PRODUCT CATALOGUE | 2025 | LG | THERMA V™

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PRODUCT CATALOGUE | 2025 | LG | THERMA V™

LG

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LG

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SOLUTIONS

INDIVIDUAL SOLUTIONS

MONOBLOC

044 R290 Monobloc
048 - Control Unit (7/9/12/14/16 kW)
062 - Hydro Unit (7/9/12/14/16 kW)
076 - Combi Unit (7/9/12/14/16 kW)
094 R32 Monobloc S Ⅱ (5/7/9/12/14/16 kW)

HYDROSPLIT

110 R32 Hydrosplit
114 - Hydro Unit (12/14/16 kW)
124 - Combi Unit (12/14/16 kW)

SPLIT

134 R32 Split
138 - Hydro Unit (4/6, 5/7/9 kW)
152 - Combi Unit (4/6, 5/7/9 kW)

HEAT PUMP WATER HEATER

174 R290 Round Type (100/150/200ℓ)
182 R134a Square Type (200/270ℓ)

COLLECTIVE SOLUTIONS

MONOBLOC

190 R32 Monobloc 51 kW

CASCADE SOLUTION

200 Cascade Control Unit

ACCESSORIES

208 Accessories Provided by LG
212 Electric Backup Heater
214 LG Wi-Fi Modem
215 Domestic Hot Water Tank

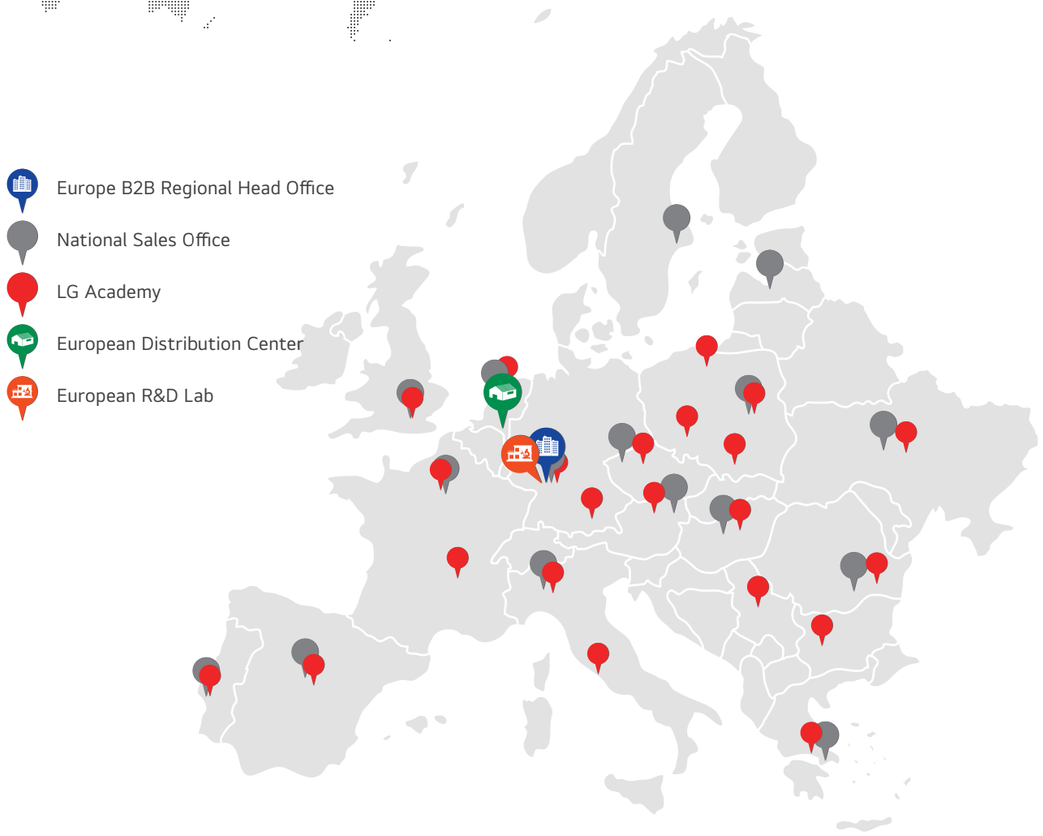
LG BUSINESS PARTNERSHIP & INFRASTRUCTURE

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 Europe R&D Center

LG Europe R&D Center is located in Eschborn Germany. Purpose of this laboratory where to test and verity LG Air Solution product's liability in advance and also to verify with local HVAC components compatibility.

LG Europe B2B Regional Head Office

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.

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

LG Heat Pump and 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.

European Distribution Center

LG's European Distribution Center is located in Tilburg, 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.

THE EU BUILDING SECTOR

Buildings account for 40% of the total carbon emissions in Europe. The building stock that dates back to the 90s is three times less energy efficient than new construction built today.

OF EU ENERGY IS USED BY BUILDING SECTOR, MAKING IT THE SINGLE LARGEST ENERGY CONSUMER IN EUROPE

OF GREENHOUSE GAS EMISSIONS COME FROM BUILDINGS

LG OUR MISSION

① Create low-consuming or self-consuming innovations
② Build awareness and help people use energy more conservatively
③ Reimagine a building's usability, connectivity, convenience & health

* Source: The European Commission website. https://commission.europa.eu/news/focus-energy-efficiency-buildings-2020-02-17_en

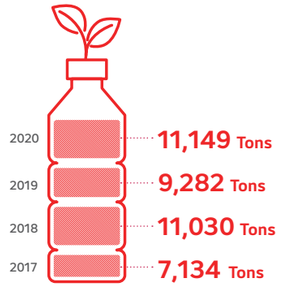
Re-Design

Improve Circularity of Raw Materials

Minimize environmental impact with our eco-conscious air conditioning solutions. By reducing reliance on finite resources such as plastic, aluminum, and copper, LG's innovative approach embraces a circular economy supply chain. This not only lessens carbon emissions during pre-manufacturing but also ensures resource efficiency, particularly for energy-hungry materials. Discover the sustainability of LG air conditioners, where recycled materials play a pivotal role. We conduct thorough stability and quality tests to guarantee optimal performance, leading the way toward a more sustainable and efficient future.

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

Amount of recycled plastic that LG used in previous years



Target on amount of use of recycled plastics

27,000 Tons
2021 achievement

600,000 Tons
2030 target

Recycling Old Appliances

Many reusable resources are left in discarded products. Founded in 2001 through investment from LG, the Chilseo Recycling Center acts as a virtuous cycle of resources, from product design, use, and recovery, to disposal. Engineers collect old appliances from LG and other brands, then carefully take them apart. More than 40 kinds of renewable raw materials, including separated plastic, iron, and non-ferrous metals, are reborn into new LG products.

of old appliances become new resources

Target amount of e-waste collection

THE EU BUILDING SECTOR

Re-Program

Achieve 95% in Waste Recycling at Production Sites by 2030

At LGE, we continuously invest in environmental facilities and improve our waste treatment processes with a view to being able to recycle 95% of waste generated at production sites around the world by 2030.

Innovate

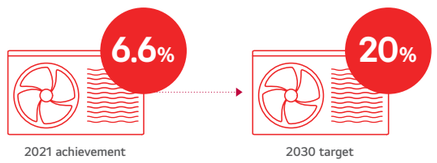
Reduce Reliance Upon High GWP Refrigerant Gases

Refrigerant gases contribute to global warming even though their contribution is not the biggest. LG was the first manufacturer to launch an R32 monobloc air-to-water heat pump in 2018 and have also converted our full single split line up to R32 with 3 years lead time on the EU -driven planned ban in 2025. Also, LG is likely to put in place collection and recovery streams of refrigerant gases from end of life equipment at no extra cost for its customers.

Constant Product Efficiency Improvements

Electrically-driven heating and cooling equipment is LG's signature. What's more, we always aim at the highest energy ratings, generation after generation of product launching.

Reduce carbon emissions during use of 7 major products (baseline year 2020)



First Home Appliances Lighthouse Factory

In March 2022, Changwon LG Smart Park was named the first 'lighthouse factory' by the World Economic Forum (WEF). The WEF "Lighthouse" facilities implement Fourth Industrial Revolution technologies, such as the Internet of Things, big data, artificial intelligence and robots, into manufacturing and supply chain operations to deliver a wide range of benefits, from increased production efficiency to enhanced environmental sustainability. LG plans to apply the innovative, smart production technologies pioneered at LG Smart Park to a total of 26 LG production facilities in 13 countries, accelerating the digital transformation of its global manufacturing network by 2025.

Educate

Life Cycle Analysis

The Air Solution Division has assessed 4 product families, as regards their total life cycle impact, according to the French PEP certification scheme: it provides product greenhouse gas emissions from production, transport, use and end of life phases, over a period of 22 years.

Efficiency comparisons between THERMA V & differing technologies

+132% improvement
Standard non-condensing gas boiler

+171%* improvement
Standard electric heating & DHW
* In Italy

+142%** improvement
Standard Coal boiler
** In Poland

Certifications

LG Electronics is listed in the:

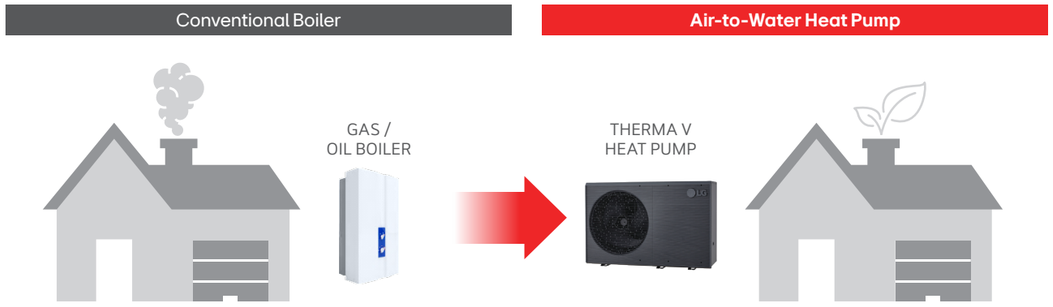
- DJSI World for 9 consecutive years
- 2020 Global Sustainability Leadership top 100, announced by Privileged United Nationals Sustainability Development Goals (UNSDGs)
- 6th place in the top 100 World Sustainable Management Companies by Wall Street Journal
- ECOVADIS Platinum certified in 2021 & 2023

HEAT PUMP TECHNOLOGY

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

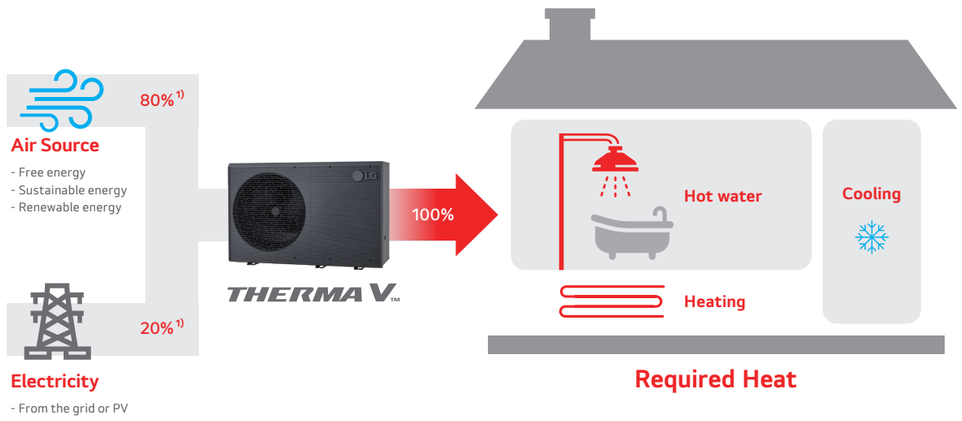
Modern Technology to Replace Conventional Boilers

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) The efficiency ratio is to help general understanding and is based on the Seasonal Coefficient of Performance (SCOP) of THERMA V R290 Monobloc under Low Temperature & Average Climate conditions, which is higher than 5. The actual efficiency may vary with water and outside temperatures.

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.

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

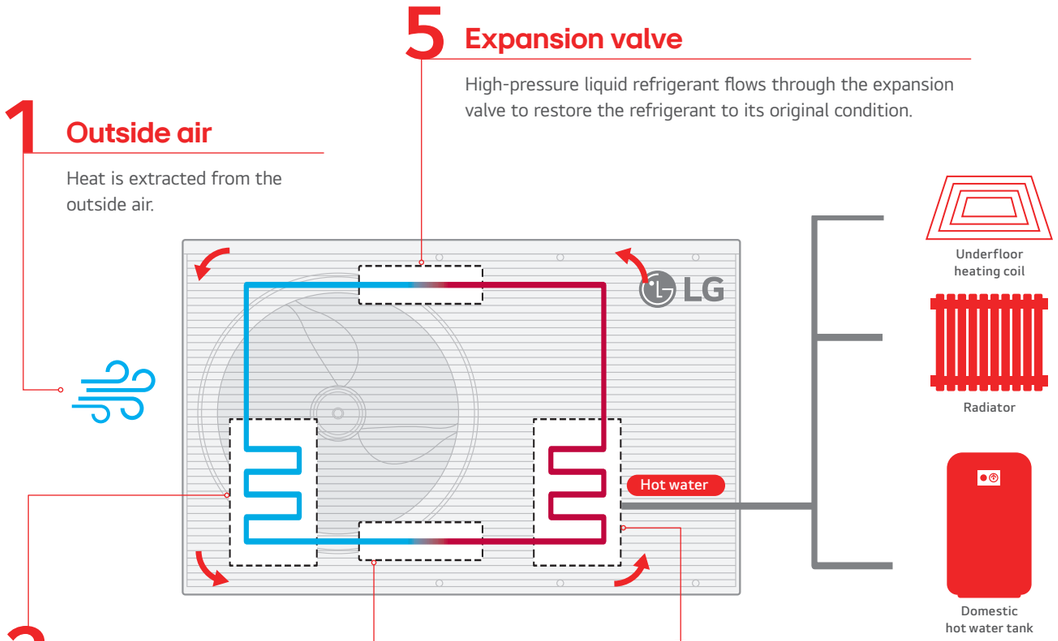
The vaporized refrigerant flows into the compressor. The electric energy used to operate the compressor is converted into heat and added to the refrigerant.

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.



REGULATIONS & CERTIFICATIONS

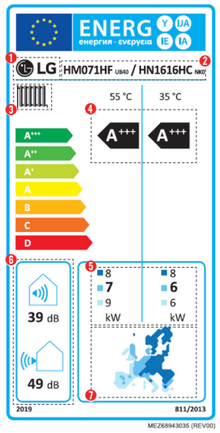
Energy Label

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

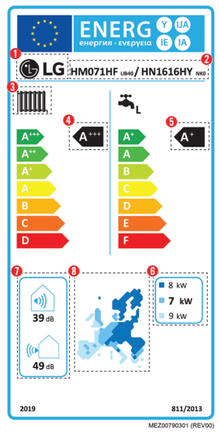
The energy labels provide minimum necessary information such as: manufacturer's name, manufacturer's model name, seasonal space heating energy efficiency class under average climate condition from A+++ to D in medium/low temperature applications (55°C/35°C), rated heat output under average, colder and 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).



Heat pump space heaters

1. 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)
5. Rated heat output (kW) under average, colder and warmer climate conditions in medium/low temperature applications (55°C/35°C)
6. Operating noise for indoor and outdoor
7. 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

1. 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 conditions from A+++ to D in medium temperature applications (55°C)
5. 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)
7. 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).

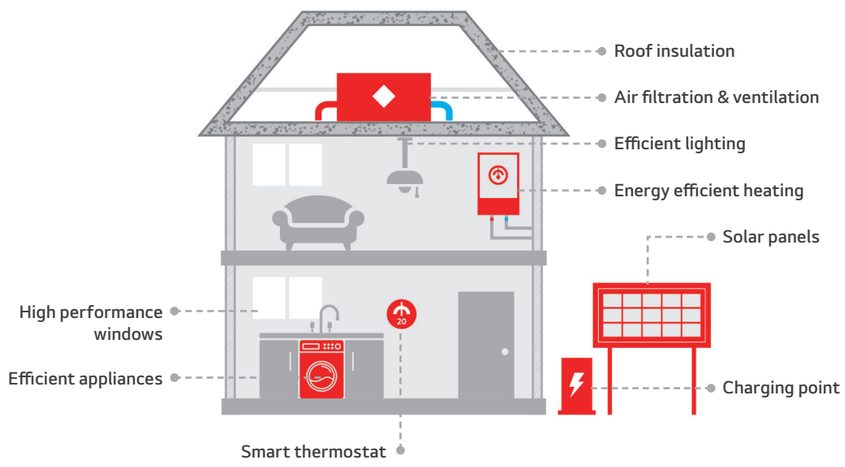
Nearly Zero Energy Building (nZEB)

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 Netherlands, 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
Browse now

EPREL - European Product Registry for Energy Labelling
https://eprel.ec.europa.eu/screen/product/spaceheaters
Browse now

Netherland - BENG
https://bcrg.nl/nl/databanken/energieprestaties/databank/
Browse now

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

France - RE2020
https://www.edibatec.org/base-produits/
Browse now

REGULATIONS & CERTIFICATIONS

Keymark

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 below for details.

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

Browse now

Eurovent

Established in 1993, Eurovent 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 below for details.

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

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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.

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 below for details.

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

Browse now

EHPA

The EHPA quality label is a label that shows the end-consumer a quality 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 below for details.

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

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THE SUSTAINABLE CHOICE

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

With refrigerant regulations changing around the world, it's time to move to a more eco-conscious solution. THERMA V R290 Monobloc uses natural R290 refrigerant which has a lower tonne of CO_2 equivalent index than other gases such as R32. Possible carbon emission from refrigerants is reduced by 99.7% compared to previous R32 Monobloc. The R290 can be vented directly into the atmosphere without any impact on the climate because it's eco-conscious refrigerant with nearly zero carbon emissions.

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

THERMA V™

SIMPLER INSTALLATION |
BETTER DESIGN
MORE COMFORTABLE LIVING |

FORM MEETS FUNCTION: THERMA V IN DARK DAWN GRAY

Outdoor units are now transformed with an elegant monotone design, showcasing a distinctive style through their design alone while elevating the aesthetic appeal of home's exterior.

Its refined new design ensures seamless integration with a wide variety of home and building exteriors.

Designed with European environmental considerations in mind, it not only offers aesthetic excellence but also ensures exceptional installation efficiency.

This design has been applied not only to the R290 model but also to the R32 Monobloc S II, achieving design unity and maximizing display value by featuring a wave-shaped grille that harmonizes simplicity and a unique pattern.

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.

THERMA V™

Space heating

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

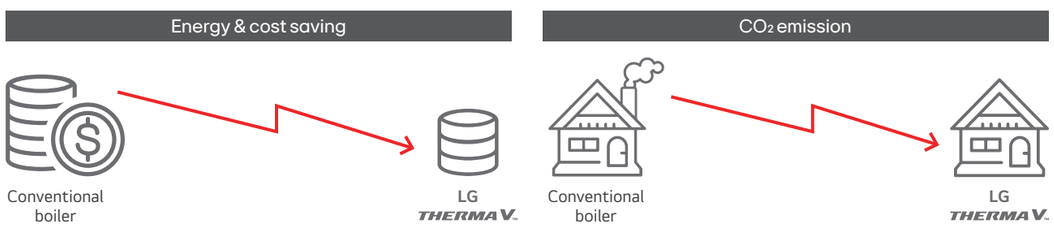
Domestic hot water

As the hot water efficiency becomes 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 CO_2 Emission



For more LG THERMA V information, please visit our website through QR code.

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Benefits of LG THERMA V

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
- Remote control, monitoring and diagnosis to avoid unnecessary site visits
- Clip connections for quick maintenance and no need for special tools

For Consultants and Designers

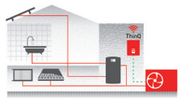
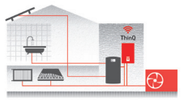
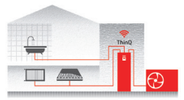
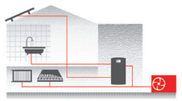
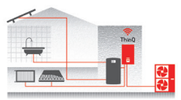
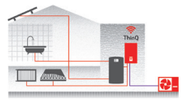
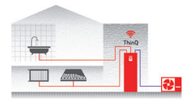
- Variety of software to support selection and designing THERMA V
- Multiple solutions with space heating, cooling and DHW supply
- Wide leaving water temperature - compatible with various heat emitters
- Valuable space savings with the small footprint
- Excellent heating performance even at low ambient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

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

THERMA V™
SOLUTION OVERVIEW

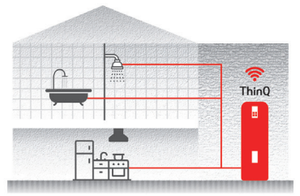
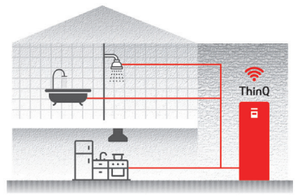
Individual Solutions

	Monobloc				Hydrosplit		Split	
Line-up								
	R290 Monobloc Control Unit	R290 Monobloc Hydro Unit	R290 Monobloc Combi Unit	R32 Monobloc S Ⅱ	R32 Hydrosplit Hydro Unit	R32 Hydrosplit Combi Unit	R32 Split Hydro Unit	R32 Split Combi Unit
Capacity	1 Ø: 7/9/12/14/16 kW 3 Ø: 7/9/12/14/16 kW	1 Ø: 7/9/12/14/16 kW 3 Ø: 7/9/12/14/16 kW	1 Ø: 7/9/12/14/16 kW 3 Ø: 7/9/12/14/16 kW	1 Ø: 5/7/9/12/14/16 kW 3 Ø: 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	1 Ø: 4/6 kW (U24A) 1 Ø: 5/7/9 kW (U36A)	1 Ø: 4/6 kW (U24A) 1 Ø: 5/7/9 kW (U36A)
Application								
Energy label	Space heating 35°C: A+++ 55°C: A+++ DHW heating A+ L Combination with OSHW-200F (Profile L)	Space heating 35°C: A+++ 55°C: A+++ DHW heating A+ L Combination with OSHW-200F (Profile L)	Space heating 35°C: A+++ 55°C: A+++ DHW heating A+ L	Space heating 35°C: A+++ 55°C: A++ DHW heating A+ L Combination with OSHW-200F (Profile L)	Space heating 35°C: A+++ 55°C: A++	Space heating 35°C: A+++ 55°C: A++ DHW heating A+ L	Space heating 35°C: A+++ 55°C: A++	Space heating 35°C: A+++ 55°C: A++ DHW heating A+ L Profile L (4/6 kW) Profile L (5/7 kW) Profile XL (9 kW)
Certifications								
Operation range (heating) – Outdoor air	-28 ~ 35°C	-28 ~ 35°C	-28 ~ 35°C	-25 ~ 35°C	-25 ~ 35°C	-25 ~ 35°C	4/6 kW: -20 ~ 35°C 5/7/9 kW: -25 ~ 35°C	4/6 kW: -20 ~ 35°C 5/7/9 kW: -25 ~ 35°C
Operation range (heating) – Leaving water	15 ~ 75°C	15 ~ 75°C	15 ~ 75°C	15 ~ 65°C	15 ~ 65°C	15 ~ 65°C	4/6 kW: 15 ~ 55°C 5/7/9 kW: 15 ~ 65°C	4/6 kW: 15 ~ 55°C 5/7/9 kW: 15 ~ 65°C
Operation range (cooling) – Outdoor air	5 ~ 48°C	5 ~ 48°C	5 ~ 48°C	5 ~ 48°C	5 ~ 48°C	5 ~ 48°C	5 ~ 48°C	5 ~ 48°C
Operation range (cooling) – Leaving water	5 ~ 27°C	5 ~ 27°C	5 ~ 27°C	5 ~ 27°C	5 ~ 27°C	5 ~ 27°C	5 ~ 27°C	5 ~ 27°C
Operation range (hot water)	15 ~ 65°C [1]	15 ~ 65°C [1]	15 ~ 65°C [1]	15 ~ 55°C [1]	15 ~ 55°C [1]	15 ~ 55°C [1]	4/6 kW: 15 ~ 50°C [1] 5/7/9 kW: 15 ~ 55°C [1]	4/6 kW: 15 ~ 50°C [1] 5/7/9 kW: 15 ~ 55°C [1]
Domestic hot water tank included	X	X	○ (200 ℓ)	X	X	○ (200 ℓ)	X	○ (200 ℓ)
Backup heater included	X	○	○	X (accessory)	X (accessory)	○	○	○
F-gas license needed	X	X	X	X	X	X	○	○
Wi-Fi remote control via ThinQ [2]	○	○	○	○	○	○	○	○

1) With electric boost heater up to 80°C possible.
2) Wi-Fi modem (PWFMDD200) should be purchased and installed separately.

