIFICATION

THERMAV... HIGH TEMPERATURE

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU161HA U33 + HN1610H NK3

Outdoor	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C	LWT 70°C	LWT 75°C	LWT 80°C
temperature					Capacit	ty (kW)				
-25°C DB	13.50	13.29	13.07	12.86	12.64	12.43	12.21	12.00	-	-
-20°C DB	14.19	14.04	13.88	13.73	13.58	13.42	13.27	13.11	12.96	-
-15°C DB	14.89	14.79	14.70	14.60	14.51	14.41	14.32	14.22	14.10	14.00
-7°C DB	16.00	16.00	16.00	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	16.00	16.00
-2°C DB	16.00	16.00	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	16.00	16.00
7°C DB	16.00	16.00	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	16.00	16.00
15°C DB	16.00	16.00	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	16.00	16.00
20°C DB	16.00	16.00	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	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.



PRODUCT SPECIFICATION

THERMA V FEATURES

MONOBLOC

HYDROSPLIT

SPLIT

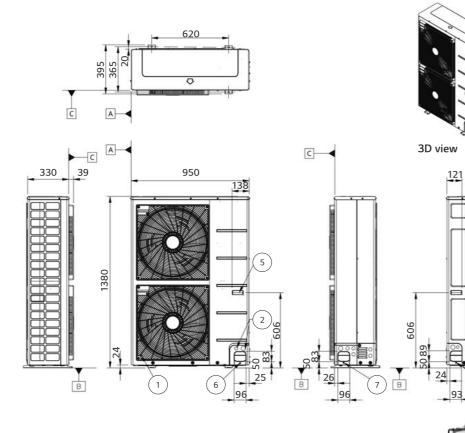
WATER HEATER

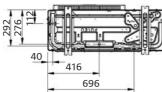
THERMAV... HIGH TEMPERATURE

Drawings

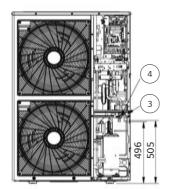
Category	Unit	Model name Capacity (kW) 16.0
1 Phase model	Outdoor unit	HU161HA U33
220 ~ 240 V, 1 Ø, 50 Hz	Indoor unit	HN1610H NK3

HU161HA U33





No.	Part name	Description
1	Air outlet	-
2	Power and communication cable hole	-
3	Gas pipe connection	Flare joint
4	Liquid pipe connection	Flare joint
5	Handle	-
6	Pipe routing hole (front)	-
7	Pipe routing hole (side)	-
8	Pipe routing hole (back)	-



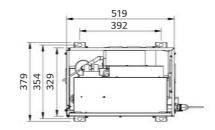
91

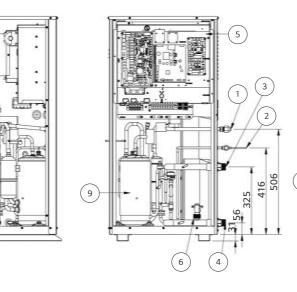
8

[Unit: mm]

A

HN1610H NK3





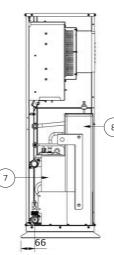
No.	Part name	Description
1	Refrigerant pipe (liquid)	Ø9.52 (mm)
2	Refrigerant pipe (gas)	Ø15.88 (mm)
3	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
4	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
5	Control box	PCB and terminal blocks
6	Flow switch	Minimum operation range at 15 LPM
7	Plate heat exchanger	Heat exchanger between refrigerant and water
8	Plate heat exchanger	Heat exchanger between refrigerant and refrigerant
9	Compressor	EPT525MBA
10	Accumulator	716 сс

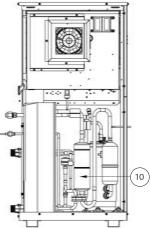
PRODUCT SPECIFICATION

[Unit: mm]