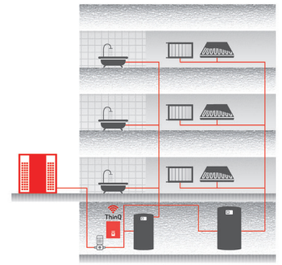
THERMA V™
SOLUTION OVERVIEW

Individual Solutions

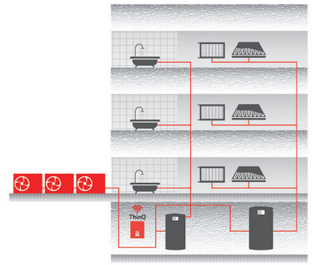
		Heat Pump Water Heater	
Line-up			
		R290 Round Type	R134a Square Type
Capacity		1 Ø: 100/150/200 ℓ	1 Ø: 200/270 ℓ
Application			
Energy label		DHW heating A+ 100ℓ (profile M) 150/200ℓ (profile L)	DHW heating A+ 200/270ℓ (profile L)
Certifications		SG Ready	1) 2) SG Ready
Operation range	Air temperature (Heat pump)	-7 ~ 48°C	-5 ~ 48°C
	Max. water temperature	up to 75°C	up to 60°C
Compressor type		Constant speed rotary	Inverter twin rotary
Heating element included		○	○
F-gas license needed		X	X
Wi-Fi remote control via ThinQ		○	○

1) WH20S.F5 / WH27S.F5
2) WH20STR2.FA / WH27STR2.FA

Collective Solutions

		Monobloc
Line-up		
		R32 Monobloc 51 kW
Capacity		3 Ø: 51 kW
Application		
Energy label		Space heating A++ 35℃ A++ 55℃
Certifications 1)		
Operation range (heating)	Outdoor air	-25 ~ 35°C
	Leaving water	25 ~ 60°C (65°C) 2)
Operation range (cooling)	Outdoor air	10 ~ 48°C
	Leaving water	5 ~ 27°C
Operation range (hot water)		25 ~ 55°C 3)
Domestic hot water tank included		X
Backup heater included		X
F-gas license needed		X
Wi-Fi remote control via ThinQ 4)		○

1) The other certifications for R32 Monobloc 51 kW are under progress.
2) The leaving water temperature of 65°C is possible only when a backup heater is installed.
3) With electric boost heater up to 80°C possible
4) Wi-Fi modem (PWFMDD200) should be purchased and installed separately.

		Cascade
Line-up		
		Cascade Control Unit
Max. number of outdoor units that can be combined		8 Units 1)
Application		
Compatible line-up		R290 Monobloc 2)
Operation range 3) (heating)	Outdoor air	-28 ~ 35°C
	Leaving water	15 ~ 70°C
Operation range 3) (cooling)	Outdoor air	5 ~ 48°C
	Leaving water	5 ~ 27°C
Operation range (hot water)		15 ~ 65°C 3) 4)
Indoor unit is needed separately from Cascade control unit		X
Wi-Fi remote control via ThinQ 5)		○

1) All units connected to Cascade Control Unit must be configured with models of the same capacity.
2) Only R290 Monobloc outdoor units manufactured after June of 2025 are compatible with cascade control unit.
3) When combined to R290 Monobloc
4) With electric boost heater up to 80°C possible
5) Wi-Fi modem (PWFMDD200) should be purchased and installed separately.

THERMA V™

LINE-UP OVERVIEW

Line-up	Unit	Type	Power supply	Appearance	4 kW	6 kW	Appearance	5 kW
R290 Monobloc	Outdoor Unit	-	1 Ø / 230 V					
			3 Ø / 400 V					
	Indoor Unit	Control Unit	Common					
		Hydro Unit	1 Ø / 230 V					
			3 Ø / 400 V					
		Combi Unit	1 Ø / 230 V					
			3 Ø / 400 V					
R32 Monobloc S Ⅱ	Set	-	1 Ø / 230 V					HM051MRS UA40
			3 Ø / 400 V					
R32 Hydrosplit	Outdoor Unit	-	1 Ø / 230 V					
			3 Ø / 400 V					
	Indoor Unit	Hydro Unit	Common					
		Combi Unit	Common					
R32 Split	Outdoor Unit	-	1 Ø / 230 V		HU041MR U20	HU061MR U20		HU051MR U44
	Indoor Unit	Hydro Unit	1 Ø / 230 V		HN0613M NK5			HN091MR NK5
		Combi Unit	1 Ø / 230 V		HN0613T NK0			HN0913T NK0
R32 Monobloc 51 kW	Outdoor Unit	-	3 Ø / 400 V					
	Indoor Unit	Control Unit	1 Ø / 230 V					

1) This is the power specifications of the backup heater inside indoor unit, and the main power supply of the indoor unit is single phase (1Ø/230V).
2) Combinations for 1 Ø outdoor units
3) Combinations for 3 Ø outdoor units

7 kW	9 kW	Appearance	12 kW	14 kW	16 kW	Appearance	51 kW
HM071HF UB40	HM091HF UB40		HM121HF UB60	HM141HF UB60	HM161HF UB60		
HM073HF UB40	HM093HF UB40		HM123HF UB60	HM143HF UB60	HM163HF UB60		
PHCS0 ENCXLEU			PHCS0 ENCXLEU				
HN1616HC NK0 [2]			HN1616HC NK0 [2]				
HN1639HC NK0 [3]			HN1639HC NK0 [3]				
HN1616HY NK0 [2]			HN1616HY NK0 [2]				
HN1639HY NK0 [3]			HN1639HY NK0 [3]				
HM071MRS UA40	HM091MRS UA40		HM121MRS UB40	HM141MRS UB40	HM161MRS UB40		
			HM123MRS UB40	HM143MRS UB40	HM163MRS UB40		
			HU121MRB U30	HU141MRB U30	HU161MRB U30		
			HU123MRB U30	HU143MRB U30	HU163MRB U30		
			HN1600MC NK1				
			HN1616Y NB1				
HU071MR U44	HU091MR U44						
HN091MR NK5							
HN0913T NK0							
							HM513MR UXC0
							PHCSL0 ENCXLEU

Line-up	Type	Power supply	Appearance	100 ℓ	Appearance	150 ℓ	Appearance
Heat Pump Water Heater	Round Type	1 Ø / 230 V		WH10ESF0 HA [1]		WH15ESF0 HA [1]	
	Square Type	1 Ø / 230 V					

1) SG Ready certified

200 ℓ	Appearance	270 ℓ
WH20ESF0 CA [1]		
WH20STR2 FA [1] WH20S F5		WH27STR2 FA [1] WH27S F5

1) SG Ready certified

Line-up	Power supply	Appearance	Model name
Cascade Control Unit	1 Ø / 230 V		PHCM0 ENCXLEU

THERMA V™

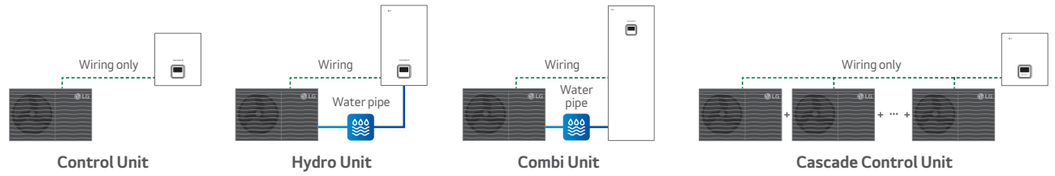
LINE-UP INTRODUCTION

R290 Monobloc

The new R290 Monobloc is a super-quiet, future-conscious heat pump that uses the R290 refrigerant which has lower GWP of only three. From an aesthetic standpoint, refined gray design allows it to seamlessly harmonize with a diverse range of home and building exteriors, and from a technical standpoint, it is designed to be low-noise, so you don't have to worry about causing noise pollution to neighbors. The LG THERMA V R290 Monobloc is available in three different combinations (Control Unit, Hydro Unit or Combi Unit) depending on the customers' needs. By adopting a high-efficiency compressor leveraging injection technology, R290 Monobloc can deliver a leaving water temperature of up to 75°C all year round. Thus, this unit is suitable for home renovations due to high water temperature compatibility with existing radiators.

Due to LG's advanced compressor technology, the THERMA V R290 Monobloc keeps indoor spaces comfortably warm-even when outdoor temperatures drop as low as -28°C.

Browse now



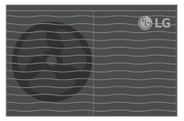
Control Unit | Hydro Unit | Combi Unit | Cascade Control Unit

Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R290 Monobloc	1 Ø 230 V				●	●	●	●	●
	3 Ø 400 V				●	●	●	●	●

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

R32 Monobloc S Ⅱ

The THERMA V R32 Monobloc S Ⅱ is the next generation model that continues the legacy of the LG THERMA V R32 Monobloc S. The new generation's sleek look matches that of the rest of the modernized line-up, while maintaining the excellent performance of the existing R32 Monobloc S, and that the single fan design has been applied to not only the 5, 7, and 9 kW but also the 12, 14, and 16 kW models. Along with these design changes, various features and installation conveniences that were developed from the R290 Monobloc have been reflected.

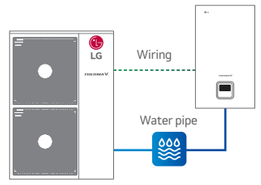


Browse now

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

R32 Hydrosplit Hydro Unit

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 Unit is a solution providing space heating, cooling and DHW supply with high installation flexibility thanks to the characteristic of being a wall mounted type. Its wall-mounted design frees up floor space and speeds up installation due to its lightweight build. With the unit located indoors-often in a machine room-access for maintenance is quick and hassle-free.



Browse now

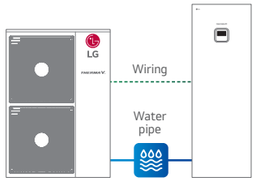
Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R32 Hydrosplit Hydro Unit	1 Ø 230 V						●	●	●
	3 Ø 400 V						●	●	●

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

THERMA V™
LINE-UP INTRODUCTION

R32 Hydrosplit Combi Unit

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 Combi Unit 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 system is easy to install and operate, and boasts 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.



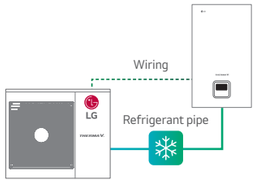
Browse now

Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R32 Hydrosplit Combi Unit	1 Ø 230 V						●	●	●
	3 Ø 400 V						●	●	●

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

R32 Split Hydro Unit

The LG THERMA V R32 Split Hydro Unit is a hydro type system consisting of an indoor 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.



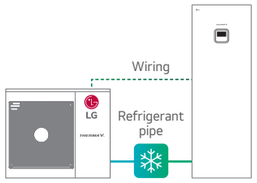
Browse now

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

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

R32 Split Combi Unit

The LG THERMA V R32 Split Combi Unit 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 Combi Unit 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. Its split design eliminates the risk of freezing, delivering reliable operation against harsh 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 the R32 Split 5/7/9 kW model is adapted for both new build and renovation projects.



Browse now

Line-up	Capacity (kW)	4.0	5.5	6.0	7.0	9.0	12.0	14.0	16.0
R32 Split Combi Unit	1 Ø 230 V	●	●	●	●	●			
	3 Ø 400 V								

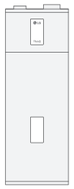
* The power supply is shown based on the outdoor unit.

THERMA V™

LINE-UP INTRODUCTION

R290 Heat Pump Water Heater

The new refrigerant technology allows the unit to efficiently reach outlet temperatures of up to 75°C. Available in sizes ranging from 100 to 200 liters, the unit is developed to meet the capacity needs of each household. Designed with modern living in mind, the R290 Heat Pump Water Heater blends seamlessly into any indoor space. Plus, its ultra-low noise level-quieter than a typical office-ensures everyday comfort without disruption. The magnesium anode and ICCP (Impressed Current Cathodic Protection) help to always keep the tank clean by preventing interior corrosion.

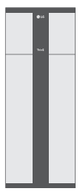


Browse now

Line-up	Capacity (ℓ)	80 ℓ	100 ℓ	150 ℓ	200 ℓ	270 ℓ	300 ℓ
R290 Heat Pump Water Heater	1 Ø 230 V		●	●	●		

R134a Heat Pump Water Heater

LG inverter compressor and two heater coils on the top and bottom provide hot water quickly. LG unit's exclusive square shape and luxury silver color make it an excellent fit for any interior design. With the LG ThinQ smartphone app, users can easily control and monitor the heat pump, check for current water temperatures, setting operating schedules and more. Four operating modes help the customer use the water heater more effectively.

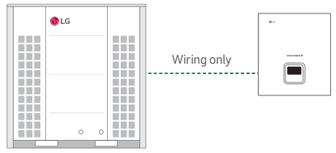


Browse now

Line-up	Capacity (ℓ)	80 ℓ	100 ℓ	150 ℓ	200 ℓ	270 ℓ	300 ℓ
R134a Heat Pump Water Heater	1 Ø 230 V				●	●	

R32 Monobloc 51 kW

The LG R32 Monobloc 51 kW is a large capacity heat pump that provides a collective central heating solution for multi-family houses or light commercial buildings. Ideal for locations that require reliable heating and cooling year-round, this air to water heat pump offers a versatile solution.
Operating efficiently as a single system, it is well-suited for various commercial spaces including multi family house, office buildings, schools and universities.

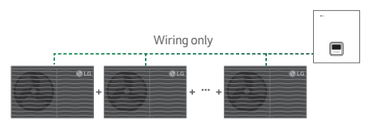


Browse now

Line-up	Capacity (kW)	18.0	24.0	32.0	36.0	48.0	51.0	64.0	80.0	96.0	112.0	128.0
R32 Monobloc 51 kW	3 Ø 400 V	Recommend to use Cascade Solution					●	Recommend to use Cascade Solution				

Cascade Control Unit

The LG Cascade Control Unit is an advanced heating solution designed to manage up to 8 units of the THERMA V system with a single controller. This centralized control enhances system efficiency and simplifies operation, making it an ideal choice for optimizing heat pump performance in multi-unit applications.
Cascade system offers efficient performance across all heating capacity ranges, adapting to fluctuating demand while maintaining reliability and reducing unnecessary energy consumption.



Browse now

Line-up	Capacity (kW)	18.0	24.0	32.0	36.0	48.0	64.0	80.0	96.0	112.0	128.0
Cascade Control Unit	Combination	9 kW x 2 Units	12 kW x 2 Units	16 kW x 2 Units	12 kW x 3 Units	16 kW x 3 Units	16 kW x 4 Units	16 kW x 5 Units	16 kW x 6 Units	16 kW x 7 Units	16 kW x 8 Units
	No of Units	2 Units			3 Units		4 Units	5 Units	6 Units	7 Units	8 Units

* LG recommends above combinations as much as possible even though up to eight (8) R290 Monobloc outdoor units of the same capacity can be connected.

PRE-SALES / ENGINEERING TOOLS

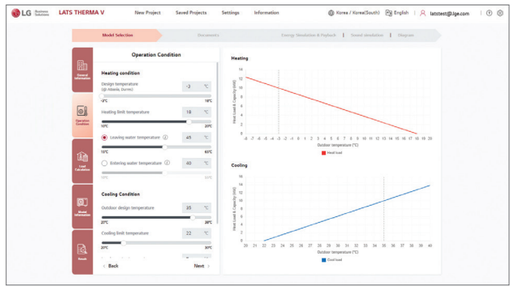
Pre-sales / Engineering Tools

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

1. LATS THERMA V

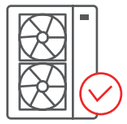
LATS THERMA V is a web based simulation tool that enables to choose the optimal THERMA V model from various capacity range and simulates its energy cost comparing to other heating solutions. Furthermore, customer is easily able to simulate payback compared to a conventional system such as a gas boiler, electric boiler by using LATS THERMA V.

Browse now

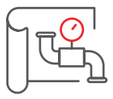


There are 3 types project in LATS THERMA V WEB.

1. Model Selection : Select suitable model based on the design conditions you input.



2. Diagram : Generate piping / wiring diagrams in DWG format based on the design conditions and other selected applications.

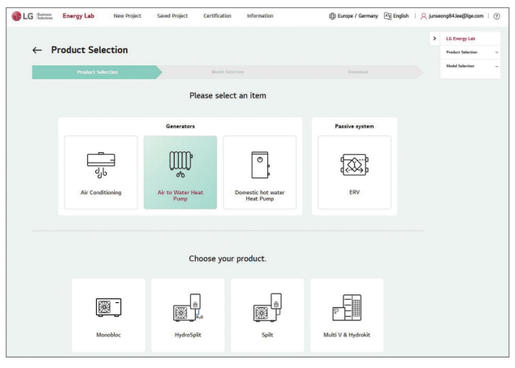


3. Sound Simulation : Provide noise simulation results according to distance from house.

2. LG Energy Lab

LG Energy Lab online is a web version tool that can print energy labels. It is easy to use because it is composed of a user-friendly UI, and provides additional functions such as contact function and project management function.

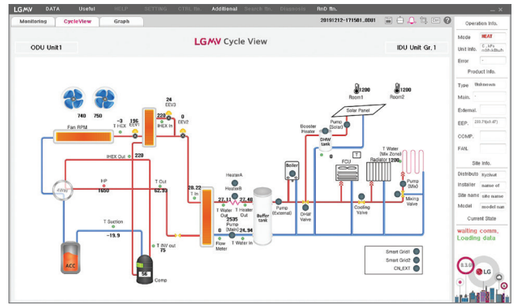
Browse now



3. LGMV

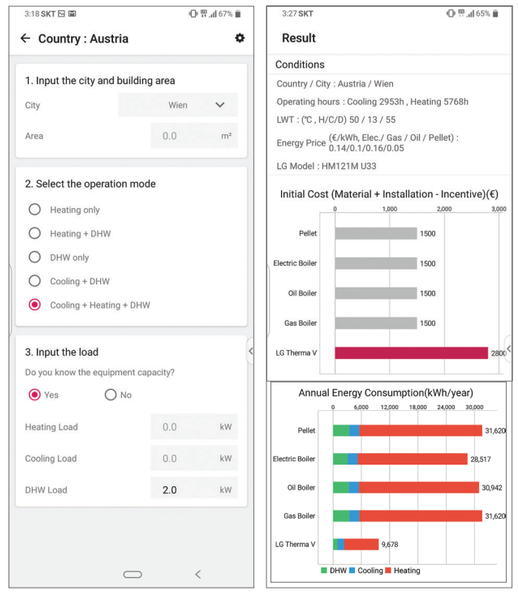
LGMV is a useful engineering tool that monitors THERMA V's real-time refrigerant and water cycle. It assists installers with effective and efficient start-up and commissioning after the THERMA V installation. LGMV enables service/field engineers to detect the errors and troubleshooting for fast and reliable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

* LGMV is available on the LG partner portal.



4. 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 CO_2 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.



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.

For Android users

GET IT ON Google Play

Download now

For iOS users

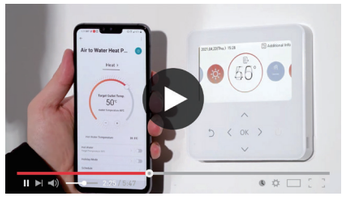
Download on the App Store

Download now

How to connect THERMA V to the LG ThinQ app

Watch now

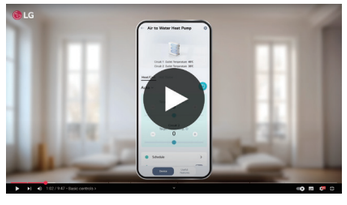
In the video below, see how to install Wi-Fi modem and connect THERMA V and ThinQ.



A ThinQ guide for LG THERMA V

Watch now

In the video below, learn how to smartly monitor and control your THERMA V with ThinQ



Connect and Control from anywhere, anytime

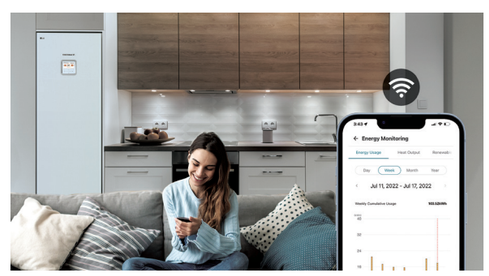
LG ThinQ allows end users to easily control their heating system in away they have never done before. Let them experience smart control of THERMA V with just the tap of a button. Even when outside, they can operate the THERMA V remotely.