THERMA V FEATURES





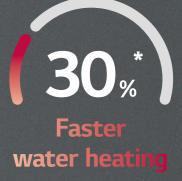


HYDROSPLIT



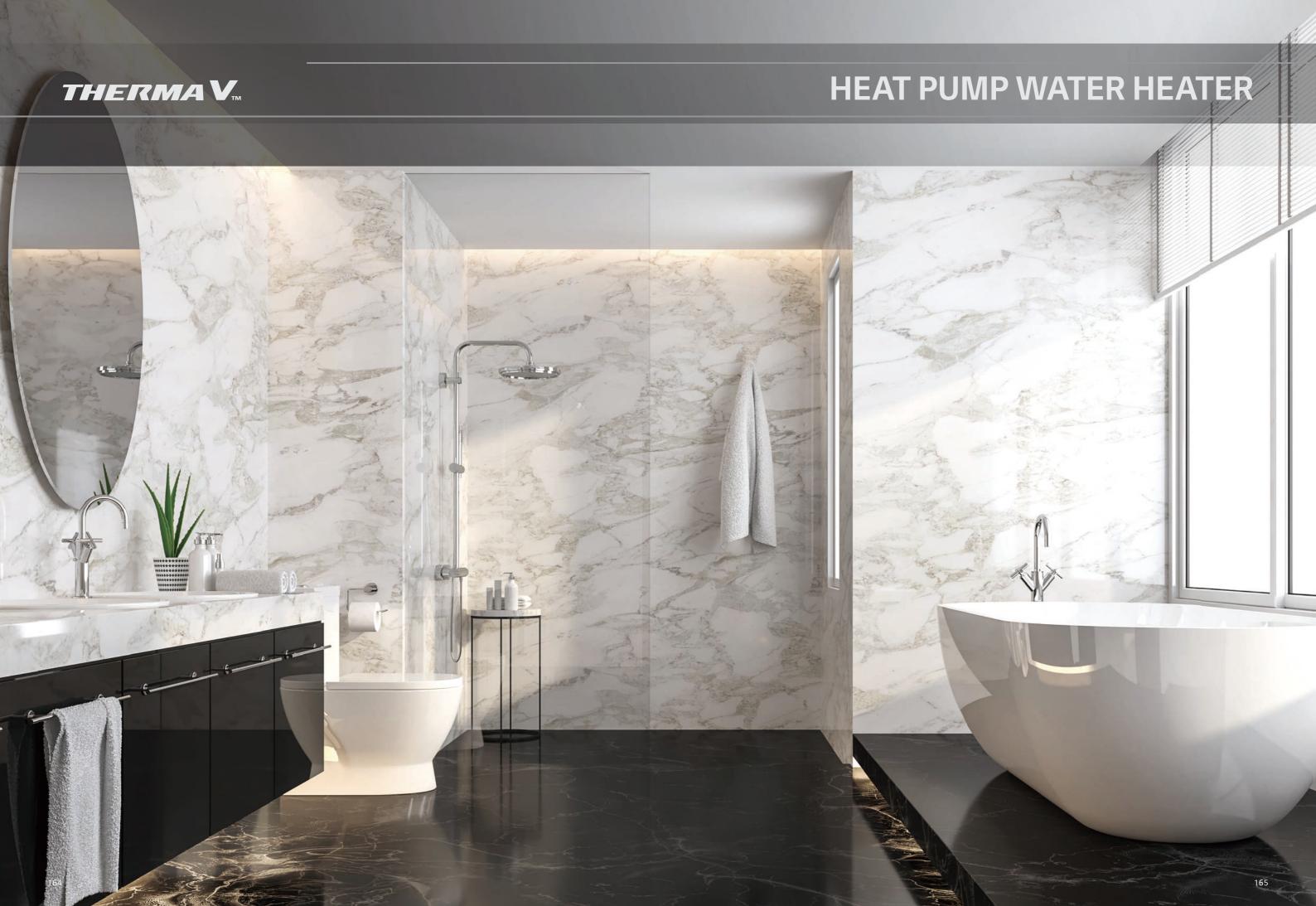






* This figure is the result of LG internal test compared to the electric heater, so it may differ from actual operation.





THERMA V. HEAT PUMP WATER HEATER

Stylish Design

LG unit's exclusive square shape and luxury silver color make it an excellent fit for any interior design.



Perfect matching with various spaces



Top Class Energy Efficiency

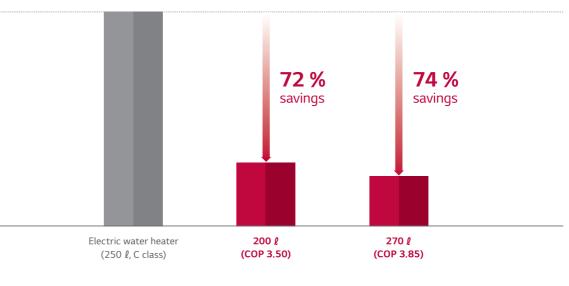
LG's new Inverter Heat Pump Water Heater with the highly efficient DUAL Inverter Compressor allows for impressive energy savings of over 70 % compared to a conventional electric heater.