Simple control with voice assistant

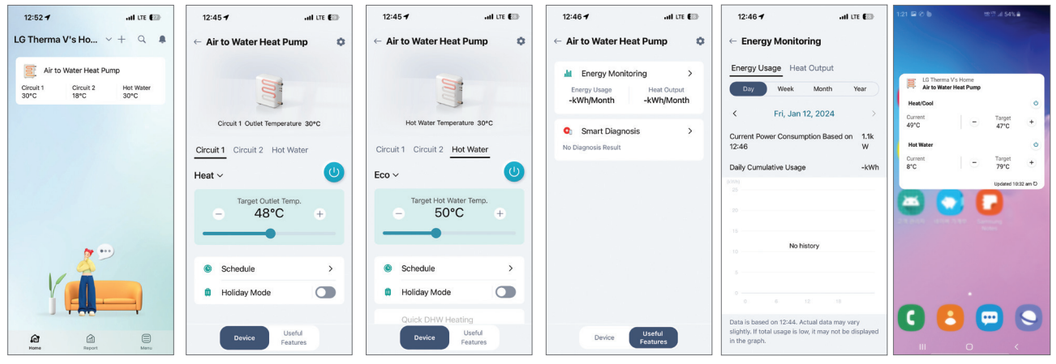
Tell THERMA V exactly what is needed.
Say, “Turn on/off the THERMA V” and the AI speaker will listen and turn on/off the THERMA V.

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



Home screen | Space heating / Cooling control | Hot water control | Useful features | Energy monitoring | Widget on home screen (Android)

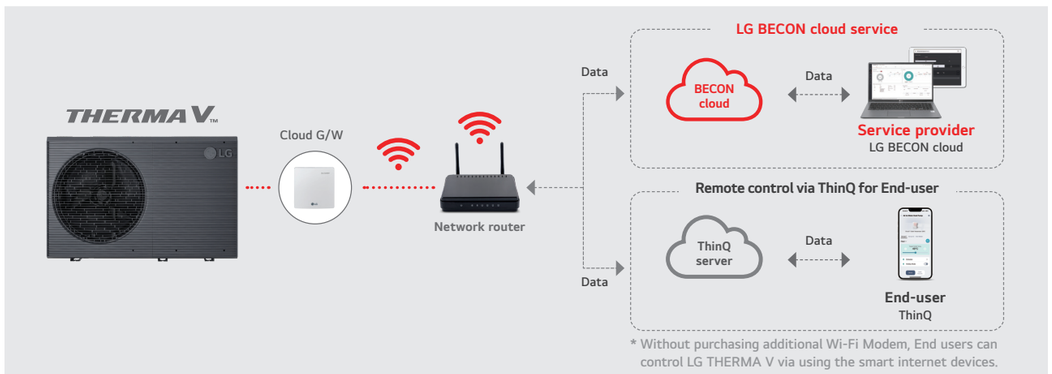
This image is intended to help you understand, and there may be some differences in actual use.
* Control via widgets is only possible with the Android app.

LG BECON CLOUD SERVICE

for THERMA V™

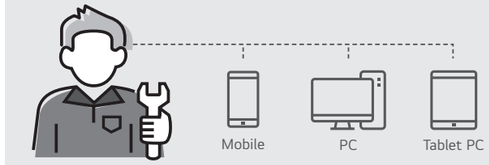
What is LG BECON cloud Service?

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



☑ 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

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

☑ Less constraints

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

Key Features

Management at a glance

Monitoring status of customers

• Interactive map view or list view

Energy monitoring

Providing warning if energy usage is excessively high

• Display estimated power consumption by self-calculation

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

Operation and error history

Providing operation data and error history to quickly identify the issue

• Operation history, error history, setting history, etc

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

Error notification by e-mail

Providing an e-mail notification automatically when an error occurs

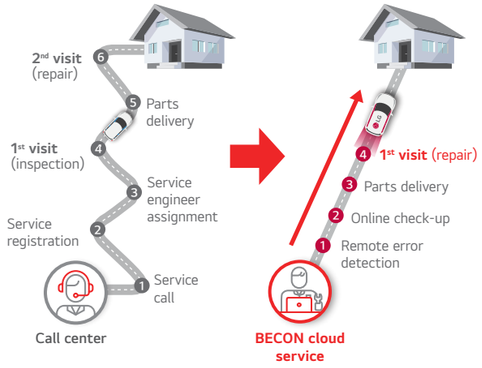
• Possible to identify immediately and take a fast action

LG *BECON* CLOUD SERVICE
for THERMA V™

Why LG BECON cloud Service?

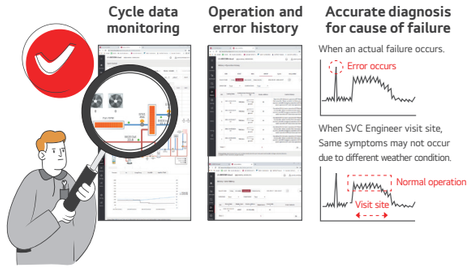
Quick service response time

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



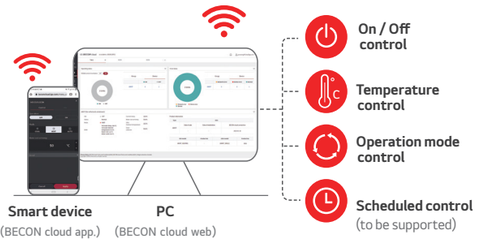
Accurate diagnosis

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



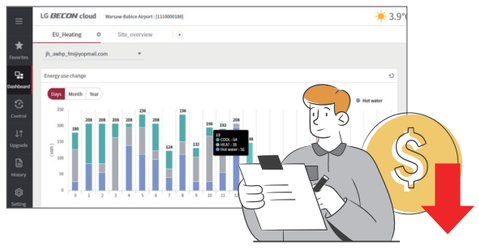
Remote device control

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.



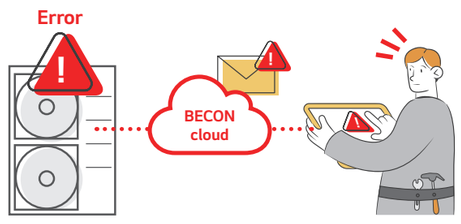
Energy monitoring

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



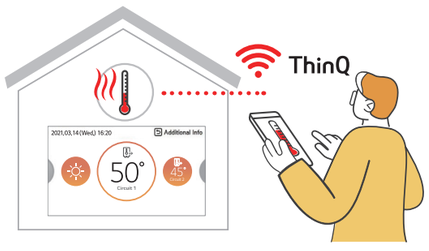
Error notification by e-mail

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.



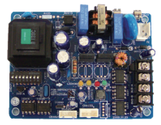
ThinQ for end-users

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



Requirements

Cloud gateway



PI485 gateway

Compatible THERMA V [1]	Required accessory	Network router
R290 Monobloc R32 Monobloc S Ⅱ R32 Split Hydro Unit R32 Split Combi Unit R32 Hydrosplit Hydro Unit	Cloud gateway (PWFMDB200) PI485 gateway (PP485A00T) [1]	Wireless or wired LAN
LG BECON cloud service contract	**Supported device / software**	**Supported language [2]**
Authority (ID and PW) to use LG platform (LG BECON cloud service)	PC, Tablet, Mobile PC or Mobile web browser, Mobile app. (Android / iOS)	English, Spanish, Italian, German, Polish, Greek

1) In the case of R290 Monobloc, PI485 G/W is built-in, so there is no need to purchase it separately.
2) More languages will be supported sequentially. The schedule for service availability may vary by country.

Interface Screen

Dashboard

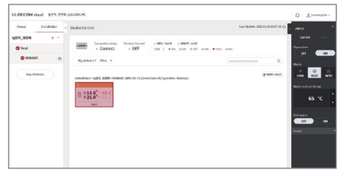
[Operation status summary]

[Operation status]

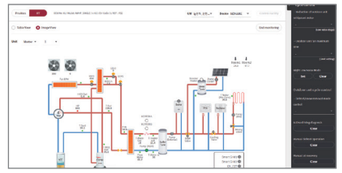
Site

[Site overview]

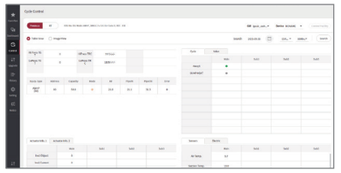
Control



[Device control]



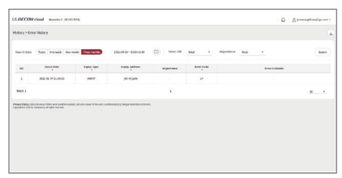
[Cycle monitoring – schematic view]



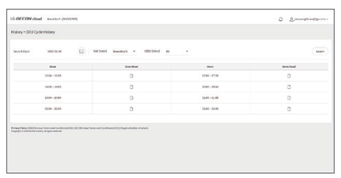
[Cycle monitoring – table view]

History

[Operation history]



[Error history]



[Outdoor unit cycle history]

MONOBLOC
044 R290 Monobloc
048 - Control Unit (7/9/12/14/16 kW)
062 - Hydro Unit (7/9/12/14/16 kW)
076 - Combi Unit (7/9/12/14/16 kW)
094 R32 Monobloc S Ⅱ (5/7/9/12/14/16 kW)

HYDROSPLIT
110 R32 Hydrosplit
114 - Hydro Unit (12/14/16 kW)
124 - Combi Unit (12/14/16 kW)

SPLIT
134 R32 Split
138 - Hydro Unit (4/6, 5/7/9 kW)
152 - Combi Unit (4/6, 5/7/9 kW)

HEAT PUMP WATER HEATER
174 R290 Round Type (100/150/200ℓ)
182 R134a Square Type (200/270ℓ)

THERMA V™ R290 Monobloc

What is R290 Monobloc

The new R290 Monobloc is a super-quiet, future-conscious heat pump that uses the R290 refrigerant which has lower GWP of only three.
From an aesthetic standpoint, refined gray design allows it to seamlessly harmonize with a diverse range of home and building exteriors, and from a technical standpoint, it is designed to be low-noise, so you don't have to worry about causing noise pollution to neighbors.
The LG THERMA V R290 Monobloc is available in three different combinations (Control Unit, Hydro Unit or Combi Unit) depending on the customers' needs.

Key Features

- Capacity range from 7 to 16 kW for new build and renovation
- Natural refrigerant R290 with low GWP (3)
- Refined gray design that adapts to various surroundings
- ErP Energy Labeling A+++ / A+++ for space heating (Average Climate 35°C / 55°C LWT)
- One of the quietest models on the market (49 dB(A) for 7 kW, 12 kW models)
- Maximum flow temperature up to 75°C
- Operation range down to -28°C
- Customized options through different three indoor units combinations
- Provides 75°C leaving water even at -15°C outdoor temperatures (7/9 kW only)
- 2024 IDEA Design Awards Bronze Winner

R290 Natural refrigerant with GWP 3 · Space heating · A+++ 35°C · A+++ 55°C · DHW heating · A+ L · 75°C · -28°C · ThinQ

Product Range

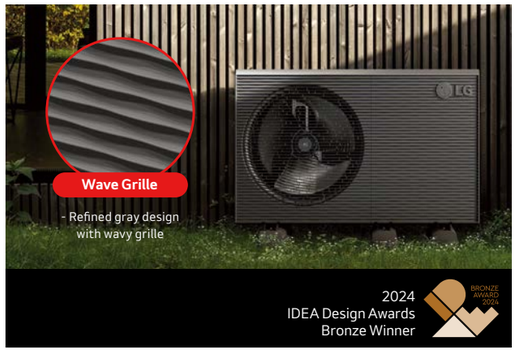
Phase	Capacity (kW)	Indoor Unit			Outdoor Unit
		Control Unit	Hydro Unit	Combi Unit	
1 Ø	7	PHCS0 ENCXLEU	HN1616HC NK0	HN1616HY NK0	HM071HF UB40 HM091HF UB40
	9				
	12				HM121HF UB60 HM141HF UB60 HM161HF UB60
	14				
	16				
3 Ø	7		HN1639HC NK0	HN1639HY NK0	HM073HF UB40 HM093HF UB40
	9				
	12				HM123HF UB60 HM143HF UB60 HM163HF UB60
	14				
	16				

HIGHLIGHT OF R290 MONOBLOC

Browse now

New Design

European Design



High Reliability

Anti-icing and Deicing technologies for R290 Monobloc.

❶ Defrost operation by dual EEVs & Cycle
❷ Corrugated fin
❸ Base pan heating (heater)
❹ Elimination of side panel and rear grille
❺ Frost-free for bottom pass of heat exchanger
❻ Increased quantity for drain hole

Improved Operational Stability

Freezing Outside, but Toasty Inside

The R290 Monobloc can function in external temperatures as low as -28°C. Plus, customers can retain their existing radiators as the system can generate an outlet water of up to 75°C, offering a cost-saving advantage. Even at -15°C, it is possible to provide an outlet water temperature of 75°C.
(7 / 9 kW only)

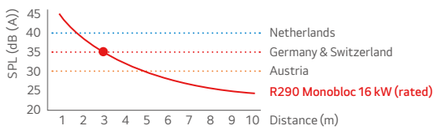
Extremely Quiet Operation

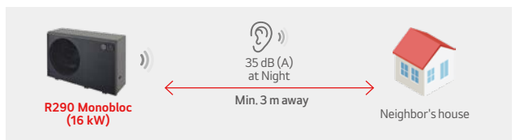
Heats Home in Hushed Tones

R290 Monobloc	7 kW	9 kW	12 kW	14 kW	16 kW
Sound power level [1] (heating / rated)	49	50	49	51	52
Sound power level [1] (heating / low noise mode)	47	48	48	50	51

1) Sound power level is measured in accordance with EN 12102-1 and ISO 9614.

Ensuring regulatory compliance across all EU markets

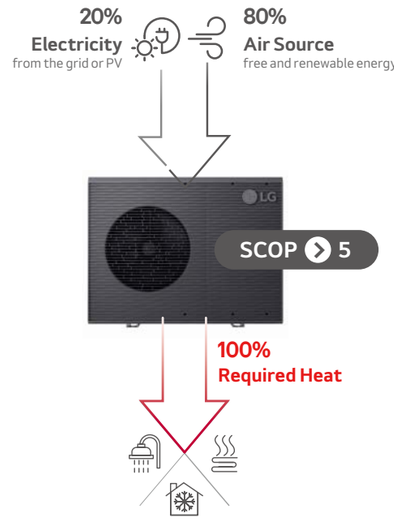




Customers can have peace of mind with no risk of complaints and no additional costs for acoustic enclosures.

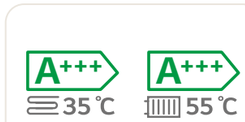
High Efficiency Operation

Exceptional Efficiency



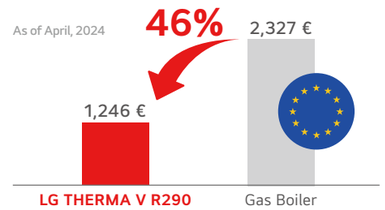
Achieving the highest ErP energy grade A+++ / A+++ for space heating

LG THERMA V R290 Monobloc
(7 / 9 / 12 / 14 / 16 kW)



Reduced annual energy costs

Estimated Average Annual Energy Costs* in the EU (EU 27)



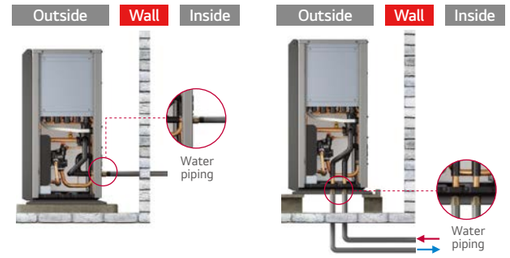
* This is simulation result based on conditions under average climate & Medium temperature (55°C) and it may differ from actual value since there are many assumptions used.

Convenience

Easy Installation

The two-way piping connection method not only grants greater installation flexibility but also offers distinct advantages when it comes to concealing underground piping for both aesthetic and frost protection purposes.

* The downward piping kit should be purchased and installed separately.
  - PHDW36B0 for 7, 9 kW models
  - PHDW60B0 for 12, 14, 16 kW models



Freedom of Integration

Customized Combinations to Meet Diverse Needs

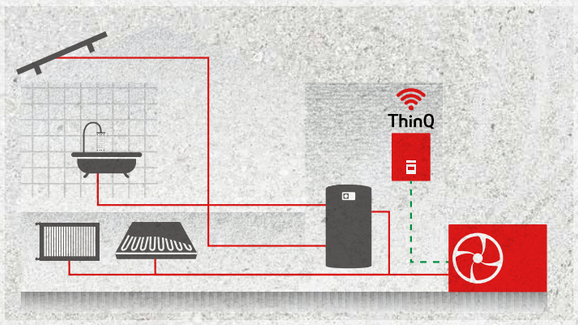
Since THERMA V R290 Monobloc has hydro components integrated into the outdoor unit, it can be combined with various indoor units to implement applications tailored to customer needs.

Outdoor Unit	Indoor Unit Type
	Control Unit • Stand-alone concept • Easy integration with 3rd party equipment
	Hydro Unit • Back-up heater & expansion tank integrated inside
	Combi Unit • DHW tank, back-up heater, expansion tank integrated inside • 200 ℓ stainless steel tank

THERMA V™ R290 Monobloc |
CONTROL UNIT

Key Features

- Stand-alone concept
- Light weight and compact size fits in small spaces
- Simple installation by minimizing piping and wiring work
- Easy integration with 3rd party equipment because of less cabling
- No pipe connections for the indoor unit allow for a neat installation



Easy to Install, Minimal Space Required

Since the water pipe is not connected to the indoor unit and requires less installation space, it offers an easy installation process similar to the full Monobloc concept.

This setup is especially recommended for cases where the customer does not wish to install a backup heater, prefers to add it as a third-party accessory, or opts to install a larger expansion tank.

Application

Certifications

Energy Label

Space heating A+++ 35℃ A+++ 55℃

THERMA V R290 MONOBLOC CONTROL UNIT (7 / 9 kW)

Outdoor unit

HM071HF UB40 / HM073HF UB40
HM091HF UB40 / HM093HF UB40

Indoor unit

PHCS0 ENCXLEU

011-1W0831

R290
Natural refrigerant with GWP 3

A+++ 35℃

A+++ 55℃

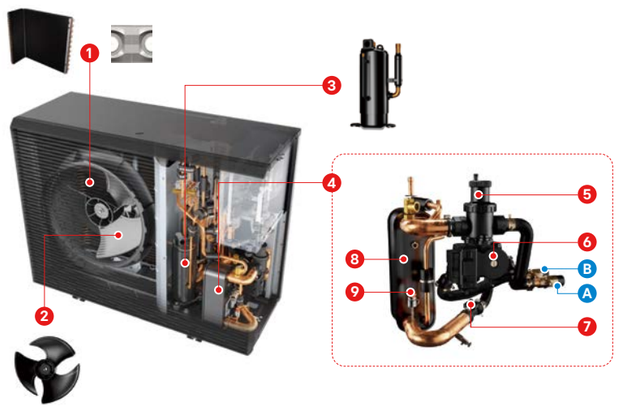
75℃

-28℃

ThinQ

Key Components

Outdoor Unit



Components

1. Black Fin heat exchanger (air / ref.)
2. Biomimetic fan
3. New R1 compressor
4. Hydronic components assembly
5. Deaerator
6. Water pump
7. Flow sensor
8. Plate heat exchanger
9. Pressure sensor

Connections

A. Leaving water pipe (male PT 1")
B. Entering water pipe (male PT 1")

Indoor Unit (Control Unit)

Components

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

1) Temperature control class (ERP class) : V

Product Specification

Efficiency Data		Unit	7 kW (1 Ø) 7 kW (3 Ø)	9 kW (1 Ø) 9 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A+++	A+++ / A+++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	207 / 151	205 / 151
SCOP (35°C / 55°C)		-	5.24 / 3.86	5.20 / 3.86
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	49 / 48	50 / 48
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	27 / 26	28 / 26
Nominal Capacity and COP/EER				
Air +7°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 5.00	9.00 / 4.70
Air +2°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 3.80	8.00 / 3.70
Air -7°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 2.80	9.00 / 2.70
Air +7°C / water +55°C	Heating capacity / COP	kW / -	4.50 / 3.35	5.50 / 3.30
Air -7°C / water +55°C	Heating capacity / COP	kW / -	7.00 / 2.40	8.00 / 2.20
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	5.00 / 4.40	5.50 / 4.20
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	5.00 / 2.80	5.50 / 2.60
Outdoor Units		**Unit**	**HM071HF UB40 HM073HF UB40**	**HM091HF UB40 HM093HF UB40**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-28 ~ 35	
	Cooling (Min. ~ Max.)	°C	5 ~ 48	
Refrigerant	Type	-	R290	
	GWP	-	3	
	Precharged amount	g	900	
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
Dimension	H x W x D	mm	1,019 x 1,320 x 520	
Weight	Net	kg	130.0	
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037	
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012	
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50	
	Standby power consumption	W	10	
	Recommended circuit breaker	A	1 Ø: 20 / 3 Ø: 16	
Indoor Units		**Unit**	**PHCS0 ENCXLEU**	
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 75	
	Cooling (Min. ~ Max.)	°C	5 ~ 27	
	DHW (Min. ~ Max.)	°C	15 ~ 80	
Dimension	H x W x D	mm	490 x 420 x 141	
Weight	Net	kg	6.8	
Exterior	Color / RAL code	-	Essence white / RAL 9003	
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50	
	Recommended circuit breaker	A	10	

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R290 MONOBLOC CONTROL UNIT (7 / 9 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM071HF UB40 + PHCS0 ENCXLEU / HM073HF UB40 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	5.90	5.85	5.85	5.85	5.80	5.80	5.80	-	-	-
-20	6.50	6.50	6.50	6.50	6.20	6.10	6.10	6.00	-	-
-15	7.00	7.00	7.00	7.00	6.80	6.70	6.30	6.30	6.20	6.20
-7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70	6.60	6.40
-4	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70	6.50
-2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.80	6.50
2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70
7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.80
10	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
18	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35	-	-	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