Energy saving

Benefiting from the market's first DUAL Inverter Compressor, LG's Heat Pump Water Heater can run at low rotational speed (up to 10 Hz), reducing energy consumption by 70 % more than an electric water heater (250 *l*, C class).

Average estimated energy consumption savings per year



* Simulation data on daily electricity consumption, based on EU climate conditions (average, 15°C). * The data are based on LG internal simulation.

% The data are depending on the experimental conditions and is changeable according to the usage environment

PRODUCT FEATURES

THERMA V FEATURES

MONOBLOC

HYDROSPLIT

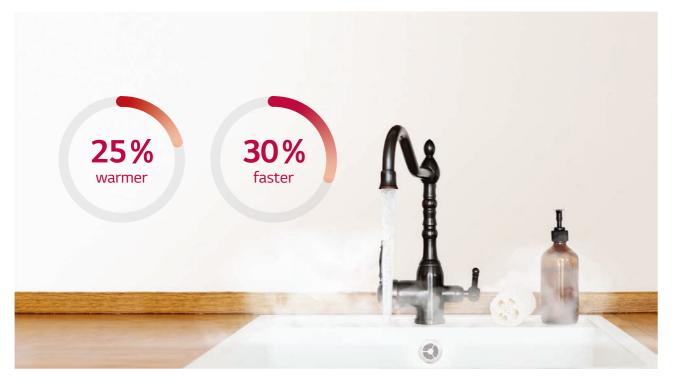
SPLIT

WATER HEATER

THERMA V. HEAT PUMP WATER HEATER

Powerful Heating Performance

The DUAL Inverter Compressor maximizes the heat pump's power in turbo mode for a 30 % faster heating time for first-use water than in auto operation mode.



Fast & powerful water heating

Turbo mode can run at high speeds (up to 80 Hz) with simultaneous heating. The target water temperature in the tank will be achieved 30 % faster in turbo mode than in in use auto mode or auto mode in one hour of operation starting from an empty tank. Furthermore, turbo mode can recover the water at 25 % warmer temperatures than in use auto mode or auto mode in one hour of operation starting from an empty tank.

* The data are based on LG internal tests and simulations.

% The data depend on the experimental conditions and are changeable according to the usage environment.

Continuous operation

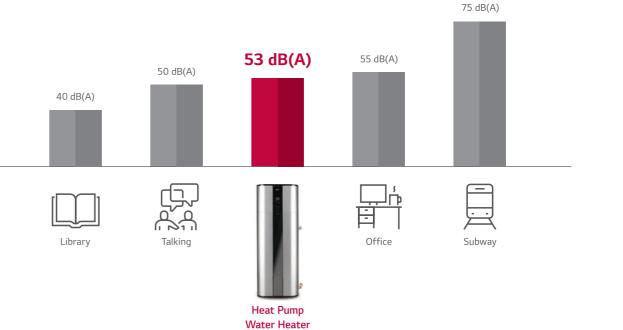
The two heat sources, two heaters and a heat pump complement each other perfectly. If the heat pump or one of the heaters fails, the other heat source allows alternative operation.



Low Noise Operation

environment even in indoor installation scenes.







% Sound pressure is 38 dB(A) based on LG internal test.

% The data are based on LG internal test (sound power). * The data are based on LG internal tests and simulations.

% The data are depending on the experimental conditions and is changeable according to the usage environment.

PRODUCT FEATURES

Through BLDC motor and DUAL Inverter Compressor, noise is reduced to 53 dB(A) (sound power) and provides a comfortable

INTRODUCTION

MONOBLOC

HYDROSPLIT

SPLIT

WATER HEATER

THERMA V. HEAT PUMP WATER HEATER

Various Operation Mode

LG Inverter Heat Pump Water Heater can be operated in four different modes for different conditions.



Using basic control Display screen

🕒 LG r ₽

11-1	ار ۴	Button	Display screen	Description
	لل ال ا		Heat pump	To select the heat pump mode
		Mode	Auto	To select the auto mode
		Mode	Turbo	To select the turbo mode
			Vacation	To select the vacation mode
Heat Pump Auto	Schedule Vacation	-	Schedule	Set schedule mode only in LG ThinQ application
	Turbo Anti Legionella ¦	-	Anti legionella	To select the anti legionella mode
 Display screen 		Set	-	To set the desired water temperature
Mode	\land	$\bigcirc \bigtriangledown$		To adjust the desired water temperature
Wi-Fi (3s)	'F/'C (3s)	Wi-Fi (3s)	(((•	To enable the Wi-Fi pairing
Set		Reset Filter (3s)	Ŕ	To reset the filter alarm
Reset Filter (3s)	Water Temp (3s)	°F/°C (3s)	°F °C	To change unit between °F and °C
1 B	utton	Water Temp (3s)		To display the current water temperature for 5 seconds

Smart Control

With the LG ThinQ smartphone app, users can easily control and monitor the heat pump, checking for current water temperatures, setting operating schedules and more.



Embedded Wi-Fi

You can control the LG ThinQ app, checking information such as current water temperature, operating mode and more.

Smart diagnosis

Smart diagnosis allows users to conveniently check setup, installation, troubleshooting and other information directly from a smartphone.

Easy check & monitoring

Easily comprehensible error messages make detecting a solution and contacting the service center simple and convenient.

PRODUCT FEATURES

	MINEDS. BARDANA	
	Water Heater Variation Model with Dire 34, 1907 Heat Pump >	
a.	tage time at	
	Sure forme Last on Anti-	
	Sched/M >	





1.0	LG Thin	ng server	· · · · · · · · · · · · · · · · · · ·
Customer	En et aleman familie den et aleman - Annex i den et aleman et et et et familie familie den beschenden den beschenden den beschenden den beschenden den beschenden	Compared named Compared and the first sense of the sense of t	Installer and SVC

THERMAV... HEAT PUMP WATER HEATER

powered by **DUAL Inverter** Compressor[™]

LG's DUAL Inverter Compressor™ - exceptional in the market - saves energy with a wide power-saving operating range and produces efficient heating, performing quietly even in max operation mode. This technology allows the inverter compressor to achieve superior energy efficiency, cooling performance and comfort compared to compressors with on-off capabilities which is rare for monobloc heat pump water heaters.



Varied-speed dual rotary

A compressor motor has a wider energy efficient rotational frequency and a higher volumetric quick cooling capacity compared to a conventional non-inverter compressor.

Product reliability improvement

As twin rotaries balance each other while they are rotating with high speed, it reduces noise dramatically compared to a shaking single rotary compressor. The reduction in vibration reduces the possibility of fractures occurring in the surrounding pipework.

The data are based on LG internal test and simulation.
 The data depend on the experimental conditions and are changeable according to the usage environment

Benefit & verification

Reliable air conditioner

The product safety is guaranteed with a 10-year warranty offered to customers.



Verification TUV Rheinland, long term accelerated-reliability test & high marginal test TÜVRheinland

Twin rotary type

% Long term accelerated-reliability test LG's unique testing method with reinforced operating condition for a product life assurance to test and determine the product life cycle in a short period of time by accelerating the life cycle. % High marginal test

Test method to secure durability in various adverse conditions that may occur in the field by performing compressor reliability test against higher pressure and temperature than the designed range of pressure and temperature which the compressor operates in. % Verification obtained from TUV rheinland for 10-year product life cycle.

Quick & Easy Installation

The machine's one-direction inlet and outlet piping and easy-to-connect wires in the junction box allow for quick and easy installation. Furthermore, the LG ThinQ app provides service alarm and self diagnosis programs for convenient maintenance.



10-year warranty

The core parts of heat pump water heaters such as water tank and compressor are certified for 10-year durability by TUV rheinland. ceramic coating inside the water tank meets Germany ceramic standard DIN 4753 and guarantees 10 years of corrosion resistance.