HM091HF UB40 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	7.40	7.20	7.10	6.90	6.80	6.70	6.60	-	-	-
-20	8.20	7.90	7.70	7.50	7.30	7.10	6.90	6.60	-	-
-15	9.00	9.00	8.20	7.90	7.70	7.60	7.30	7.00	6.80	6.50
-7	9.00	9.00	9.00	8.50	8.40	8.00	7.90	7.70	7.40	6.60
-4	9.00	9.00	9.00	9.00	9.00	8.40	8.20	7.90	7.70	6.70
-2	9.00	9.00	9.00	9.00	9.00	9.00	8.40	8.10	7.60	6.80
2	8.00	8.00	8.10	8.20	8.30	8.40	8.20	8.10	7.80	6.90
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.20	7.10
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.20	7.20
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.30	7.30
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.40	7.40
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.40	7.50
35	-	-	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.00

HM093HF UB40 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	7.90	7.77	7.92	8.08	8.20	8.40	8.40	-	-	-
-20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-	-
-15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
2	8.00	8.00	8.10	8.20	8.30	8.40	8.20	8.10	8.00	7.00
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35	-	-	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.00

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM071HF UB40 + PHCS0 ENCXLEU / HM073HF UB40 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	5.30	6.00	6.70	7.00	7.00	7.00	7.00
30	5.10	5.40	5.80	6.20	7.00	7.00	7.00
35	5.00	5.40	5.80	6.20	6.80	6.80	7.00
40	4.60	4.90	5.30	5.60	6.20	6.70	7.00
45	4.20	4.70	5.30	5.60	6.20	6.50	7.00

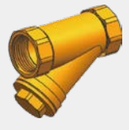
HM091HF UB40 + PHCS0 ENCXLEU / HM093HF UB40 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	5.80	6.70	7.50	9.00	9.00	9.00	9.00
30	5.60	6.40	7.20	7.70	9.00	9.00	9.00
35	5.50	6.30	7.20	7.80	9.00	9.00	9.00
40	5.00	5.70	6.40	6.80	7.40	7.70	9.00
45	4.40	5.10	5.70	6.10	6.80	7.20	7.60

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer



Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

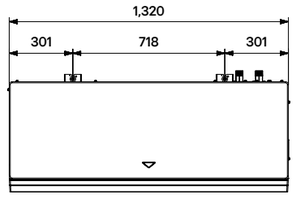
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R290 MONOBLOC CONTROL UNIT (7 / 9 kW)

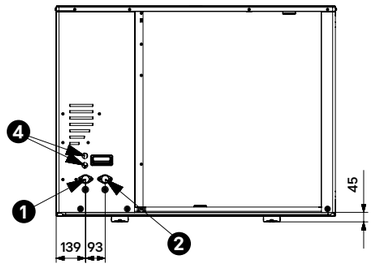
Drawings

[Unit: mm]

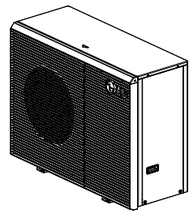
HM071HF UB40 / HM073HF UB40
HM091HF UB40 / HM093HF UB40



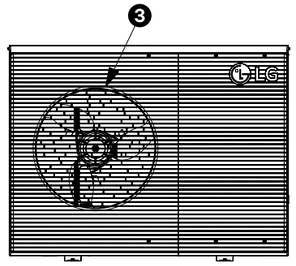
Top view



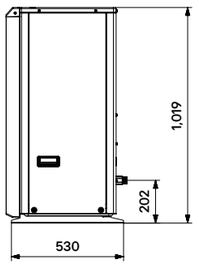
Back view



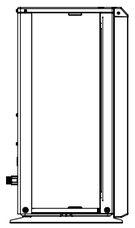
3D view



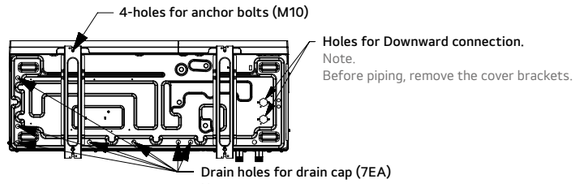
Front view



Side view



Side view

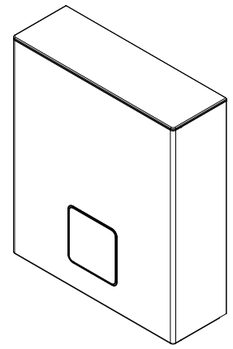


Bottom view

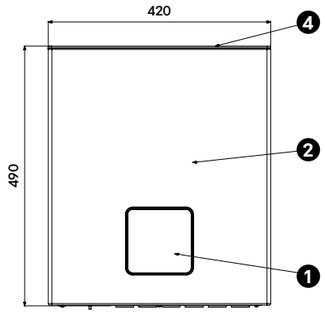
No.	Part Name	Description
1	Leaving Water Pipe	Male PT 1 inch
2	Entering Water Pipe	Male PT 1 inch
3	Air Discharge Grille	-
4	Access to Electrical Terminals	Power, Communication

PHCS0 ENCXLEU

[Unit: mm]

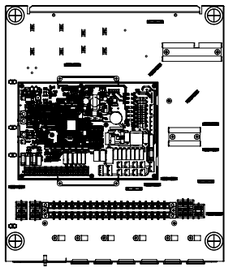


3D view

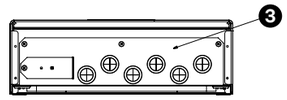


Front view

Side view



Internal view



Bottom view

No.	Part Name	Description
1	Remote Controller Assembly	Built-in Remote Controller
2	Panel Assembly.Front	SGMCD1 M08 ESSENCE WHITE PCM
3	Panel Assembly.Indoor	PCB and Terminal Blocks
4	Cover	MOLD ABS

THERMA V R290 MONOBLOC CONTROL UNIT (12 / 14 / 16 kW)

Outdoor unit

HM121HF UB60 / HM123HF UB60
HM141HF UB60 / HM143HF UB60
HM161HF UB60 / HM163HF UB60

Indoor unit

PHCS0 ENCXLEU

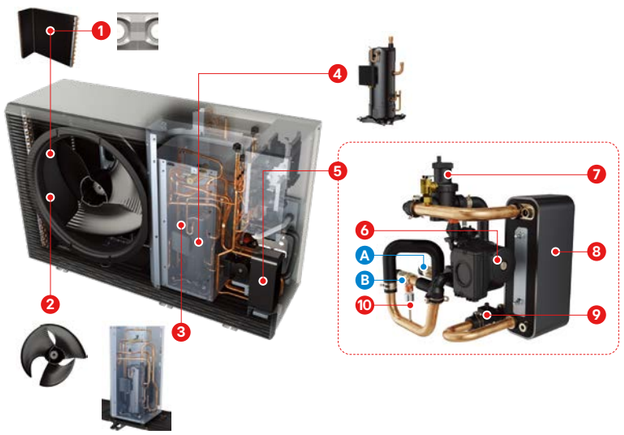
011-1W0689

R290 Natural refrigerant with GWP 3

A+++ 35℃ | A+++ 55℃ | 75℃ | -28℃ | ThinQ

Key Components

Outdoor Unit



Components

1. Black Fin heat exchanger (air / ref.)
2. New biomimetic fan
3. Dual sound shield
4. R290 scroll compressor
5. Hydronic components assembly
6. Water pump
7. Deaerator
8. Plate heat exchanger (ref / water)
9. Flow sensor
10. Pressure sensor

Connections

A. Leaving water pipe (male PT 1")
B. Entering water pipe (male PT 1")

Indoor Unit (Control Unit)

Components

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

1) Temperature control class (ERP class) : V

Product Specification

Efficiency Data		Unit	12 kW (1 Ø) 12 kW (3 Ø)	14 kW (1 Ø) 14 kW (3 Ø)	16 kW (1 Ø) 16 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A+++	A+++ / A+++	A+++ / A+++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	215 / 156	212 / 155	201 / 154
SCOP (35°C / 55°C)		-	5.45 / 3.97	5.38 / 3.96	5.11 / 3.92
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	49 / 48	51 / 50	52 / 51
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	27 / 26	29 / 28	30 / 29
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 4.70	14.00 / 4.50	16.00 / 4.30
Air +2°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 3.72	14.00 / 3.61	14.50 / 3.49
Air -7°C / water +35°C	Heating capacity / COP	kW / -	11.80 / 3.27	13.00 / 3.21	13.80 / 3.17
Air +7°C / water +55°C	Heating capacity / COP	kW / -	10.00 / 3.10	11.00 / 3.25	12.00 / 3.30
Air -7°C / water +55°C	Heating capacity / COP	kW / -	9.30 / 2.32	10.30 / 2.28	10.90 / 2.26
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	11.50 / 3.78	12.00 / 3.70	12.50 / 3.70
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	10.50 / 3.12	12.00 / 2.99	12.50 / 2.95
Outdoor Units		**Unit**	**HM121HF UB60 HM123HF UB60**	**HM141HF UB60 HM143HF UB60**	**HM161HF UB60 HM163HF UB60**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-28 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Refrigerant	Type	-	R290		
	GWP	-	3		
	Precharged amount	g	1,200		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Dimension	H x W x D	mm	1,019 x 1,560 x 520		
Weight	Net	kg	181.0		
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037		
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50		
	Standby power consumption	W	10		
	Recommended circuit breaker	A	1 Ø: 25 / 3 Ø: 16		
Indoor Units		**Unit**	**PHCS0 ENCXLEU**		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 75		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Dimension	H x W x D	mm	490 x 420 x 141		
Weight	Net	kg	6.8		
Exterior	Color / RAL code	-	Essence white / RAL 9003		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50		
	Recommended circuit breaker	A	10		

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R290 MONOBLOC CONTROL UNIT (12 / 14 / 16 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM121HF UB60 + PHCS0 ENCXLEU / HM123HF UB60 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	8.36	8.07	7.79	7.54	7.32	6.37	-	-	-	-
-20	9.60	9.39	9.20	9.09	9.08	8.27	6.77	-	-	-
-15	10.84	10.69	10.55	10.55	10.84	10.76	8.71	7.17	-	-
-7	12.00	12.00	12.00	12.00	12.00	12.00	11.27	10.00	8.99	-
-4	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.88	9.65	8.91
-2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.45	10.29	9.32
2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.08	6.84	6.36
7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.28	8.34	7.67
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.20	9.90	8.95
15	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.09
18	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.69
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	-	-	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

HM141HF UB60 + PHCS0 ENCXLEU / HM143HF UB60 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	8.88	8.57	8.28	8.01	7.78	6.37	-	-	-	-
-20	10.20	9.97	9.78	9.66	9.48	8.27	6.77	-	-	-
-15	12.06	11.99	11.79	11.59	11.29	10.76	8.71	7.17	-	-
-7	14.00	14.00	13.82	13.63	13.45	12.58	11.27	10.00	8.99	-
-4	14.00	14.00	13.90	13.83	13.83	13.23	12.06	10.88	9.65	8.91
-2	14.00	14.00	13.96	13.95	14.00	13.71	12.59	11.45	10.29	9.32
2	14.00	14.00	14.00	14.00	14.00	14.00	13.16	8.08	6.84	6.36
7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	10.28	8.34	7.67
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00	11.20	9.90	8.95
15	14.00	14.00	14.00	14.00	14.00	14.00	14.00	12.72	12.02	11.09
18	14.00	14.00	14.00	14.00	14.00	14.00	14.00	13.82	12.89	11.69
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	13.47	12.09
35	-	-	14.00	14.00	14.00	14.00	14.00	14.00	14.00	12.80

HM161HF UB60 + PHCS0 ENCXLEU / HM163HF UB60 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	9.41	9.08	8.76	8.48	7.81	6.37	-	-	-	-
-20	10.80	10.56	10.35	10.23	9.48	8.27	6.77	-	-	-
-15	13.36	13.28	12.74	12.15	11.29	10.76	8.71	7.17	-	-
-7	16.00	16.00	15.17	14.35	13.52	12.58	11.27	10.00	8.99	-
-4	16.00	16.00	15.43	14.85	14.29	13.23	12.06	10.88	9.65	8.91
-2	16.00	16.00	15.69	15.34	14.81	13.71	12.59	11.45	10.29	9.32
2	16.00	16.00	16.00	16.00	16.00	14.84	13.16	8.08	6.84	6.36
7	16.00	16.00	16.00	16.00	16.00	16.00	14.25	10.28	8.34	7.67
10	16.00	16.00	16.00	16.00	16.00	16.00	14.92	11.20	9.90	8.95
15	16.00	16.00	16.00	16.00	16.00	16.00	16.00	12.72	12.02	11.09
18	16.00	16.00	16.00	16.00	16.00	16.00	16.00	13.82	12.89	11.69
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00	14.56	13.47	12.09
35	-	-	16.00	16.00	16.00	16.00	16.00	16.00	14.40	12.80

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM121HF UB60 + PHCS0 ENCXLEU / HM123HF UB60 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	11.50	11.50	11.50	11.50	11.50	11.50	11.50
30	10.97	11.50	11.50	11.50	11.50	11.50	11.50
35	10.50	11.28	11.50	11.50	11.50	11.50	11.50
40	9.35	10.08	10.80	11.27	11.50	11.50	11.50
45	8.19	8.90	9.61	10.07	10.77	11.23	11.50

HM141HF UB60 + PHCS0 ENCXLEU / HM143HF UB60 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00
30	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00
40	10.68	11.52	12.00	12.00	12.00	12.00	12.00
45	9.36	10.17	10.98	11.51	12.00	12.00	12.00

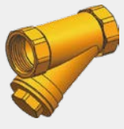
HM161HF UB60 + PHCS0 ENCXLEU / HM163HF UB60 + PHCS0 ENCXLEU

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	12.50	12.50	12.50	12.50	12.50	12.50	12.50
30	12.50	12.50	12.50	12.50	12.50	12.50	12.50
35	12.50	12.50	12.50	12.50	12.50	12.50	12.50
40	12.02	12.50	12.50	12.50	12.50	12.50	12.50
45	10.03	10.78	11.54	12.05	12.50	12.50	12.50

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer



Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

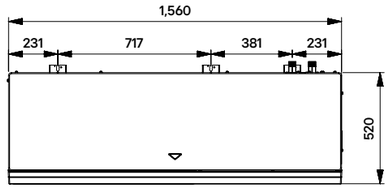
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R290 MONOBLOC CONTROL UNIT (12 / 14 / 16 kW)

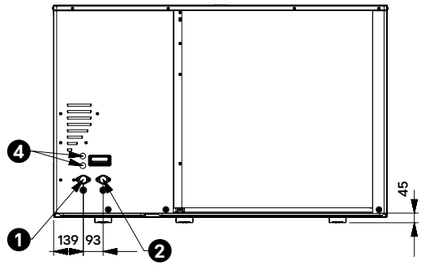
Drawings

[Unit: mm]

HM121HF UB60 / HM123HF UB60
HM141HF UB60 / HM143HF UB60
HM161HF UB60 / HM163HF UB60

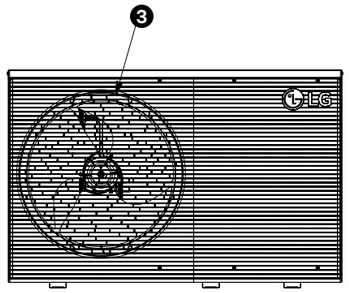


Top view

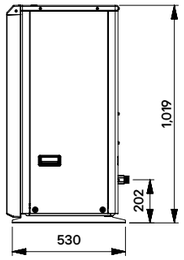


Back view

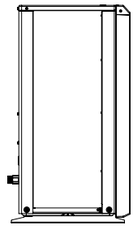
3D view



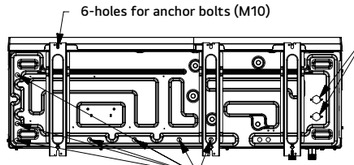
Front view



Side view



Side view

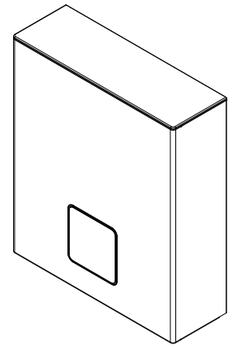


Bottom view

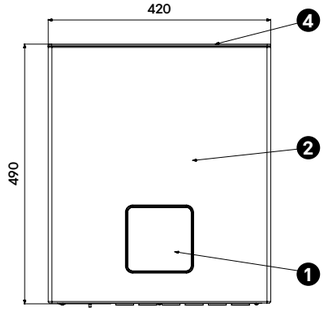
No.	Part Name	Description
1	Leaving Water Pipe	Male PT 1 inch
2	Entering Water Pipe	Male PT 1 inch
3	Air Discharge Grille	-
4	Access to Electrical Terminals	Power, Communication

PHCS0 ENCXLEU

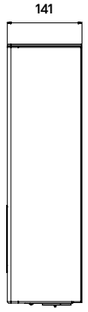
[Unit: mm]



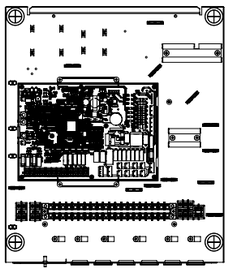
3D view



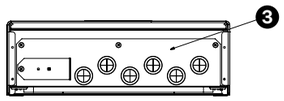
Front view



Side view



Internal view



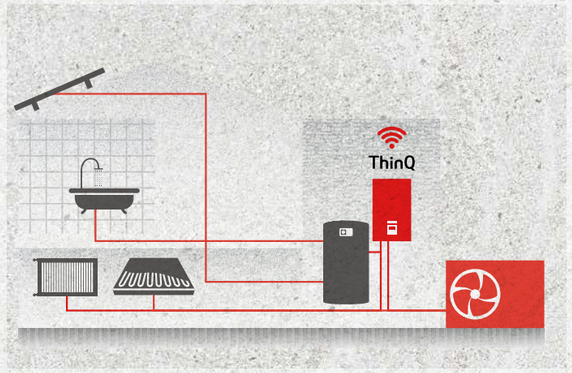
Bottom view

No.	Part Name	Description
1	Remote Controller Assembly	Built-in Remote Controller
2	Panel Assembly.Front	SGMCD1 M08 ESSENCE WHITE PCM
3	Panel Assembly.Indoor	PCB and Terminal Blocks
4	Cover	MOLD ABS

THERMA V™ R290 Monobloc
HYDRO UNIT

Key Features

- Integrated hydronic components - Backup heater, Expansion tank
- Space-saving solution with compact and light indoor unit
- Simple installation due to no refrigerant piping work



Optimized Solution, Time and Space Saving Design

Hydronic components such as backup heater and expansion tank are included in the indoor unit, minimizing installation space and reducing installation time.

Application

Certifications

Energy Label

Space heating A+++ 35℃ A+++ 55℃

THERMA V R290 MONOBLOC HYDRO UNIT (7 / 9 kW)

Outdoor unit

HM071HF UB40 / HM073HF UB40
HM091HF UB40 / HM093HF UB40

Indoor unit

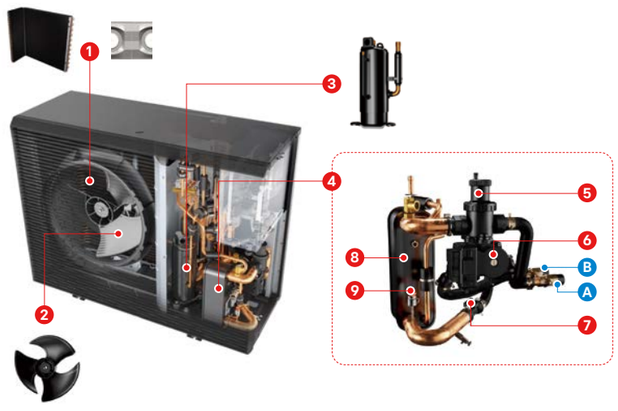
HN1616HC NK0
HN1639HC NK0

011-1W0831

R290 Natural refrigerant with GWP 3 · A+++ 35℃ · A+++ 55℃ · 75℃ · -28℃ · ThinQ

Key Components

Outdoor Unit



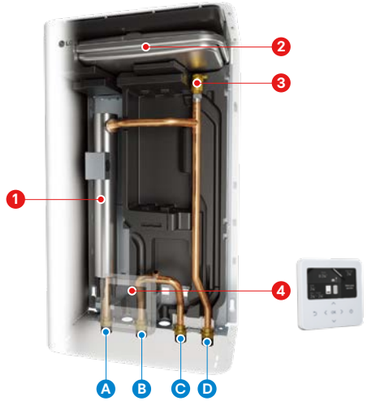
Components

1. Black Fin heat exchanger (air / ref.)
2. Biomimetic fan
3. New R1 compressor
4. Hydronic components assembly
5. Deaerator
6. Water pump
7. Flow sensor
8. Plate heat exchanger
9. Pressure sensor

Connections

- A Leaving water pipe (male PT 1")
- B Entering water pipe (male PT 1")

Indoor Unit (Hydro Unit)



Components

1. Backup heater (1 Ø: 6 kW / 3 Ø: 9 kW)
2. Expansion tank (8 ℓ)
3. Air vent valve
4. Standard III remote controller [1] (air temp. sensor integrated)

1) Temperature control class (ERP class) : V

Connections

- A Heating circuit outlet pipe (male PT 1")
- B Heating circuit inlet pipe (male PT 1")
- C Outlet pipe to outdoor unit (male PT 1")
- D Inlet pipe from outdoor unit (male PT 1")