* Other parts warranty may vary according to after sales service condition

PRODUCT FEATURES

t wires in the junction box allow for quick and easy





SPLIT

HYDROSPLIT

THERMA V FEATURES

MONOBLOC

173

THERMAV... HEAT PUMP WATER HEATER



Product specification

Sales model			WH20S
Factory model			R5TT20F-SA1
Capacity	Volume (nominal)	l	200
Energy efficiency 1)	COP (7°C / 15°C)		3.30 / 3.50
Energy consumption	Annual energy consumption (7°C / 15°C)	kWh	756 / 709
Load profile			Large
Devuen innut	Upper element wattage (230 V)	kW	2
Power input	Lower element wattage (230 V)	kW	2
Energy efficiency class (7°C / 1	5°C)	-	A+ / A+
Power supply		V, Ø, Hz	230 / 1 / 50
Available voltage range		V	195 ~ 265
Operating mode			Turbo / Auto / Heat pump / Vacation / Anti legionella
A. ()	H/M	m ³ /min	6.7 / 4.4
Air flow rate	Н/М	CFM	236.6 / 155.4
Sound pressure level	Auto	dB(A)+3	38
Sound power level		dB(A)	55
Dimensions	Net (W x H x D)	mm	580 x 1,625 x 582
Weight	Net	kg	100
Nominal insulation thickness	Min. / Max.	mm	40 / 80
Heat pump operation range	Min. / Max.	°C DB	-5 / 48
Exterior color code		-	Luxury silver
	Туре	-	Inverter twin rotary
_	Warranty	Year	10
Compressor	Manufacturer	-	LG Electronics
	Motor output	W	510
	High side	-	2.0 MPa / 290 PSI
Design pressure (system)	Low side	-	0.9 MPa / 130.5 PSI
Max. working pressure (water t	ank)	-	150 PSI (1,034 kPa)
Circuit breaker		A	15
Condensate water connection	I.D	mm	19, 12.7
V40 (Mixed water at 40°C)		l	260
	Туре	-	R134a
	Pre charge	kg	0.650
Refrigerant	GWP		1,430
	t-CO₂ eq		0.930
Defrost method		-	Reverse cycle
Anode			Impressed current cathodic protection
T&P relief valve		-	Yes
Water connection location		-	side
Water connection size		inch	G ¾ M
Digital display		-	Yes
Wi-Fi (LG ThinQ) ²⁾		_	Yes
Tank warranty		Year	10

1) Water heater energy efficiency (at auto mode)

2) ThinQ main function

- Operation mode (auto. heatpump, turbo, vacation, schedule), temperature setting - Monitoring hot water temperature

- Maintenance point alarm (filter, anode rod, etc.)

* This product contains fluorinated greenhouse gases (R134a).

GWP: Global Warming Potential
 t-CO₂eq: F-gas (kg)*GWP/1000
 Specification, design and feature are subject to change without prior notice.

Product specification

Sales model			WH27S	
Factory model			R5TT27F-SA0	
Capacity	Volume (nominal)	l	270	
Energy efficiency 1)	COP (7°C / 15°C)		3.45 / 3.85	
Energy consumption	Annual energy consumption (7°C / 15°C)	kWh	712 / 646	
Load profile			Large	
D	Upper element wattage (230 V)	kW	2	
Power input	Lower element wattage (230 V)	kW	2	
Energy efficiency class (7°C / 1	5°C)	-	A+ / A++ ²⁾	
Power supply		V, Ø, Hz	230 / 1 / 50	
Available voltage range		V	195 ~ 265	
Operating mode			Turbo / Auto / Heat pump / Vacation / Anti legionella	
A: ()	Н/М	m³/min	6.7 / 4.4	
Air flow rate	Н/М	CFM	236.6 / 155.4	
Sound pressure level	Auto	dB(A)+3	38	
Sound power level		dB(A)	55	
Dimensions	Net (W x H x D)	mm	580 x 2,008 x 582	
Weight	Net	kg	119	
Nominal insulation thickness	Min. / Max.	mm	40 / 80	
Heat pump operation range	Min. / Max.	°C DB	-5 / 48	
Exterior color code		-	Luxury silver	
	Туре	-	Inverter twin rotary	
	Warranty	Year	10	
Compressor	Manufacturer	-	LG Electronics	
	Motor output	W	510	
D: (.)	High side	-	2.0 MPa / 290 PSI	
Design pressure (system)	Low side	-	0.9 MPa / 130.5 PSI	
Max. working pressure (water t	ank)	-	150 PSI (1,034 kPa)	
Circuit breaker		A	15	
Condensate water connection	I.D	mm	19, 12.7	
V40 (Mixed water at 40°C)		l	360	
	Туре	-	R134a	
Definition	Pre charge	kg	0.750	
Refrigerant	GWP		1,430	
	t-CO ₂ eq		1.073	
Defrost method		-	Reverse cycle	
Anode			Impressed current cathodic protection	
T&P relief valve		-	Yes	
Water connection location		-	side	
Water connection size		inch	G ¾ M	
Digital display		-	Yes	
Wi-Fi (LG ThinQ) ²⁾		-	Yes	
Tank warranty		Year	10	

Water heater energy efficiency (at auto mode)
 Energy label marked A+ and more than COP 3.75 in EU standard is A++

3) ThinQ main function

- Operation mode (auto. heatpump, turbo, vacation, schedule), temperature setting

Monitoring hot water temperature
 Maintenance point alarm (filter, anode rod, etc.)

* This product contains fluorinated greenhouse gases (R134a).

* GWP: Global Warming Potential

% t-CO2eq: F-gas (kg)*GWP/1000

* Specification, design and feature are subject to change without prior notice.