Product Specification

Efficiency Data		Unit	7 kW (1 Ø) 7 kW (3 Ø)	9 kW (1 Ø) 9 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A+++	A+++ / A+++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	207 / 151	205 / 151
SCOP (35°C / 55°C)		-	5.24 / 3.86	5.20 / 3.86
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	49 / 48	50 / 48
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	27 / 26	28 / 26
Sound power level (indoor unit)	Rated	dB(A)	39	
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	31	
Nominal Capacity and COP/EER				
Air +7°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 5.00	9.00 / 4.70
Air +2°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 3.80	8.00 / 3.70
Air -7°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 2.80	9.00 / 2.70
Air +7°C / water +55°C	Heating capacity / COP	kW / -	4.50 / 3.35	5.50 / 3.30
Air -7°C / water +55°C	Heating capacity / COP	kW / -	7.00 / 2.40	8.00 / 2.20
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	5.00 / 4.40	5.50 / 4.20
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	5.00 / 2.80	5.50 / 2.60
Outdoor Units		**Unit**	**HM071HF UB40 HM073HF UB40**	**HM091HF UB40 HM093HF UB40**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-28 ~ 35	
	Cooling (Min. ~ Max.)	°C	5 ~ 48	
Refrigerant	Type	-	R290	
	GWP	-	3	
	Precharged amount	g	900	
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
Dimension	H x W x D	mm	1,019 x 1,320 x 520	
Weight	Net	kg	130.0	
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037	
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012	
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50	
	Standby power consumption	W	10	
	Recommended circuit breaker	A	1 Ø: 20 / 3 Ø: 16	
Indoor Units		**Unit**	**HN1616HC NK0 / HN1639HC NK0**	
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 75	
	Cooling (Min. ~ Max.)	°C	5 ~ 27	
	DHW (Min. ~ Max.)	°C	15 ~ 80	
Expansion vessel (heating circuit)	Volume	ℓ	8	
Backup heater	Capacity combination	kW	3.0 + 3.0 / 3.0 + 3.0 + 3.0	
	Heating steps	Steps	2	
	Power supply	V, Ø, Hz	220 - 240, 1, 50 / 380 - 415, 3, 50	
	Rated running current	A	26 / 13	
Piping connections (water)	Heating circuit outlet pipe	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
	Heating circuit inlet pipe	inch		
	Outlet pipe to outdoor unit	inch		
	Inlet pipe from outdoor unit	inch		
Dimension	H x W x D	mm	850 x 490 x 315	
Weight	Net	kg	1 Ø: 30.0 / 3 Ø: 31.0	
Exterior	Color / RAL code	-	Noble white / RAL 9016	
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 - 240, 1, 50	
	Recommended circuit breaker	A	10	

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R290 MONOBLOC HYDRO UNIT (7 / 9 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM071HF UB40 + HN1616HC NK0 / HM073HF UB40 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	5.90	5.85	5.85	5.85	5.80	5.80	5.80	-	-	-
-20	6.50	6.50	6.50	6.50	6.20	6.10	6.10	6.00	-	-
-15	7.00	7.00	7.00	7.00	6.80	6.70	6.30	6.30	6.20	6.20
-7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70	6.60	6.40
-4	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70	6.50
-2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.80	6.50
2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70
7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.80
10	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
18	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35	-	-	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

HM091HF UB40 + HN1616HC NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	7.40	7.20	7.10	6.90	6.80	6.70	6.60	-	-	-
-20	8.20	7.90	7.70	7.50	7.30	7.10	6.90	6.60	-	-
-15	9.00	9.00	8.20	7.90	7.70	7.60	7.30	7.00	6.80	6.50
-7	9.00	9.00	9.00	8.50	8.40	8.00	7.90	7.70	7.40	6.60
-4	9.00	9.00	9.00	9.00	9.00	8.40	8.20	7.90	7.70	6.70
-2	9.00	9.00	9.00	9.00	9.00	9.00	8.40	8.10	7.60	6.80
2	8.00	8.00	8.10	8.20	8.30	8.40	8.20	8.10	7.80	6.90
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.20	7.10
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.20	7.20
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.30	7.30
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.40	7.40
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.40	7.50
35	-	-	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.00

HM093HF UB40 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	7.90	7.77	7.92	8.08	8.20	8.40	8.40	-	-	-
-20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-	-
-15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
2	8.00	8.00	8.10	8.20	8.30	8.40	8.20	8.10	8.00	7.00
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35	-	-	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.00

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM071HF UB40 + HN1616HC NK0 / HM073HF UB40 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	5.30	6.00	6.70	7.00	7.00	7.00	7.00
30	5.10	5.40	5.80	6.20	7.00	7.00	7.00
35	5.00	5.40	5.80	6.20	6.80	6.80	7.00
40	4.60	4.90	5.30	5.60	6.20	6.70	7.00
45	4.20	4.70	5.30	5.60	6.20	6.50	7.00

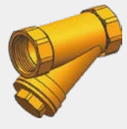
HM091HF UB40 + HN1616HC NK0 / HM093HF UB40 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	5.80	6.70	7.50	9.00	9.00	9.00	9.00
30	5.60	6.40	7.20	7.70	9.00	9.00	9.00
35	5.50	6.30	7.20	7.80	9.00	9.00	9.00
40	5.00	5.70	6.40	6.80	7.40	7.70	9.00
45	4.40	5.10	5.70	6.10	6.80	7.20	7.60

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer



Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

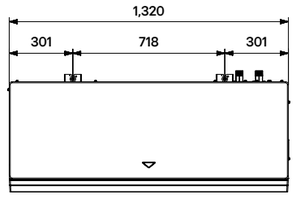
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R290 MONOBLOC HYDRO UNIT (7 / 9 kW)

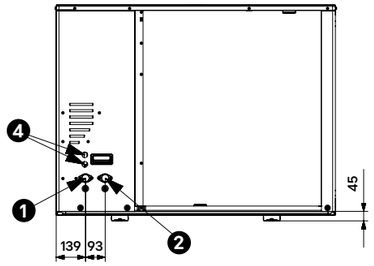
Drawings

[Unit: mm]

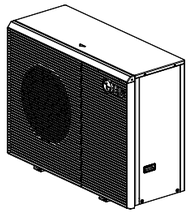
HM071HF UB40 / HM073HF UB40
HM091HF UB40 / HM093HF UB40



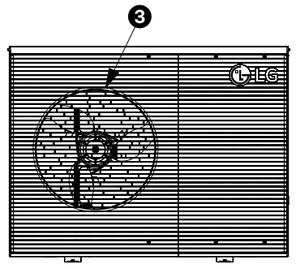
Top view



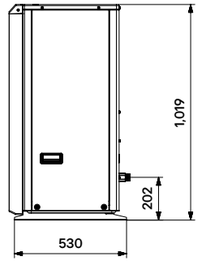
Back view



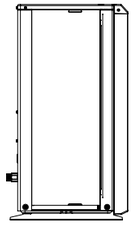
3D view



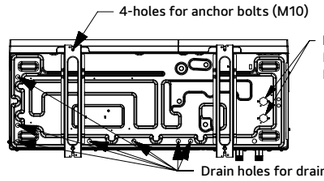
Front view



Side view



Side view



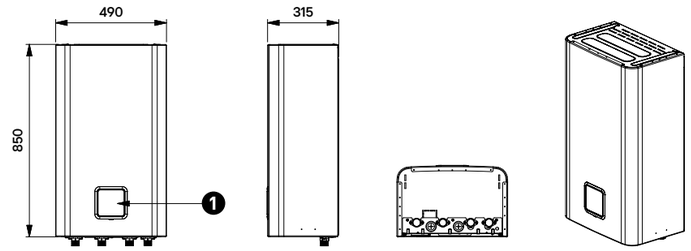
Bottom view

No.	Part Name	Description
1	Leaving Water Pipe	Male PT 1 inch
2	Entering Water Pipe	Male PT 1 inch
3	Air Discharge Grille	-
4	Access to Electrical Terminals	Power, Communication

[Unit: mm]

External

HN1616HC NK0 / HN1639HC NK0

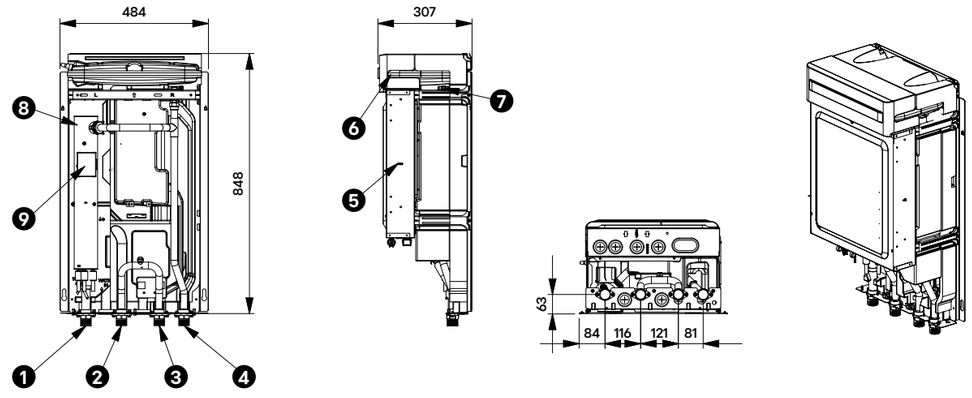


Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Control Panel	Built-in Remote Controller

Internal

HN1616HC NK0 / HN1639HC NK0



Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Leaving Water Pipe (Heat load)	Male PT 1 inch
2	Entering Water Pipe (Heat load)	Male PT 1 inch
3	Leaving Water Pipe (ODU)	Male PT 1 inch
4	Entering Water Pipe (ODU)	Male PT 1 inch
5	Control Box	PCB and Terminal Blocks
6	Expansion Tank	Absorbing Volume Change of Heated Water
7	Air Vent	Air Purging when Charging Water
8	Backup Heater	Capacity : 1 Ø 6 kW, 3 Ø 9 kW
9	Thermal Switch	Cut-off Power Input to Backup Heater at 90°C (Manual return at 55°C)

THERMA V R290 MONOBLOC HYDRO UNIT (12 / 14 / 16 kW)

Outdoor unit

HM121HF UB60 / HM123HF UB60
HM141HF UB60 / HM143HF UB60
HM161HF UB60 / HM163HF UB60

Indoor unit

HN1616HC NK0
HN1639HC NK0

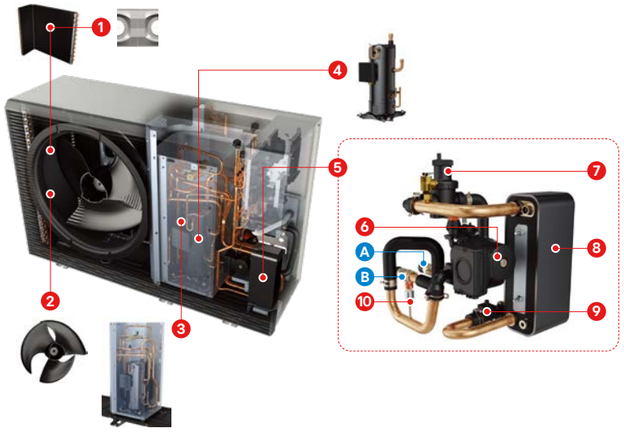
011-1W0689

R290 Natural refrigerant with GWP 3

A+++ 35℃ A+++ 55℃ 75℃ -28℃ ThinQ

Key Components

Outdoor Unit



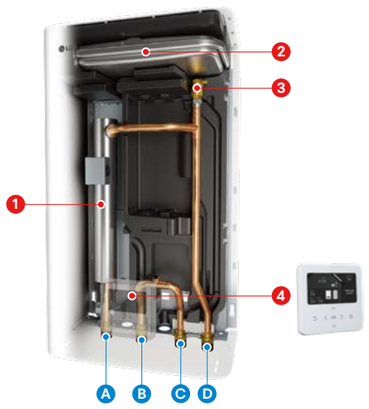
Components

1. Black Fin heat exchanger (air / ref.)
2. New biomimetic fan
3. Dual sound shield
4. R290 scroll compressor
5. Hydronic components assembly
6. Water pump
7. Deaerator
8. Plate heat exchanger (ref / water)
9. Flow sensor
10. Pressure sensor

Connections

- A Leaving water pipe (male PT 1")
- B Entering water pipe (male PT 1")

Indoor Unit (Hydro Unit)



Components

1. Backup heater (1 Ø: 6 kW / 3 Ø: 9 kW)
2. Expansion tank (8 ℓ)
3. Air vent valve
4. Standard III remote controller [1] (air temp. sensor integrated)

1) Temperature control class (ERP class) : V

Connections

- A Heating circuit outlet pipe (male PT 1")
- B Heating circuit inlet pipe (male PT 1")
- C Outlet pipe to outdoor unit (male PT 1")
- D Inlet pipe from outdoor unit (male PT 1")

Product Specification

Efficiency Data		Unit	12 kW (1 Ø) 12 kW (3 Ø)	14 kW (1 Ø) 14 kW (3 Ø)	16 kW (1 Ø) 16 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A+++	A+++ / A+++	A+++ / A+++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	215 / 156	212 / 155	201 / 154
SCOP (35°C / 55°C)		-	5.45 / 3.97	5.38 / 3.96	5.11 / 3.92
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	49 / 48	51 / 50	52 / 51
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	27 / 26	29 / 28	30 / 29
Sound power level (indoor unit)	Rated	dB(A)	39		
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	31		
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 4.70	14.00 / 4.50	16.00 / 4.30
Air +2°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 3.72	14.00 / 3.61	14.50 / 3.49
Air -7°C / water +35°C	Heating capacity / COP	kW / -	11.80 / 3.27	13.00 / 3.21	13.80 / 3.17
Air +7°C / water +55°C	Heating capacity / COP	kW / -	10.00 / 3.10	11.00 / 3.25	12.00 / 3.30
Air -7°C / water +55°C	Heating capacity / COP	kW / -	9.30 / 2.32	10.30 / 2.28	10.90 / 2.26
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	11.50 / 3.78	12.00 / 3.70	12.50 / 3.70
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	10.50 / 3.12	12.00 / 2.99	12.50 / 2.95
Outdoor Units		**Unit**	**HM121HF UB60 HM123HF UB60**	**HM141HF UB60 HM143HF UB60**	**HM161HF UB60 HM163HF UB60**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-28 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Refrigerant	Type	-	R290		
	GWP	-	3		
	Precharged amount	g	1,200		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Dimension	H x W x D	mm	1,019 x 1,560 x 520		
Weight	Net	kg	181.0		
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037		
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50		
	Standby power consumption	W	10		
	Recommended circuit breaker	A	1 Ø: 25 / 3 Ø: 16		
Indoor Units		**Unit**	**HN1616HC NK0 / HN1639HC NK0**		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 75		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Expansion vessel (heating circuit)	Volume	ℓ	8		
Backup heater	Capacity combination	kW	3.0 + 3.0 / 3.0 + 3.0 + 3.0		
	Heating steps	Steps	2		
	Power supply	V, Ø, Hz	220 - 240, 1, 50 / 380 - 415, 3, 50		
	Rated running current	A	26 / 13		
Piping connections (water)	Heating circuit outlet pipe	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
	Heating circuit inlet pipe	inch			
	Outlet pipe to outdoor unit	inch			
	Inlet pipe from outdoor unit	inch			
Dimension	H x W x D	mm	850 x 490 x 315		
Weight	Net	kg	1 Ø: 30.0 / 3 Ø: 31.0		
Exterior	Color / RAL code	-	Noble white / RAL 9016		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 - 240, 1, 50		
	Recommended circuit breaker	A	10		

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R290 MONOBLOC HYDRO UNIT (12 / 14 / 16 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM121HF UB60 + HN1616HC NK0 / HM123HF UB60 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	8.36	8.07	7.79	7.54	7.32	6.37	-	-	-	-
-20	9.60	9.39	9.20	9.09	9.08	8.27	6.77	-	-	-
-15	10.84	10.69	10.55	10.55	10.84	10.76	8.71	7.17	-	-
-7	12.00	12.00	12.00	12.00	12.00	12.00	11.27	10.00	8.99	-
-4	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.88	9.65	8.91
-2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.45	10.29	9.32
2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.08	6.84	6.36
7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.28	8.34	7.67
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.20	9.90	8.95
15	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.09
18	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.69
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	-	-	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

HM141HF UB60 + HN1616HC NK0 / HM143HF UB60 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	8.88	8.57	8.28	8.01	7.78	6.37	-	-	-	-
-20	10.20	9.97	9.78	9.66	9.48	8.27	6.77	-	-	-
-15	12.06	11.99	11.79	11.59	11.29	10.76	8.71	7.17	-	-
-7	14.00	14.00	13.82	13.63	13.45	12.58	11.27	10.00	8.99	-
-4	14.00	14.00	13.90	13.83	13.83	13.23	12.06	10.88	9.65	8.91
-2	14.00	14.00	13.96	13.95	14.00	13.71	12.59	11.45	10.29	9.32
2	14.00	14.00	14.00	14.00	14.00	14.00	13.16	8.08	6.84	6.36
7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	10.28	8.34	7.67
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00	11.20	9.90	8.95
15	14.00	14.00	14.00	14.00	14.00	14.00	14.00	12.72	12.02	11.09
18	14.00	14.00	14.00	14.00	14.00	14.00	14.00	13.82	12.89	11.69
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	13.47	12.09
35	-	-	14.00	14.00	14.00	14.00	14.00	14.00	14.00	12.80

HM161HF UB60 + HN1616HC NK0 / HM163HF UB60 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	9.41	9.08	8.76	8.48	7.81	6.37	-	-	-	-
-20	10.80	10.56	10.35	10.23	9.48	8.27	6.77	-	-	-
-15	13.36	13.28	12.74	12.15	11.29	10.76	8.71	7.17	-	-
-7	16.00	16.00	15.17	14.35	13.52	12.58	11.27	10.00	8.99	-
-4	16.00	16.00	15.43	14.85	14.29	13.23	12.06	10.88	9.65	8.91
-2	16.00	16.00	15.69	15.34	14.81	13.71	12.59	11.45	10.29	9.32
2	16.00	16.00	16.00	16.00	16.00	14.84	13.16	8.08	6.84	6.36
7	16.00	16.00	16.00	16.00	16.00	16.00	14.25	10.28	8.34	7.67
10	16.00	16.00	16.00	16.00	16.00	16.00	14.92	11.20	9.90	8.95
15	16.00	16.00	16.00	16.00	16.00	16.00	16.00	12.72	12.02	11.09
18	16.00	16.00	16.00	16.00	16.00	16.00	16.00	13.82	12.89	11.69
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00	14.56	13.47	12.09
35	-	-	16.00	16.00	16.00	16.00	16.00	16.00	14.40	12.80

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM121HF UB60 + HN1616HC NK0 / HM123HF UB60 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	11.50	11.50	11.50	11.50	11.50	11.50	11.50
30	10.97	11.50	11.50	11.50	11.50	11.50	11.50
35	10.50	11.28	11.50	11.50	11.50	11.50	11.50
40	9.35	10.08	10.80	11.27	11.50	11.50	11.50
45	8.19	8.90	9.61	10.07	10.77	11.23	11.50

HM141HF UB60 + HN1616HC NK0 / HM143HF UB60 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00
30	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00
40	10.68	11.52	12.00	12.00	12.00	12.00	12.00
45	9.36	10.17	10.98	11.51	12.00	12.00	12.00

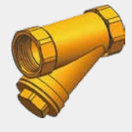
HM161HF UB60 + HN1616HC NK0 / HM163HF UB60 + HN1639HC NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	12.50	12.50	12.50	12.50	12.50	12.50	12.50
30	12.50	12.50	12.50	12.50	12.50	12.50	12.50
35	12.50	12.50	12.50	12.50	12.50	12.50	12.50
40	12.02	12.50	12.50	12.50	12.50	12.50	12.50
45	10.03	10.78	11.54	12.05	12.50	12.50	12.50

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer



Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

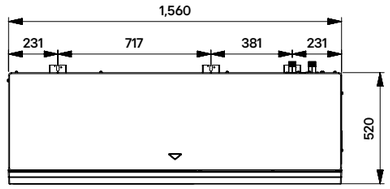
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R290 MONOBLOC HYDRO UNIT (12 / 14 / 16 kW)

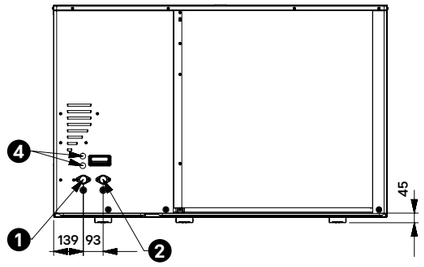
Drawings

[Unit: mm]

HM121HF UB60 / HM123HF UB60
HM141HF UB60 / HM143HF UB60
HM161HF UB60 / HM163HF UB60

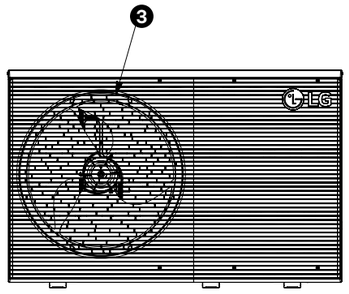


Top view

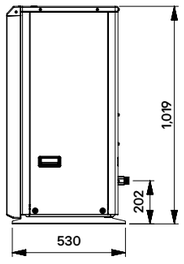


Back view

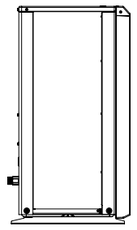
3D view



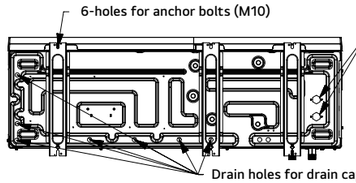
Front view



Side view



Side view



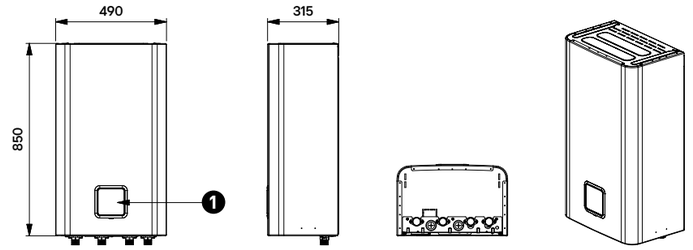
Bottom view

No.	Part Name	Description
1	Leaving Water Pipe	Male PT 1 inch
2	Entering Water Pipe	Male PT 1 inch
3	Air Discharge Grille	-
4	Access to Electrical Terminals	Power, Communication

[Unit: mm]

External

HN1616HC NK0 / HN1639HC NK0

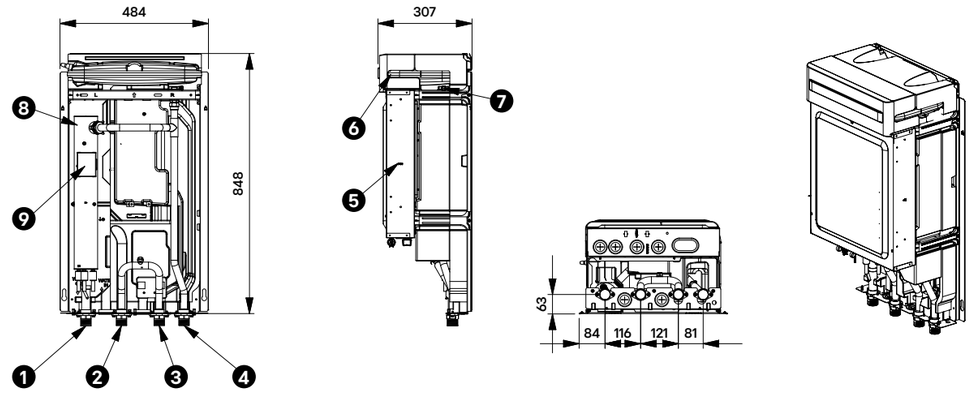


Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Control Panel	Built-in Remote Controller

Internal

HN1616HC NK0 / HN1639HC NK0



Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Leaving Water Pipe (Heat load)	Male PT 1 inch
2	Entering Water Pipe (Heat load)	Male PT 1 inch
3	Leaving Water Pipe (ODU)	Male PT 1 inch
4	Entering Water Pipe (ODU)	Male PT 1 inch
5	Control Box	PCB and Terminal Blocks
6	Expansion Tank	Absorbing Volume Change of Heated Water
7	Air Vent	Air Purging when Charging Water
8	Backup Heater	Capacity : 1 Ø 6 kW, 3 Ø 9 kW
9	Thermal Switch	Cut-off Power Input to Backup Heater at 90°C (Manual return at 55°C)

THERMA V™ R290 Monobloc

COMBI UNIT

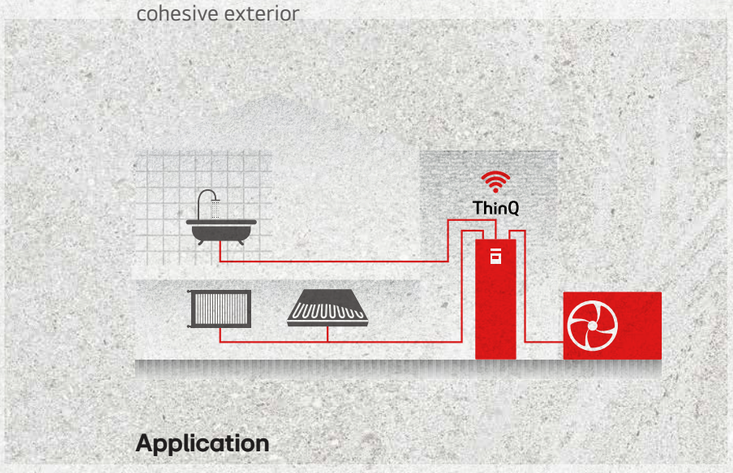
All-in-One

Designed to streamline your home's heating, cooling, and hot water systems, this all-in-one solution provides seamless integration.