PRODUCT SPECIFICATION



MONOBLOC

THERMA V FEATURES

INTRODUCTION

HYDROSPLIT

SPLIT

WATER HEATER

THERMAV... HEAT PUMP WATER HEATER

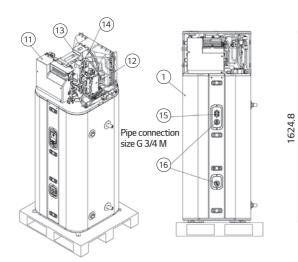
Drawings

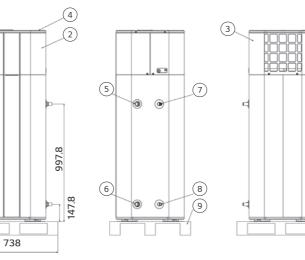
		l name	
Category	Capacity (DWH tank volume)		
	200 ℓ	270 ℓ	
1 Phase model 230 V, 1 Ø, 50 Hz	WH20S	WH27S	

WH20S

738 580

(10)





No.	Part name	Description
1	Water tank	200 l
2	Front panel	-
3	Rear panel	-
4	Top cover	-
5	T/P valve	210 °F / 99 °C 3/4 NPT
6	Drain valve	3/4 NPT
7	Outlet pipe	Water out, 3/4 NPT
8	Inlet pipe	Water in, 3/4 NPT

No.	Part name	Description
9	Wooden pallet	-
10	Junction cover	Power input
11	C/B case	-
12	Compressor	EST092MBA
13	Motor	43 W
14	Fan propeller	290 Ø
15	ECO	Emergency cut off (77°C)
16	Heater	2 EA, 2000 W+2000 W, 220 ~ 240 V

[Unit: mm]

WH27S

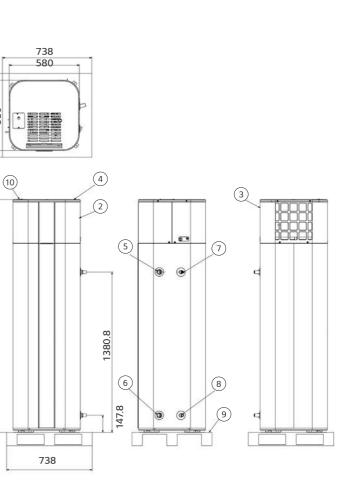
No.	Part name	Description	No.	Part name	Description
1	Water tank	270 l	9	Wooden pallet	-
2	Front panel	-	10	Junction cover	Power input
3	Rear panel	-	11	C/B case	-
4	Top cover	-	12	Compressor	EST092MBA
5	T/P valve	210 °F / 99 °C 3/4 NPT	13	Motor	43 W
6	Drain valve	3/4 NPT	14	Fan propeller	290 Ø
7	Outlet pipe	Water out, 3/4 NPT	15	ECO	Emergency cut off (77°C)
8	Inlet pipe	Water in, 3/4 NPT	16	Heater	2 EA, 2000 W+2000 W, 220 ~ 240 V

90

2007.8

PRODUCT SPECIFICATION





HYDROSPLIT

MONOBLOC

INTRODUCTION

THERMA V FEATURES

SPLIT



Additional Inte 2019/04/25(7%) PM 82/25 65 ö \wedge < ок > Ф 5 \sim

Accessories Provided by LG

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Sensors	Room temperature sensor	PQRSTAO	9	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	Ø	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	PHRSTAO	Q	All except for R32 Split IWT and R32 Hydrosplit IWT	Domestic hot water heating	To detect DHW tank temperature	• Included in DHW tank kit
	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
Valves	Thermostatic mixing valve	OSHA-MV		Regardless of the	Domestic	To blend hot water with cold water for	• Size: 3/4" DN20 male threaded
		OSHA-MV1		model	hot water supply	ensuring constant, safe shower and bath outlet temp.	• Size: 1" DN25 male threaded
DHW	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	To generate and store domestic	 Storage volume: 200 l, 300 l, 500 l Type: internal single coil Material: stainless steel Capacity of booster heater: 2.4 kW
tanks	Domestic hot water tank (double coil)	OSHW-300 FD		All except for R32 Split IWT, R32 Hydrosplit IWT and High Temperature	hot water heating	hot water	 Storage volume: 300 l Type: internal double coil Material: stainless steel Capacity of booster heater: 2.4 kW
		PHLTA		Hydro Box for Split & Hydrosplit	Domestic hot water	To operate with DHW tank including the booster heater	• Parts included: DHW tank sensor
	Domestic hot water	PHLTC		Old Hydro Box for R410A Split - 3 Ø (HN1639 NK3 only)			(thermistor), circuit breaker, relay
Installation kits	tank kit	PHLTB	015	R32 Monobloc, R32 Monobloc S	heating		• Parts included: DHW tank sensor (thermistor), circuit breaker, relay, multi harness
	Solar thermal kit	PHLLA	0	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