It efficiently saves space in your home.

Key Features

- All-in-one Combi Unit with integrated hot water cylinder
- Saves space in the technical room with a small footprint
- Reduced installation time with pre-installed components
- Harmonized with other household appliances for a cohesive exterior



Application

Certifications

Energy Label

Space heating A+++ 35℃ A+++ 55℃ DHW heating A+ L

THERMA V R290 MONOBLOC COMBI UNIT (7 / 9 kW)

Outdoor unit

HM071HF UB40 / HM073HF UB40
HM091HF UB40 / HM093HF UB40

Indoor unit

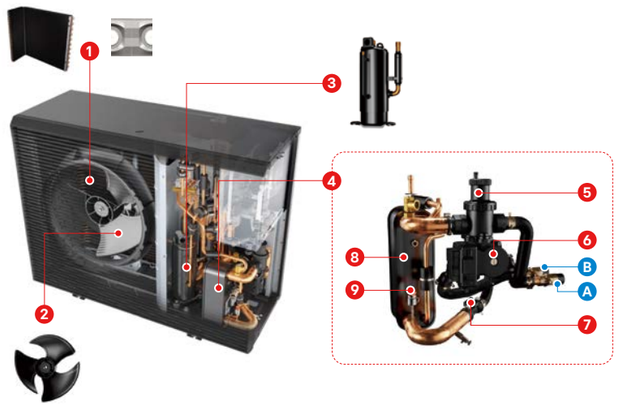
HN1616HY NK0
HN1639HY NK0

011-1W0831

R290 Natural refrigerant with GWP 3 · A+++ 35℃ · A+++ 55℃ · A+ L · 75℃ · -28℃ · ThinQ

Key Components

Outdoor Unit



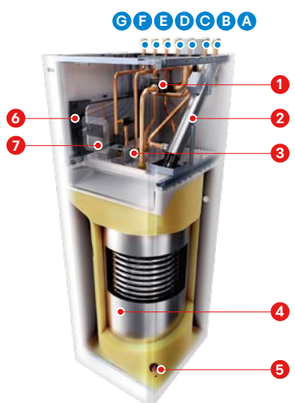
Components

1. Black Fin heat exchanger (air / ref.)
2. Biomimetic fan
3. New R1 compressor
4. Hydronic components assembly
5. Deaerator
6. Water pump
7. Flow sensor
8. Plate heat exchanger
9. Pressure sensor

Connections

A. Leaving water pipe (male PT 1")
B. Entering water pipe (male PT 1")

Indoor Unit (Combi Unit)



Components

1. 3 Way diverting valve (DC)
2. Electric heater (1 ph: 6 kW / 3 ph: 9 kW)
3. Drain pan
4. DHW storage tank (200 L / Duplex stainless Steel)
5. Drain valve
6. Expansion tank (8ℓ)
7. Standard III remote controller [1] (air temp. sensor integrated)

1) Temperature control class (ERP class) : V

Connections

A. Inlet pipe from outdoor unit (female G1")
B. Outlet pipe to outdoor unit (female G1")
C. Heating circuit outlet pipe (female G1")
D. Heating circuit inlet pipe (female G1")
E. Domestic hot water inlet pipe (female G1")
F. Domestic hot water outlet pipe (female G1")
G. Domestic hot water re-circulation pipe (female G1")

Product Specification

Efficiency Data		Unit	7 kW (1 Ø) 7 kW (3 Ø)	9 kW (1 Ø) 9 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A+++	A+++ / A+++
Seasonal space heating efficiency (η_S) (35°C / 55°C)		%	207 / 151	205 / 151
SCOP (35°C / 55°C)		-	5.24 / 3.86	5.20 / 3.86
Declared load profile, average climate		-	L	L
Water heating efficiency (η_{WH}), average climate		%	130	130
COP_{DHW}, average climate		-	3.10	3.10
Water heating eff. class, average climate		-	A+	A+
Annual energy consumption, DHW (average climate)		kWh	780	780
Heating up time acc. to EN 16147 (average climate)		h/mm	1h 25	1h 25
Max. usable water volume acc. to EN 16147 (average climate)		ℓ	240	240
Declared load profile, warmer climate		-	L	L
Water heating efficiency (η_{WH}), warmer climate		%	160	160
COP_{DHW}, warmer climate		-	3.78	3.78
Water heating eff. class, warmer climate		-	A++	A++
Declared load profile, colder climate		-	L	L
Water heating efficiency (η_{WH}), colder climate		%	110	110
COP_{DHW}, colder climate		-	2.64	2.64
Water heating eff. class, colder climate		-	A	A
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	49 / 48	50 / 48
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	27 / 26	28 / 26
Sound power level (indoor unit)	Rated	dB(A)	39	
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	31	
Nominal Capacity and COP/EER				
Air +7°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 5.00	9.00 / 4.70
Air +2°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 3.80	8.00 / 3.70
Air -7°C / water +35°C	Heating capacity / COP	kW / -	7.00 / 2.80	9.00 / 2.70
Air +7°C / water +55°C	Heating capacity / COP	kW / -	4.50 / 3.35	5.50 / 3.30
Air -7°C / water +55°C	Heating capacity / COP	kW / -	7.00 / 2.40	8.00 / 2.20
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	5.00 / 4.40	5.50 / 4.20
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	5.00 / 2.80	5.50 / 2.60

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R290 MONOBLOC COMBI UNIT (7 / 9 kW)

Product Specification

Outdoor Units		Unit	HM071HF UB40 HM073HF UB40	HM091HF UB40 HM093HF UB40
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-28 ~ 35	
	Cooling (Min. ~ Max.)	°C	5 ~ 48	
Refrigerant	Type	-	R290	
	GWP	-	3	
	Precharged amount	g	900	
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
Dimension	H x W x D	mm	1,019 x 1,320 x 520	
Weight	Net	kg	130.0	
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037	
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012	
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50	
	Standby power consumption	W	10	
	Recommended circuit breaker	A	1 Ø: 20 / 3 Ø: 16	
Indoor Units		**Unit**	**HN1616HY NK0 / HN1639HY NK0**	
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 75	
	Cooling (Min. ~ Max.)	°C	5 ~ 27	
	DHW (Min. ~ Max.)	°C	15 ~ 80	
Domestic hot water tank	Volume	ℓ	200	
	Tank material	-	Duplex stainless steel	
	Standby losses	W	60	
Expansion vessel (heating circuit)	Volume	ℓ	8	
Electric heater	Capacity combination	kW	1 Ø: 6.0 / 3 Ø: 9.0	
	Power supply	V, Ø, Hz	220 ~ 240, 1, 50	
Piping connections (water)	Inlet / outlet diameter for connection to outdoor unit	inch	Female G1" according to ISO228-1 (parallel pipe threads)	
	Inlet / outlet diameter for space heating	inch		
	Inlet / outlet diameter for DHW	inch		
	Recirculation	inch		
Dimension	H x W x D	mm	1,750 x 600 × 660	
Weight	Net	kg	1 Ø: 106.5 / 3 Ø: 107.0	
Exterior	Color / RAL code	-	Noble white / RAL 9016	

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R290 MONOBLOC COMBI UNIT (7 / 9 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM071HF UB40 + HN1616HY NK0 / HM073HF UB40 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	5.90	5.85	5.85	5.85	5.80	5.80	5.80	-	-	-
-20	6.50	6.50	6.50	6.50	6.20	6.10	6.10	6.00	-	-
-15	7.00	7.00	7.00	7.00	6.80	6.70	6.30	6.30	6.20	6.20
-7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70	6.60	6.40
-4	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70	6.50
-2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.80	6.50
2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.70
7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.80
10	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
18	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35	-	-	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

HM091HF UB40 + HN1616HY NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	7.40	7.20	7.10	6.90	6.80	6.70	6.60	-	-	-
-20	8.20	7.90	7.70	7.50	7.30	7.10	6.90	6.60	-	-
-15	9.00	9.00	8.20	7.90	7.70	7.60	7.30	7.00	6.80	6.50
-7	9.00	9.00	9.00	8.50	8.40	8.00	7.90	7.70	7.40	6.60
-4	9.00	9.00	9.00	9.00	9.00	8.40	8.20	7.90	7.70	6.70
-2	9.00	9.00	9.00	9.00	9.00	9.00	8.40	8.10	7.60	6.80
2	8.00	8.00	8.10	8.20	8.30	8.40	8.20	8.10	7.80	6.90
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.20	7.10
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.20	7.20
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.30	7.30
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.40	7.40
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.40	7.50
35	-	-	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.00

HM093HF UB40 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	7.90	7.77	7.92	8.08	8.20	8.40	8.40	-	-	-
-20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-	-
-15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
2	8.00	8.00	8.10	8.20	8.30	8.40	8.20	8.10	8.00	7.00
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35	-	-	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.00

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM071HF UB40 + HN1616HY NK0 / HM073HF UB40 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	5.30	6.00	6.70	7.00	7.00	7.00	7.00
30	5.10	5.40	5.80	6.20	7.00	7.00	7.00
35	5.00	5.40	5.80	6.20	6.80	6.80	7.00
40	4.60	4.90	5.30	5.60	6.20	6.70	7.00
45	4.20	4.70	5.30	5.60	6.20	6.50	7.00

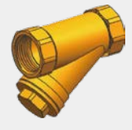
HM091HF UB40 + HN1616HY NK0 / HM093HF UB40 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	5.80	6.70	7.50	9.00	9.00	9.00	9.00
30	5.60	6.40	7.20	7.70	9.00	9.00	9.00
35	5.50	6.30	7.20	7.80	9.00	9.00	9.00
40	5.00	5.70	6.40	6.80	7.40	7.70	9.00
45	4.40	5.10	5.70	6.10	6.80	7.20	7.60

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer



Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

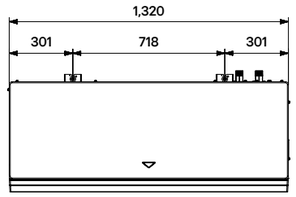
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R290 MONOBLOC COMBI UNIT (7 / 9 kW)

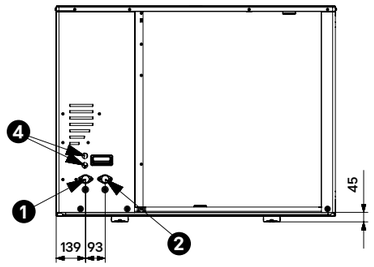
Drawings

[Unit: mm]

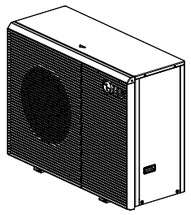
HM071HF UB40 / HM073HF UB40
HM091HF UB40 / HM093HF UB40



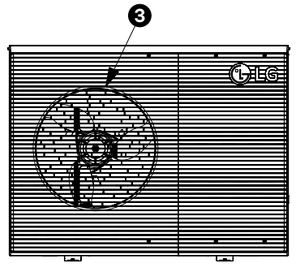
Top view



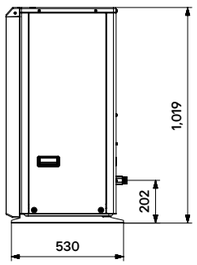
Back view



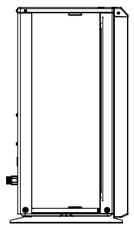
3D view



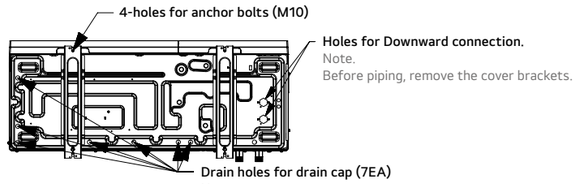
Front view



Side view



Side view



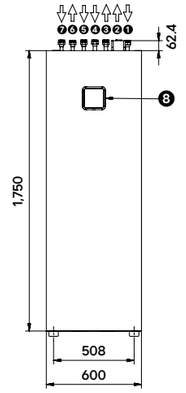
Bottom view

No.	Part Name	Description
1	Leaving Water Pipe	Male PT 1 inch
2	Entering Water Pipe	Male PT 1 inch
3	Air Discharge Grille	-
4	Access to Electrical Terminals	Power, Communication

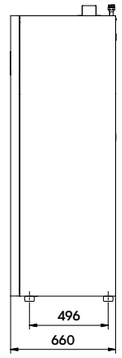
[Unit: mm]

External

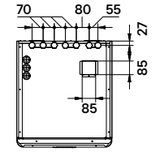
HN1616HY NK0 / HN1639HY NK0



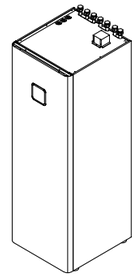
Front view



Side view



Top view

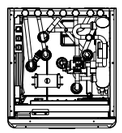


3D view

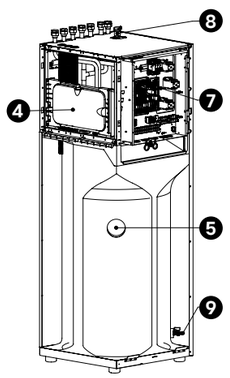
No.	Part Name	Description	No.	Part Name	
1	Inlet Pipe from Outdoor Unit	Female G1" According to ISO228-1 (Parallel pipe threads)	5	Domestic Hot Water Inlet Pipe	Female G1" According to ISO228-1 (Parallel pipe threads)
2	Outlet Pipe from Outdoor Unit		6	Domestic Hot Water Outlet Pipe	
3	Heating Circuit Outlet Pipe		7	DHW Re-circulation Pipe	
4	Heating Circuit Inlet Pipe		8	Control Panel	Built-in Remote Controller

Internal

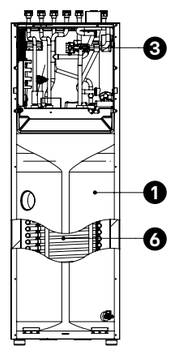
HN1616HY NK0 / HN1639HY NK0



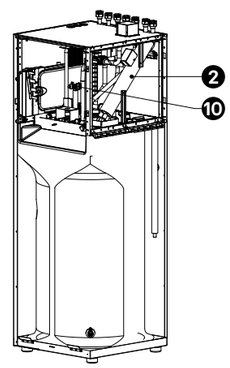
Top view



Left side view



Front view



Right side view

No.	Part Name	Description	No.	Part Name	
1	DHW Tank	Domestic Hot Water Tank (200 L)	6	Heat Exchanger	Coil Heat Exchanger (Water / DHW)
2	Heater	Electric Heater (1Ø 6 kW, 3Ø 9 kW)	7	Control Box	PCB'A and Terminal Blocks
3	3 Way Valve	For DHW / Heating	8	Air Vent	For Air Purging
4	Expansion Vessel	8L for Heating Circuit	9	Drain Cock 1	Valve for DHW Tank Drain
5	DHW Tank Sensor	Temperature Sensor	10	Safety Valve	For DHW (10 bar)

THERMA V R290 MONOBLOC COMBI UNIT (12 / 14 / 16 kW)

Outdoor unit

HM121HF UB60 / HM123HF UB60
HM141HF UB60 / HM143HF UB60
HM161HF UB60 / HM163HF UB60

Indoor unit

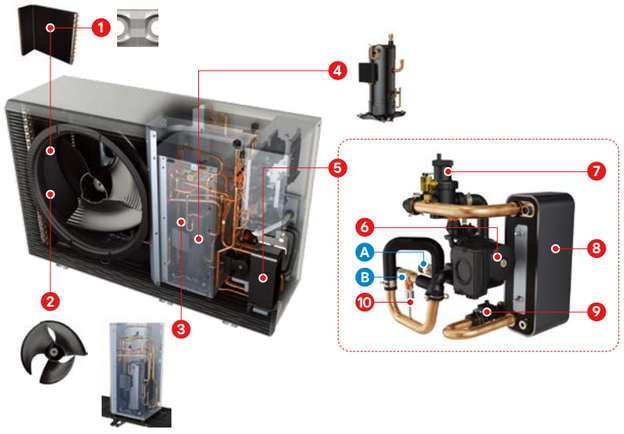
HN1616HY NK0
HN1639HY NK0

011-1W0689

R290 Natural refrigerant with GWP 3 · A+++ 35℃ · A+++ 55℃ · A+ L · 75℃ · -28℃ · ThinQ

Key Components

Outdoor Unit



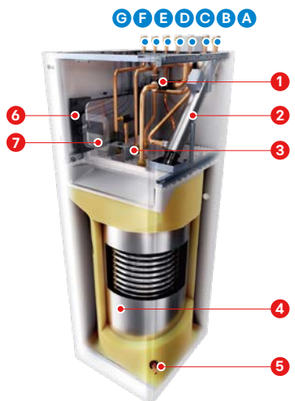
Components

1. Black Fin heat exchanger (air / ref.)
2. New biomimetic fan
3. Dual sound shield
4. R290 scroll compressor
5. Hydronic components assembly
6. Water pump
7. Deaerator
8. Plate heat exchanger (ref / water)
9. Flow sensor
10. Pressure sensor

Connections

- A Leaving water pipe (male PT 1")
- B Entering water pipe (male PT 1")

Indoor Unit (Combi Unit)



Components

1. 3 Way diverting valve (DC)
2. Electric heater (1 ph: 6 kW / 3 ph: 9 kW)
3. Drain pan
4. DHW storage tank (200 L / Duplex stainless Steel)
5. Drain valve
6. Expansion tank (8ℓ)
7. Standard III remote controller [1] (air temp. sensor integrated)

1) Temperature control class (ERP class) : V

Connections

- A Inlet pipe from outdoor unit (female G1")
- B Outlet pipe to outdoor unit (female G1")
- C Heating circuit outlet pipe (female G1")
- D Heating circuit inlet pipe (female G1")
- E Domestic hot water inlet pipe (female G1")
- F Domestic hot water outlet pipe (female G1")
- G Domestic hot water re-circulation pipe (female G1")

Product Specification

Efficiency Data		Unit	12 kW (1 Ø) 12 kW (3 Ø)	14 kW (1 Ø) 14 kW (3 Ø)	16 kW (1 Ø) 16 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A+++	A+++ / A+++	A+++ / A+++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	215 / 156	212 / 155	201 / 154
SCOP (35°C / 55°C)		-	5.45 / 3.97	5.38 / 3.96	5.11 / 3.92
Declared load profile, average climate		-	L	L	L
Water heating efficiency (η_{WH}), average climate		%	130	130	130
COP_{DHW}, average climate		-	3.00	3.00	3.00
Water heating eff. class, average climate		-	A+	A+	A+
Annual energy consumption, DHW (average climate)		kWh	771	771	771
Heating up time acc. to EN 16147 (average climate)		h/mm	1h 25	1h 25	1h 25
Max. usable water volume acc. to EN 16147 (average climate)		ℓ	240	240	240
Declared load profile, warmer climate		-	L	L	L
Water heating efficiency (η_{WH}), warmer climate		%	151	151	151
COP_{DHW}, warmer climate		-	3.43	3.43	3.43
Water heating eff. class, warmer climate		-	A++	A++	A++
Declared load profile, colder climate		-	L	L	L
Water heating efficiency (η_{WH}), colder climate		%	101	101	101
COP_{DHW}, colder climate		-	2.34	2.34	2.34
Water heating eff. class, colder climate		-	A	A	A
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	49 / 48	51 / 50	52 / 51
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	27 / 26	29 / 28	30 / 29
Sound power level (indoor unit)	Rated	dB(A)	39		
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	31		
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 4.70	14.00 / 4.50	16.00 / 4.30
Air +2°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 3.72	14.00 / 3.61	14.50 / 3.49
Air -7°C / water +35°C	Heating capacity / COP	kW / -	11.80 / 3.27	13.00 / 3.21	13.80 / 3.17
Air +7°C / water +55°C	Heating capacity / COP	kW / -	10.00 / 3.10	11.00 / 3.25	12.00 / 3.30
Air -7°C / water +55°C	Heating capacity / COP	kW / -	9.30 / 2.32	10.30 / 2.28	10.90 / 2.26
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	11.50 / 3.78	12.00 / 3.70	12.50 / 3.70
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	10.50 / 3.12	12.00 / 2.99	12.50 / 2.95

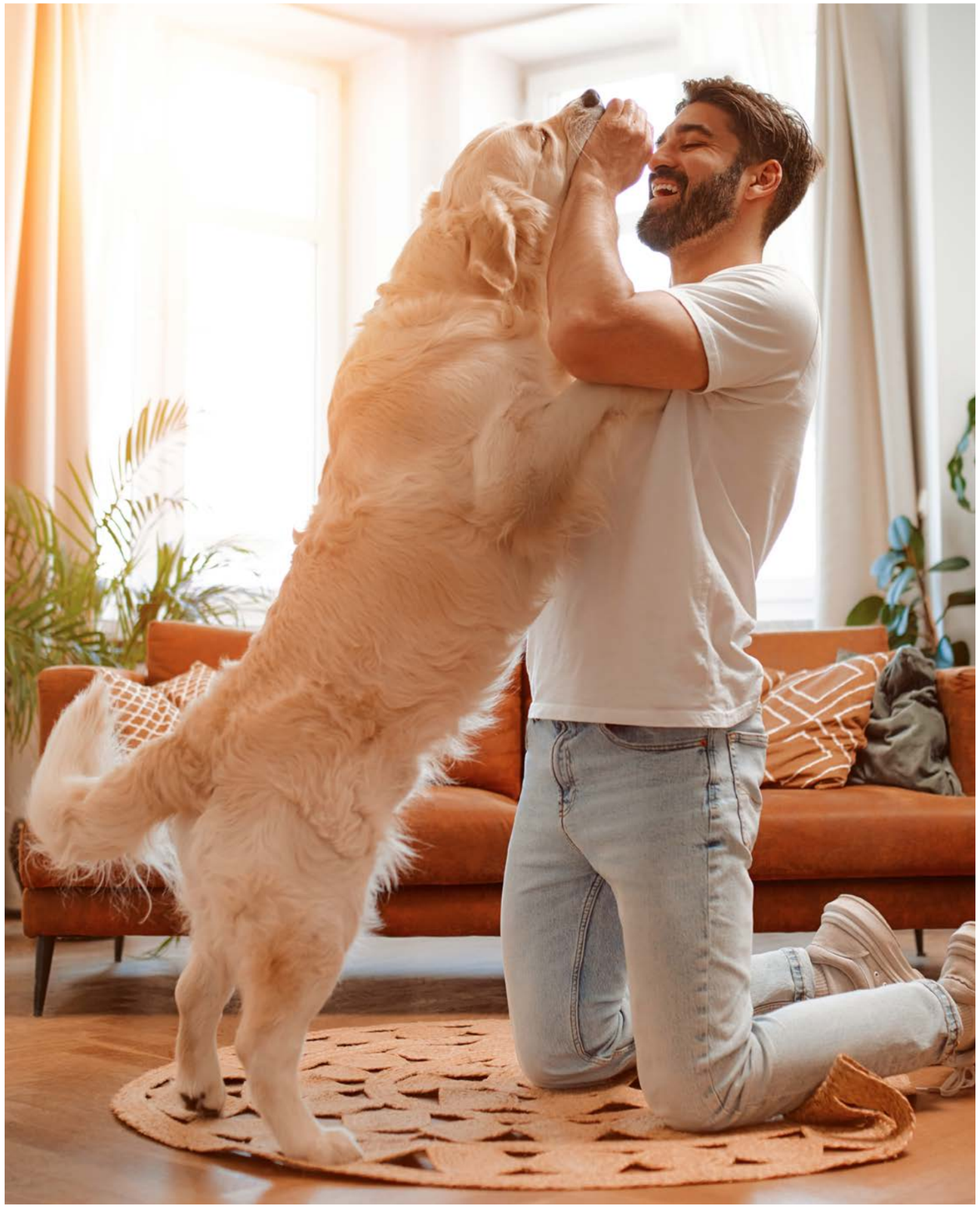
Note
1. Due to our policy of innovation, some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound power level is measured on the rated condition in accordance with ISO 9614 standard. Sound pressure level is not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R290 MONOBLOC COMBI UNIT (12 / 14 / 16 kW)

Product Specification

Outdoor Units		Unit	HM121HF UB60 HM123HF UB60	HM141HF UB60 HM143HF UB60	HM161HF UB60 HM163HF UB60
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-28 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Refrigerant	Type	-	R290		
	GWP	-	3		
	Precharged amount	g	1,200		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Dimension	H x W x D	mm	1,019 x 1,560 x 520		
Weight	Net	kg	181.0		
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037		
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50		
	Standby power consumption	W	10		
	Recommended circuit breaker	A	1 Ø: 25 / 3 Ø: 16		
Indoor Units		**Unit**	**HN1616HY NK0 / HN1639HY NK0**		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 75		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Domestic hot water tank	Volume	ℓ	200		
	Tank material	-	Duplex stainless steel		
	Standby losses	W	60		
Expansion vessel (heating circuit)	Volume	ℓ	8		
Electric heater	Capacity combination	kW	1 Ø: 6.0 / 3 Ø: 9.0		
	Power supply	V, Ø, Hz	220 ~ 240, 1, 50		
Piping connections (water)	Inlet / outlet diameter for connection to outdoor unit	inch	Female G1" according to ISO228-1 (parallel pipe threads)		
	Inlet / outlet diameter for space heating	inch			
	Inlet / outlet diameter for DHW	inch			
	Recirculation	inch			
Dimension	H x W x D	mm	1,750 x 600 × 660		
Weight	Net	kg	1 Ø: 106.5 / 3 Ø: 107.0		
Exterior	Color / RAL code	-	Noble white / RAL 9016		

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.



THERMA V R290 MONOBLOC COMBI UNIT (12 / 14 / 16 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM121HF UB60 + HN1616HY NK0 / HM123HF UB60 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	8.36	8.07	7.79	7.54	7.32	6.37	-	-	-	-
-20	9.60	9.39	9.20	9.09	9.08	8.27	6.77	-	-	-
-15	10.84	10.69	10.55	10.55	10.84	10.76	8.71	7.17	-	-
-7	12.00	12.00	12.00	12.00	12.00	12.00	11.27	10.00	8.99	-
-4	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.88	9.65	8.91
-2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.45	10.29	9.32
2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	8.08	6.84	6.36
7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.28	8.34	7.67
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.20	9.90	8.95
15	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.09
18	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.69
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	-	-	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

HM141HF UB60 + HN1616HY NK0 / HM143HF UB60 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	8.88	8.57	8.28	8.01	7.78	6.37	-	-	-	-
-20	10.20	9.97	9.78	9.66	9.48	8.27	6.77	-	-	-
-15	12.06	11.99	11.79	11.59	11.29	10.76	8.71	7.17	-	-
-7	14.00	14.00	13.82	13.63	13.45	12.58	11.27	10.00	8.99	-
-4	14.00	14.00	13.90	13.83	13.83	13.23	12.06	10.88	9.65	8.91
-2	14.00	14.00	13.96	13.95	14.00	13.71	12.59	11.45	10.29	9.32
2	14.00	14.00	14.00	14.00	14.00	14.00	13.16	8.08	6.84	6.36
7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	10.28	8.34	7.67
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00	11.20	9.90	8.95
15	14.00	14.00	14.00	14.00	14.00	14.00	14.00	12.72	12.02	11.09
18	14.00	14.00	14.00	14.00	14.00	14.00	14.00	13.82	12.89	11.69
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	13.47	12.09
35	-	-	14.00	14.00	14.00	14.00	14.00	14.00	14.00	12.80

HM161HF UB60 + HN1616HY NK0 / HM163HF UB60 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 30 °C	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
	Capacity (kW)									
-25	9.41	9.08	8.76	8.48	7.81	6.37	-	-	-	-
-20	10.80	10.56	10.35	10.23	9.48	8.27	6.77	-	-	-
-15	13.36	13.28	12.74	12.15	11.29	10.76	8.71	7.17	-	-
-7	16.00	16.00	15.17	14.35	13.52	12.58	11.27	10.00	8.99	-
-4	16.00	16.00	15.43	14.85	14.29	13.23	12.06	10.88	9.65	8.91
-2	16.00	16.00	15.69	15.34	14.81	13.71	12.59	11.45	10.29	9.32
2	16.00	16.00	16.00	16.00	16.00	14.84	13.16	8.08	6.84	6.36
7	16.00	16.00	16.00	16.00	16.00	16.00	14.25	10.28	8.34	7.67
10	16.00	16.00	16.00	16.00	16.00	16.00	14.92	11.20	9.90	8.95
15	16.00	16.00	16.00	16.00	16.00	16.00	16.00	12.72	12.02	11.09
18	16.00	16.00	16.00	16.00	16.00	16.00	16.00	13.82	12.89	11.69
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00	14.56	13.47	12.09
35	-	-	16.00	16.00	16.00	16.00	16.00	16.00	14.40	12.80

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM121HF UB60 + HN1616HY NK0 / HM123HF UB60 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	11.50	11.50	11.50	11.50	11.50	11.50	11.50
30	10.97	11.50	11.50	11.50	11.50	11.50	11.50
35	10.50	11.28	11.50	11.50	11.50	11.50	11.50
40	9.35	10.08	10.80	11.27	11.50	11.50	11.50
45	8.19	8.90	9.61	10.07	10.77	11.23	11.50

HM141HF UB60 + HN1616HY NK0 / HM143HF UB60 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00
30	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00
40	10.68	11.52	12.00	12.00	12.00	12.00	12.00
45	9.36	10.17	10.98	11.51	12.00	12.00	12.00

HM161HF UB60 + HN1616HY NK0 / HM163HF UB60 + HN1639HY NK0

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
20	12.50	12.50	12.50	12.50	12.50	12.50	12.50
30	12.50	12.50	12.50	12.50	12.50	12.50	12.50
35	12.50	12.50	12.50	12.50	12.50	12.50	12.50
40	12.02	12.50	12.50	12.50	12.50	12.50	12.50
45	10.03	10.78	11.54	12.05	12.50	12.50	12.50

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer

Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

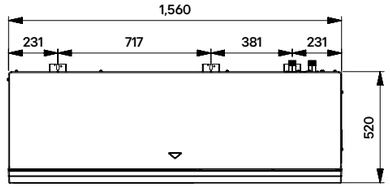
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R290 MONOBLOC COMBI UNIT (12 / 14 / 16 kW)

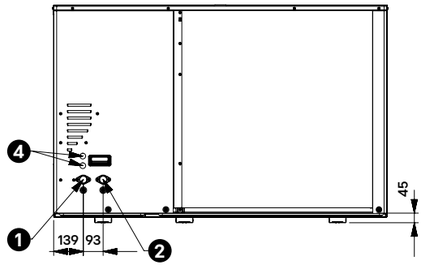
Drawings

[Unit: mm]

HM121HF UB60 / HM123HF UB60
HM141HF UB60 / HM143HF UB60
HM161HF UB60 / HM163HF UB60

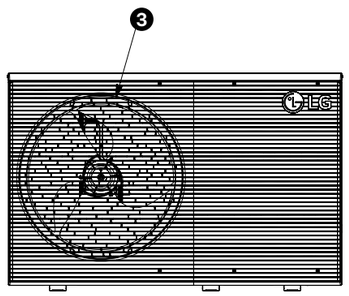


Top view

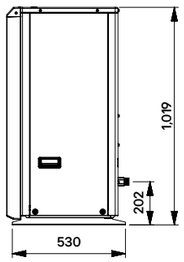


Back view

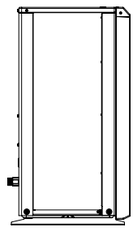
3D view



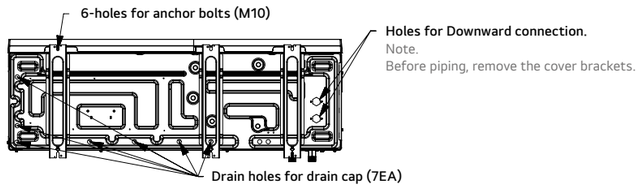
Front view



Side view



Side view



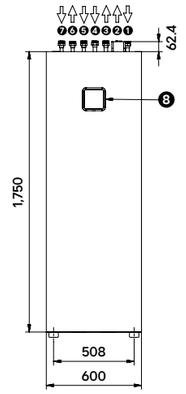
Bottom view

No.	Part Name	Description
1	Leaving Water Pipe	Male PT 1 inch
2	Entering Water Pipe	Male PT 1 inch
3	Air Discharge Grille	-
4	Access to Electrical Terminals	Power, Communication

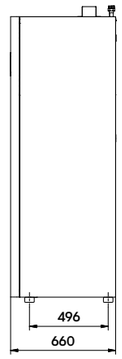
[Unit: mm]

External

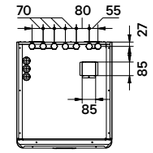
HN1616HY NK0 / HN1639HY NK0



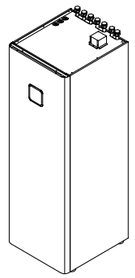
Front view



Side view



Top view

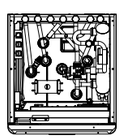


3D view

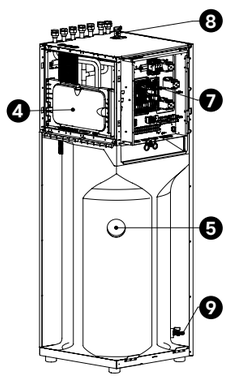
No.	Part Name	Description	No.	Part Name	
1	Inlet Pipe from Outdoor Unit	Female G1" According to ISO228-1 (Parallel pipe threads)	5	Domestic Hot Water Inlet Pipe	Female G1" According to ISO228-1 (Parallel pipe threads)
2	Outlet Pipe from Outdoor Unit		6	Domestic Hot Water Outlet Pipe	
3	Heating Circuit Outlet Pipe		7	DHW Re-circulation Pipe	
4	Heating Circuit Inlet Pipe		8	Control Panel	Built-in Remote Controller

Internal

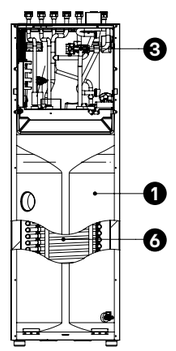
HN1616HY NK0 / HN1639HY NK0



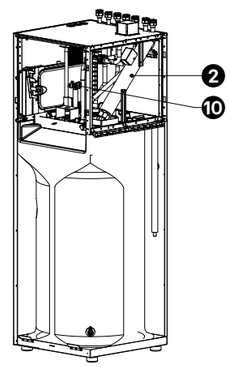
Top view



Left side view



Front view



Right side view

No.	Part Name	Description	No.	Part Name	Description
1	DHW Tank	Domestic Hot Water Tank (200 L)	6	Heat Exchanger	Coil Heat Exchanger (Water / DHW)
2	Heater	Electric Heater (1Ø 6 kW, 3Ø 9 kW)	7	Control Box	PCB'A and Terminal Blocks
3	3 Way Valve	For DHW / Heating	8	Air Vent	For Air Purging
4	Expansion Vessel	8L for Heating Circuit	9	Drain Cock 1	Valve for DHW Tank Drain
5	DHW Tank Sensor	Temperature Sensor	10	Safety Valve	For DHW (10 bar)

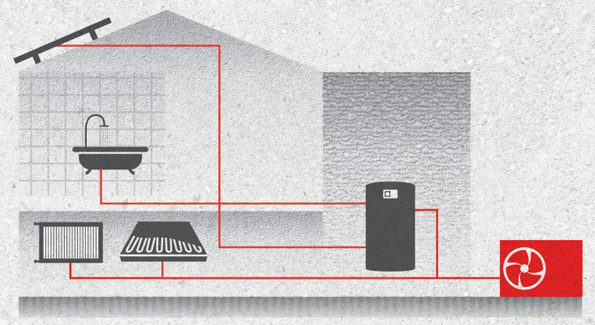
THERMA V™ R32 Monobloc S Ⅱ

The Final Evolution of the R32 Monobloc

The R32 Monobloc S Ⅱ is the ultimate evolution of the R32 Monobloc series, with all the benefits of the R32 Monobloc S in a sleek gray European design.

What is R32 Monobloc S Ⅱ

The THERMA V R32 Monobloc S Ⅱ is the next generation model that continues the legacy of the LG THERMA V R32 Monobloc S. The new generation's sleek look matches that of the rest of the modernized line-up, while maintaining the excellent performance of the existing R32 Monobloc S, and that the single fan design has been applied to not only the 5, 7, and 9 kW but also the 12, 14, and 16 kW models. Along with these design changes, various features and installation conveniences that were developed from the R290 Monobloc have been reflected.



Key Features

- Capacity range from 5 to 16 kW for new build and renovation
- Refined gray design that adapt to various surroundings
- Standalone heat pump allowing easy installation (Plug and play solution)
- ErP Energy Labeling A+++ / A++ for space heating (Average Climate 35°C / 55°C LWT)
- Low noise level for high installation flexibility
- 100% Heating capacity at -15°C outdoor temperature (16 kW 90%)
- Maximum flow temperature up to 65°C
- Operation range down to -25°C

R32 Space heating A+++ 35℃ A++ 55℃ 65℃ -25℃ ThinQ

Product Range

Phase	Capacity (kW)	Outdoor Unit
1Ø	5	HM051MRS UA40
	7	HM071MRS UA40
	9	HM091MRS UA40
	12	HM121MRS UB40
	14	HM141MRS UB40
	16	HM161MRS UB40
3Ø	12	HM123MRS UB40
	14	HM143MRS UB40
	16	HM163MRS UB40

HIGHLIGHT OF R32 MONOBLOC S Ⅱ

Browse now

New Design

European-style Gray

Enhanced Convenience

- Outdoor units design meets European standards
- Refined gray design that will look great anywhere
- 2 feet instead of 3 feet which was uncomfortable

Improved Structure

Prevent Cumulative Icing

Elimination of side panel and rear grille to prevent ice build-up

Monobloc S

Free from ice build up

Monobloc S Ⅱ

Space Efficiency

Simpler Exterior

- Integrated hydronic components in the package
- Easier and quicker installation without refrigerant piping work
- The best solution, when interior space is limited

Comfortable Ease

Low Noise Level Allowing Installation Flexibility

- Designed to reach lower noise levels in order to meet homeowner expectations in urban areas
- Noise reduction technology such as encapsulated compressor and vibration-decoupling to ensure a quieter and more comfortable experience

Reliable Performance

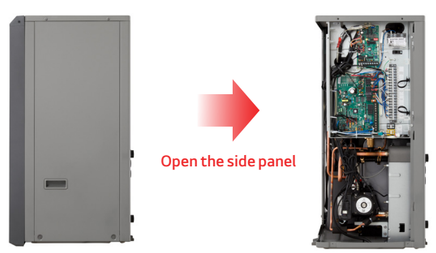
Remarkable Heating Performance even in Cold Weather

- 100 % heating capacity at -15 °C ambient temp. (@LWT 35 °C, except for 16 kW model)
- Longer continuous heating periods with reduced defrost operation time and extended intervals

Convenience

Easy Maintenance

Easy access to PCB for installing and maintenance



Separate Supply of Strainer

Easy strainer cleaning by not opening the panel

Integrated strainer

Loose supplied item (Supplied with outdoor unit)

THERMA V R32
MONOBLOC S II (5 / 7 / 9 kW)

Outdoor unit

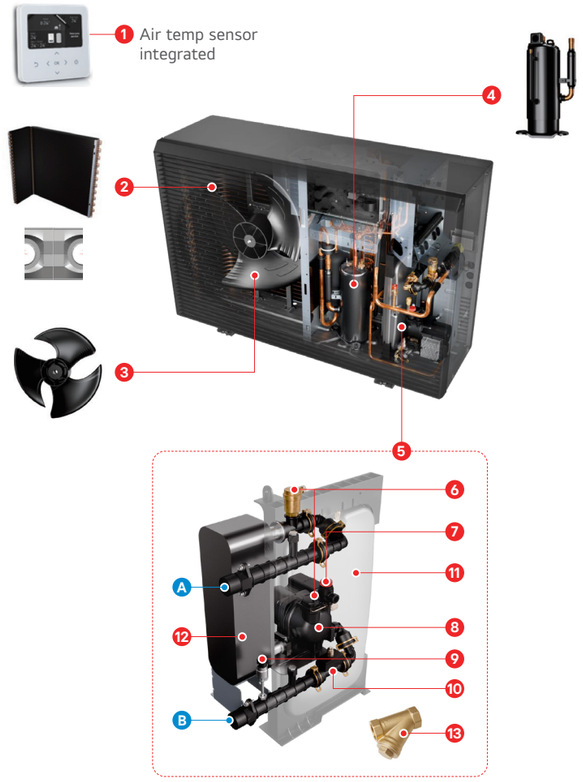
HM051MRS UA40
HM071MRS UA40
HM091MRS UA40

011-1W0927

R32 | A+++ 35℃ | A++ 55℃ | 65℃ | -25℃ | ThinQ

Key Components

Outdoor Unit



Components

1. Standard III remote controller [1) 2)]
2. Black Fin heat exchanger (air / ref.)
3. Biomimetic fan
4. R1 compressor
5. Hydronic components assembly
6. Air vent valve
7. Safety valve
8. Water pump
9. Pressure sensor
10. Flow sensor
11. Expansion tank (8ℓ)
12. Plate heat exchanger
13. Strainer (loose supplied)

1) The remote controller is supplied with the product, but it needs to be installed separately.
2) Temperature control class (ERP class) : V

Connections

A. Leaving water pipe (male PT 1")
B. Entering water pipe (male PT 1")

Product Specification

Efficiency Data		Unit	5 kW (1 Ø)	7 kW (1 Ø)	9 kW (1 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	175 / 125	176 / 125	179 / 125
SCOP (35°C / 55°C)		-	4.46 / 3.20	4.48 / 3.20	4.55 / 3.20
Sound power level	Rated / low noise mode	dB(A)	57 / 54	57 / 55	57 / 55
Sound pressure level at 5m	Rated / low noise mode	dB(A)	35 /32	35 / 33	35 / 33
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	5.50 / 4.70	7.00 / 4.70	9.00 / 4.60
Air +2°C / water +35°C	Heating capacity / COP	kW / -	5.50 / 3.60	6.00 / 3.55	7.00 / 3.50
Air +7°C / water +55°C	Heating capacity / COP	kW / -	5.50 / 2.70	5.75 / 2.70	6.00 / 2.70
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	5.50 / 4.70	7.00 / 4.65	9.00 / 4.60
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	5.50 / 3.30	7.00 / 3.20	9.00 / 3.00
Outdoor Units		**Unit**	**HM051MRS UA40**	**HM071MRS UA40**	**HM091MRS UA40**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 65		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	1,400		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Expansion vessel (heating circuit)	Volume	ℓ	8		
Dimension	H x W x D	mm	853 x 1,242 x 391		
Weight	Net	kg	94		
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037		
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50		
	Standby power consumption	W	10		
	Recommended circuit breaker	A	16	20	25