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
		HA031M E1	€u	R32 Monobloc,			 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			Capacity back up & emergency operation	To supplement insufficient capacity	 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
Installation kits	Electric back-up heater	HA063M E1					 Heater capacity: 6 kW Number of heating coil: 3 ea (20 + 2.0 + 2.0 kW) Size (W x H x D) : 210 x 607 x 217 Power: 380 ~ 415 V, 3 Ø
		HA061C E1		R32 Hydrosplit	Capacity back Up & emergency operation	To supplement	 Heater capacity: 6 kW Number of heating coil: 2 ea (3.0 + 3.0 kW) Power: 220-240 V, 1 Ø
		HA063C E1		– Hydro Box (HN1600MC NK1)		capacity	 Heater capacity: 6 kW Number of heating coil: 3 ea (2.0 + 2.0 + 2.0 kW) Power: 380-415 V, 3 Ø
	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
Vessel	Expansion vessel for DHW	OSHE-12KT		R32 Hydrosplit IWT	-	To absorb the volume changes by temperature of water for the DHW circuit	 Volume: 8 <i>l</i> Connection: 3/4" Max. pressure: 10 bar Size (W x H x D): 416 x 238 x 502
	Extension wire for a wired remote controller	PZCWRC1	~O}	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
ETC		PHDPB	-	R32 Split Hydro Box (NK4 suffix), R410A Split Hydro Box (NK3 suffix)		To collect condensed water	
	Drain pan	PHDPC		R32 Hydrosplit , R32 Split Hydro Box (NK5 suffix), R410A Split Hydro Box (NK5 suffix)	Cooling operation	in the indoor unit during the cooling operation	-
	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.	-

MONOBLOC

Accessories Provided by LG

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature	Category	Model name	Model number	Figure	Applicable product	t R
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)	 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 	Gateway	Modbus RTU gateway	PMBUSBOOA		All Therma V – products	C
	ACE T. (1)	DACE 74000					 5 inch color display User-friendly control with iconographic interface (touch screen) Max. 32 unit control Total 200 schedule events (weekly/ 		PI485 gateway for Therma V	PP485A00T			
	AC Ez Touch ¹⁾	PACEZA000	•44				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		Simple dry contact	PDRYCB000			
				_			 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 	Dry contact	Dry contact for thermostat	PDRYCB320		All Therma V products	-
Central controller	AC Smart 5 ¹⁾	PACS5A000 (Smart 5)		All Therma V products	Centralized control	To control the AWHP using LG central controller	 (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 		LG Wi-Fi modem	PWFMDD200	ere ere	All Therma V products	V
							Web access controller Max. 128 unit control Total 100 schedule events (weekly/ monthly/yearly/exception day) History/operation trend	ETC	Cloud gateway ¹⁾	PWFMDB200	and a	R32 Monobloc S, R32 Split IWT, New Hydro Box for Split & Hydrosplit	Li
	ACP 5 ¹⁾	PACP5A000 (ACP5)					 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 		Meter interface	PENKTH000		All Therma V products	E

* 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.

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

t	Relevant function	Purpose	Feature	Ŧ	
	Centralized	To communicate and control through the central controller (providing modbus RTU connection between the 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 12 V 	THERMA V FEATURES	
		To communicate and control through the central controller (converting LG protocol to RS485 protocol)	• 1 for each outdoor unit • Power: supplied by outdoor unit	MONOBLOC	
			 1 Set per 1 unit 1 Input contact for turning on/off Input power. 220 ~ 240 V 		
		To connect between the	• 2 output contacts - Operation status - Error status	т	
	-	AWHP and external devices to control various functions	 1 Set per 1 unit Non voltage or 12 ~ 24 V 8 digital input contacts for thermostat On/off, operation mode, DHW heating Emergency mode, silent mode 2 Output contacts Operation status - Error status 	HYDROSPLIT	
	Wi-Fi control via LG ThinQ	To control the AWHP via a smartphone	 Basic control function 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 	SPLIT	
	LG BECON cloud service	For remote control, monitoring and diagnosis	 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 	WATER HEATER	
	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: 40 ms ~ 100 ms Modbus RTU comm. with Therma V 2 wire RS485 / 9600 bps Power: DC 12 V Size (W x H x D): 54 x 90 x 61 	RACCESSOR	

• Size (W x H x D): 54 x 90 x 61

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.



Domestic Hot Water Tank

OSHW-200F AEU OSHW-300F AEU OSHW-500F AEU OSHW-300FD AEU

Technical specificati	ion	Unit	OSHW-200F	OSHW-300F	OSHW-500F	OSHW-300FD	
	Water volume	l	200	300	500	300	
	Diameter	mm	640	640	810	640	
General	Height	mm	1.350	1.850	1.900	1.850	
characteristics	Empty weight	kg	61	100	146	106	
	Tank materials	-	STS : F18	STS : F18	STS : F18	STS : F18	
	Color	-	Grey (RAL 7035)	Grey (RAL 7035)	Grey (RAL 7035)	Grey (RAL 7035)	
	Additional electric heater	W	2,400	2,400	2,400	2,400	
Specification of electric back up	Power supply	V, Ø, Hz	230, 1, 50 (60)	230, 1, 50 (60)	230, 1, 50 (60)	230, 1, 50 (60)	
electric back up	Adjustable thermostat	°C	0 ~ 90	0 ~ 90	0 ~ 90	0 ~ 90	
	Exchanger type	-	Internal single coil	Internal single coil	Internal single coil	Internal double coi	
Specification of	Material exchanger	-	STS : F18	STS : F18	STS : F18	STS : F18	
heat exchanger	Maximum water temp.	°C	90	90	90	90	
	Coil surface	m ²	2.3	3.1	4.8	3.1 + 1	
	Heat pump inlet	inch	1 BSP female	1 BSP female	1 ¼ BSP female	1 BSP female (upper coil)	
	Heat pump outlet	inch	1 BSP female	1 BSP female	1 ¼ BSP female	1 BSP female (upper coil)	
Water connections	Solar inlet	inch	-	-	-	¾ BSP Female (lower coil)	
	Solar outlet	inch	-	-	-	¾ BSP Female (lower coil)	
	City water inlet	inch	¾ BSP male	¾ BSP male	1 BSP male	¾ BSP male	
	Hot water outlet	inch	3⁄4 BSP female	1 BSP female	1 BSP female	1 BSP female	
Energy efficiency class	s (A+ to F scale)	-	В	В	В	В	
Standing heat loss		VV	61	70	83	70	
		Man	datory optional acco	essories			
Domestic hot water tank installation kit			PHLTA (Hydro Box for Split & Hydrosplit), PHLTB (Monobloc), PHLTC (old Hydro Box for R410A Split 3 Ø - HN1639 NK3)				
			Optional accessori	es	- -		
Thermostatic mixing	valve (3/4" DN20)		OSHA-MV				
Thermostatic mixing	valve (1" DN25)		OSHA-MV1				
3 way valve			OSHA-3V				



-

Ę.
Ă.
ž
0
ŝ
ř
Ξ.

MONOBLOC

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 accordance with the European nZEB regulations.

• R32 Monobloc S (5 ~ 16 kW) + OSHW-200 F

- HM051MR U44
- HM071MR U44
- HM091MR U44
- HM121MR U34
- HM141MR U34
- HM161MR U34
- HM123MR U34
- HM143MR U34
- HM163MR U34





	Therma V line-up	R32 Monobloc S (5, 7, 9 kW)	R32 Monobloc S (12, 14, 16 kW)
Model	Model name	HM051MR U44 HM071MR U44 HM091MR U44	HM121MR U34 HM141MR U34 HM161MR U34 HM123MR U34 HM143MR U34 HM143MR U34 HM163MR U34
	DHW tank	OSHW-200F AEU	OSHW-200F AEU
Declared load profile		L	L
	Water heating eff. class	A+	A+
Average	Water heating efficiency (_{חש})	144 %	146 %
climate	СОР _{DHW}	3.1	3.2
	Annual energy consumption	712 kWh	701 kWh
	Water heating eff. class	A++	A++
Warmer	Water heating efficiency (η_{WH})	174 %	166 %
climate	СОР _{рни}	3.8	3.6
	Annual energy consumption	588 kWh	616 kWh
	Water heating eff. class	А	A
Colder	Water heating efficiency (ŋwĦ)	87 %	101 %
climate	СОР _{рни}	1.9	2.2
	Annual energy consumption	1,172 kWh	1,011 kWh

Energy label