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 MONOBLOC S II (5 / 7 / 9 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM051MRS UA40

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

HM071MRS UA40

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

HM091MRS UA40

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	6.20	6.20	6.20	6.20	-	-	-	-
-20	7.60	7.60	7.60	7.60	7.22	-	-	-
-15	9.00	9.00	9.00	9.00	8.55	8.55	-	-
-7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35	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),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM051MRS UA40

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

HM071MRS UA40

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

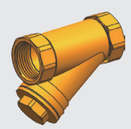
HM091MRS UA40

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

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer



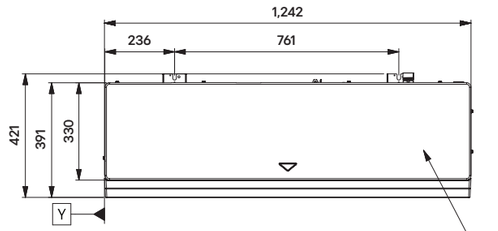
Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

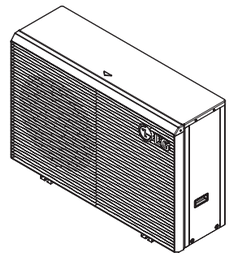
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R32
MONOBLOC S II (5 / 7 / 9 kW)

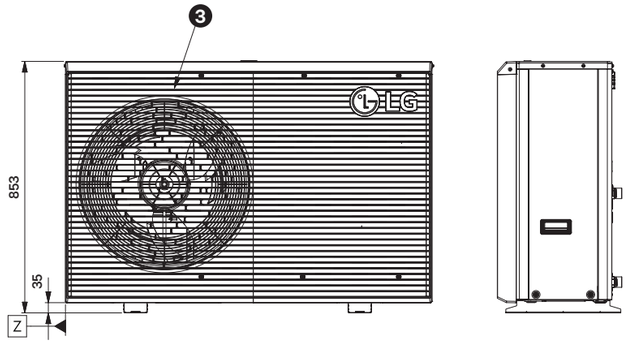
Drawings

[Unit: mm]

HM051MRS UA40
HM071MRS UA40
HM091MRS UA40

Top view



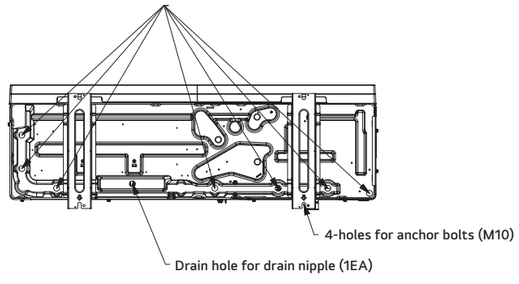
3D view



Top view

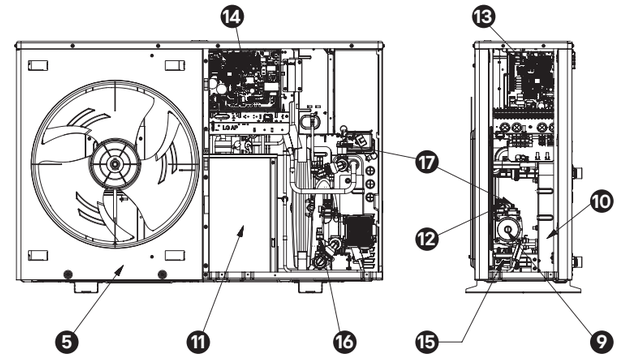
Side view

Drain holes for drain cap (7EA)
Note.
If you need more drains, remove them



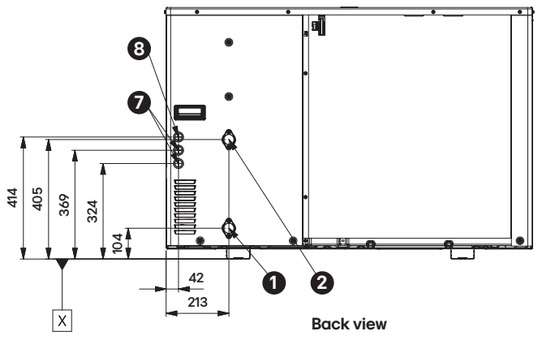
Bottom view

[Unit: mm]

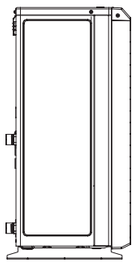


Internal front view

Internal side view



Back view



Side view

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	Air Discharge Grille	-
4	Top Cover	-
5	Front Panel	-
6	Side Panel	-
7	Low Voltage	Communication Cable Hole
8	UNIT Power	Power Cable Hole
9	Water Pump	OH SUNG, ODM-061P / GRUNDFOS, UPM3K 20-75 CHBL
10	Plate Heat Exchanger	Heat Exchanger Between Refrigerant and Water
11	Compressor Shield Panel	-
12	Safety Relief Valve	Open at Water Pressure 3 Bar
13	Indoor Control Box	Hydro, Cycle PCB and Terminal Blocks
14	Outdoor Control Box	Inverter PCB and Terminal Blocks
15	Flow Sensor	SIKA VVX20 / SEBA LGF-080-C20-E-0.5V, 5-80 LPM
16	Water Pressure Sensor	SENSATA 2HMP3-05W 02-MPa
17	Automatic Air Vents	-

THERMA V R32
MONOBLOC S II (12 / 14 / 16 kW)

Outdoor unit

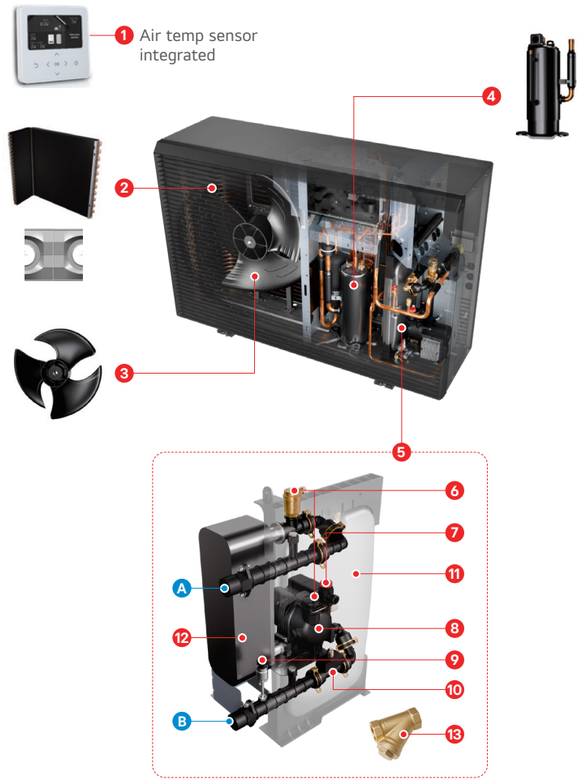
HM121MRS UB40 / HM123MRS UB40
HM141MRS UB40 / HM143MRS UB40
HM161MRS UB40 / HM163MRS UB40

011-1W0962

R32 | A+++ 35℃ | A++ 55℃ | 65℃ | -25℃ | ThinQ

Key Components

Outdoor Unit



Components

1. Standard III remote controller [1) 2)]
2. Black Fin heat exchanger (air / ref.)
3. Biomimetic fan
4. R1 compressor
5. Hydronic components assembly
6. Air vent valve
7. Safety valve
8. Water pump
9. Pressure sensor
10. Flow sensor
11. Expansion tank (8ℓ)
12. Plate heat exchanger
13. Strainer (loose supplied)

1) The remote controller is supplied with the product, but it needs to be installed separately.
2) Temperature control class (ERP class) : V

Connections

A. Leaving water pipe (male PT 1")
B. Entering water pipe (male PT 1")

Product Specification

Efficiency Data		Unit	12 kW (1 Ø) 12 kW (3 Ø)	14 kW (1 Ø) 14 kW (3 Ø)	16 kW (1 Ø) 16 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	184 / 136	182 / 135	178 / 135
SCOP (35°C / 55°C)		-	4.67 / 3.47	4.62 / 3.46	4.53 / 3.45
Sound power level	Rated / low noise mode	dB(A)	60 / 56	61 / 57	61 / 57
Sound pressure level at 5m	Rated / low noise mode	dB(A)	38 / 34	39 / 35	39 / 35
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 4.90	14.00 / 4.80	16.00 / 4.70
Air +2°C / water +35°C	Heating capacity / COP	kW / -	11.00 / 3.60	12.00 / 3.55	13.80 / 3.50
Air +7°C / water +55°C	Heating capacity / COP	kW / -	11.00 / 2.90	11.50 / 2.85	12.00 / 2.80
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	12.00 / 4.80	14.00 / 4.70	16.00 / 4.60
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	12.00 / 3.20	14.00 / 3.10	15.00 / 3.00
Outdoor Units		**Unit**	**HM121MRS UB40 HM123MRS UB40**	**HM141MRS UB40 HM143MRS UB40**	**HM161MRS UB40 HM163MRS UB40**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 65		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	1,600		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Expansion vessel (heating circuit)	Volume	ℓ	8		
Dimension	H x W x D	mm	1,019 x 1,320 x 520		
Weight	Net	kg	117		
Exterior	Color of chassis / RAL code	-	Dawn gray / RAL 7037		
	Color of front grille / RAL code	-	Dark dawn gray / RAL 7012		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50		
	Standby power consumption	W	10		
	Recommended circuit breaker	A	40 / 16		

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32
MONOBLOC S Ⅱ (12 / 14 / 16 kW)

Performance Table for Heating Operation

Maximum heating capacity (Include defrost effect)

HM121MRS UB40 / HM123MRS UB40

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	9.50	9.50	9.50	9.50	-	-	-	-
-20	10.75	10.75	10.75	10.75	10.21	-	-	-
-15	12.00	12.00	12.00	12.00	11.50	11.50	-	-
-7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	-
-4	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
-2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
15	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
18	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

HM141MRS UB40 / HM143MRS UB40

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	10.00	10.00	10.00	10.00	-	-	-	-
-20	12.00	12.00	12.00	12.00	11.40	-	-	-
-15	14.00	14.00	14.00	14.00	13.30	13.30	-	-
-7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	-
-4	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
-2	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
2	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
15	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
18	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35	14.00	14.00	14.00	14.00	14.00	14.00	14.00	12.50

HM161MRS UB40 / HM163MRS UB40

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	10.50	10.50	10.50	10.50	-	-	-	-
-20	13.25	13.25	13.25	13.25	12.59	-	-	-
-15	16.00	14.40	14.40	14.40	13.68	13.68	-	-
-7	16.00	16.00	16.00	16.00	16.00	16.00	16.00	-
-4	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-2	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
2	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
7	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
15	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35	16.00	16.00	16.00	16.00	16.00	16.00	16.00	13.00

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM121MRS UB40 / HM123MRS UB40

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00
30	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00
40	11.05	11.19	11.33	11.43	11.57	11.67	11.76
45	10.10	10.37	10.64	10.83	11.10	11.28	11.46

HM141MRS UB40 / HM143MRS UB40

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	12.50	12.80	13.10	13.30	13.60	13.80	14.00
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00
30	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35	14.00	14.00	14.00	14.00	14.00	14.00	14.00
40	12.35	12.60	12.84	13.01	13.26	13.42	13.59
45	10.69	11.19	11.69	12.02	12.51	12.84	13.17

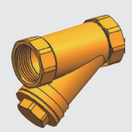
HM161MRS UB40 / HM163MRS UB40

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	13.00	13.60	14.20	14.60	15.20	15.60	16.00
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00
30	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35	16.00	16.00	16.00	16.00	16.00	16.00	16.00
40	13.60	13.96	14.32	14.56	14.92	15.16	15.40
45	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),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Supplied Parts

Strainer



Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

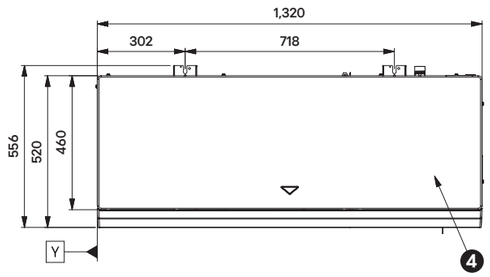
* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R32
MONOBLOC S II (12 / 14 / 16 kW)

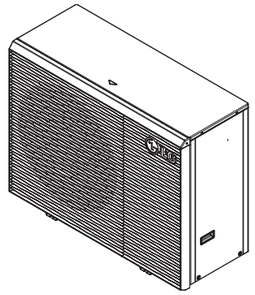
Drawings

[Unit: mm]

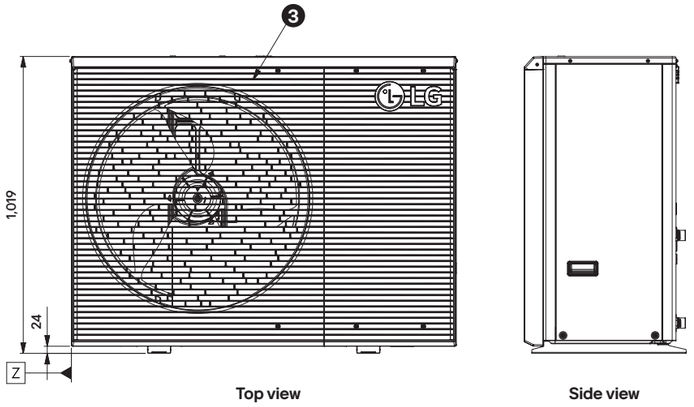
HM121MRS UB40 / HM123MRS UB40
HM141MRS UB40 / HM143MRS UB40
HM161MRS UB40 / HM163MRS UB40



Top view



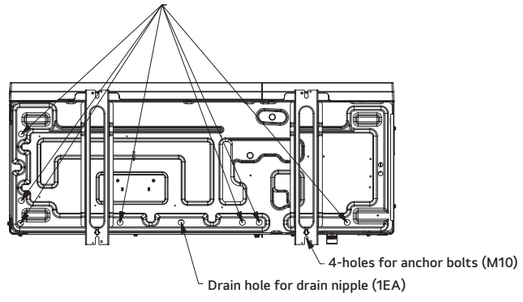
3D view



Top view

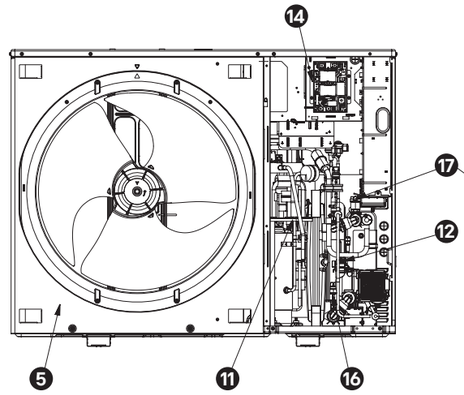
Side view

Drain holes for drain cap (7EA)
Note.
If you need more drains, remove them

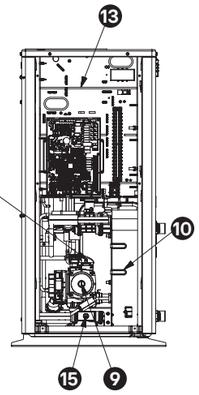


Bottom view

[Unit: mm]

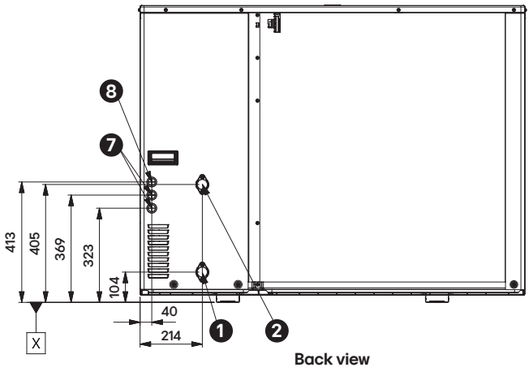


Internal front view

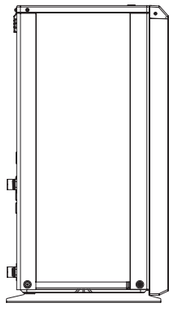


Internal side view

Side view



Back view



Side view

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	Air Discharge Grille	-
4	Top Cover	-
5	Front Panel	-
6	Side Panel	-
7	Low Voltage	Communication Cable Hole
8	UNIT Power	Power Cable Hole
9	Water Pump	OH SUNG, ODM-061P / GRUNDFOS, UPM3K 20-75 CHBL
10	Plate Heat Exchanger	Heat Exchanger Between Refrigerant and Water
11	Compressor Shield Panel	-
12	Safety Relief Valve	Open at Water Pressure 3 Bar
13	Indoor Control Box	Hydro, Cycle PCB and Terminal Blocks
14	Outdoor Control Box	Inverter PCB and Terminal Blocks
15	Flow Sensor	SIKA VVX20 / SEBA LGF-080-C20-E-0.5V, 5-80 LPM
16	Water Pressure Sensor	SENSATA 2HMP3-05W 02-MPa
17	Automatic Air Vents	-

THERMA V™ R32 Hydrosplit

What is R32 Hydrosplit

The LG THERMA V Hydrosplit series is a simple, safe heat pump that eliminating the risk of indoor refrigerant leakage by connecting outdoor unit and indoor unit using water piping. It separates the indoor unit and outdoor unit, connecting them just via water pipes instead of refrigerant pipe.

Key Features

- Capacity range from 12 to 16 kW for renovation and large new build
- ErP Energy Labeling A+++ / A++ for space heating (Average Climate 35°C / 55°C LWT)
- ErP Energy Labeling A+ for hot water heating (L profile)
- No need for F-gas license and simple installation due to no refrigerant piping work
- Operation range down to -25°C
- Maximum flow temperature up to 65°C

R32 A+++ 35℃ A++ 55℃ A+ L 65℃ -25℃ ThinQ

Product Range

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

HIGHLIGHT OF R32 HYDROSPLIT

Simple Installation without Refrigerant Piping

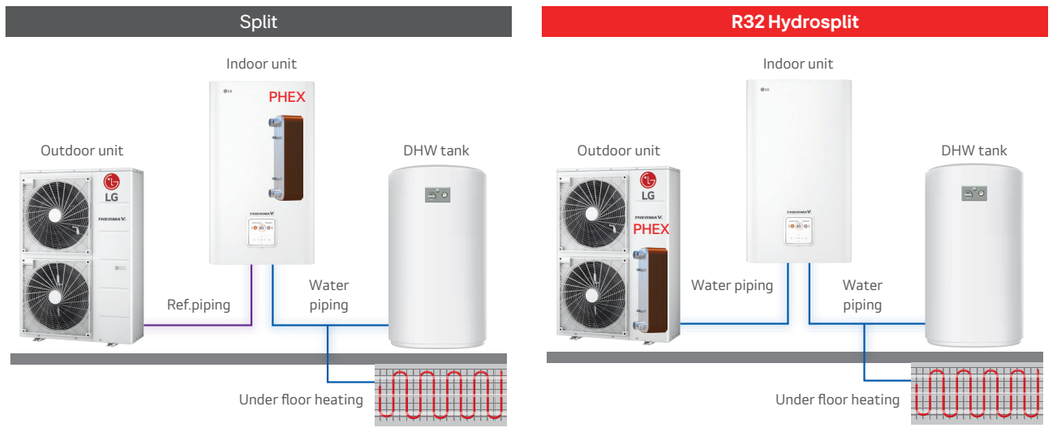
- No need for F-gas license, because outdoor and indoor unit are connected by water pipes
- As hydronic parts are packaged inside indoor units, the installation can be realized with minimum usage of space
- Refrigerant is hermetically sealed inside outdoor unit

Remarkable Heating Performance even in Cold Weather

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

No Risk of Indoor Refrigerant Leakage

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



If piping length between indoor unit and outdoor unit is 30 m

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

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

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

No minimum floor area requirement

Browse now

All-in-one Integration (Combi Unit)

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

Sophisticated and Harmonious Exterior

The indoor unit's sleek design fits into diverse indoor spaces, such as a utility or laundry room, a garage or a kitchen.

Save Space and Time

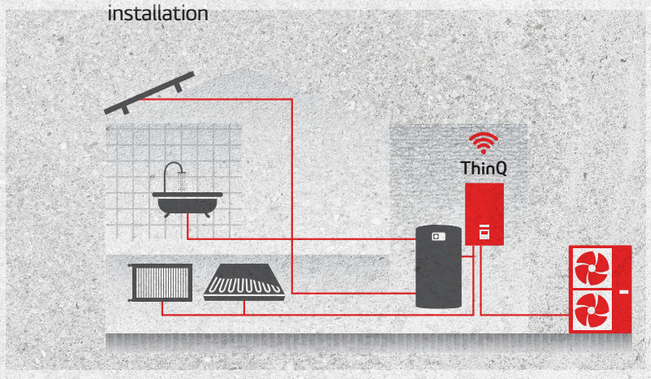
Unlike in the case of a conventional system, this all-in-one solution requires reduced installation time and saves valuable living space.

THERMA V™ R32 Hydrosplit

HYDRO UNIT

Key Features

- Capacity range from 12 to 16 kW for renovation and large new build
- No need for F-gas license and simple installation due to no refrigerant piping work
- Operation range down to -25°C
- Maximum flow temperature up to 65°C
- High level hydronic components integration for fast and clean installation



Only Water Enters Home

The LG THERMA V Hydrosplit series is a simple, safe heat pump that eliminating the risk of indoor refrigerant leakage by connecting outdoor unit and indoor unit using water piping. Since the indoor unit of R32 Hydrosplit Hydro Unit is installed on the wall rather than on the floor, space is not wasted, and the light weight enables quick installation. This makes it perfect for renovation projects. Also, it has good maintainability because the indoor unit is located indoors, for example in a machine room.

Application

Certifications

Energy Label

Space heating A+++ 35°C A++ 55°C

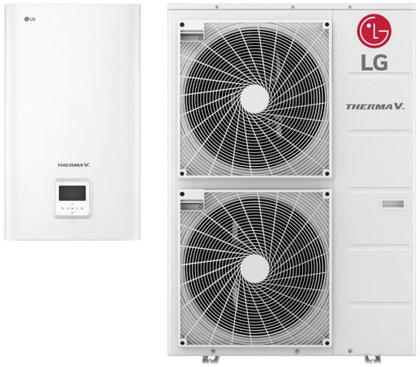
THERMA V R32 HYDROSPLIT HYDRO UNIT

Outdoor unit

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

Indoor unit

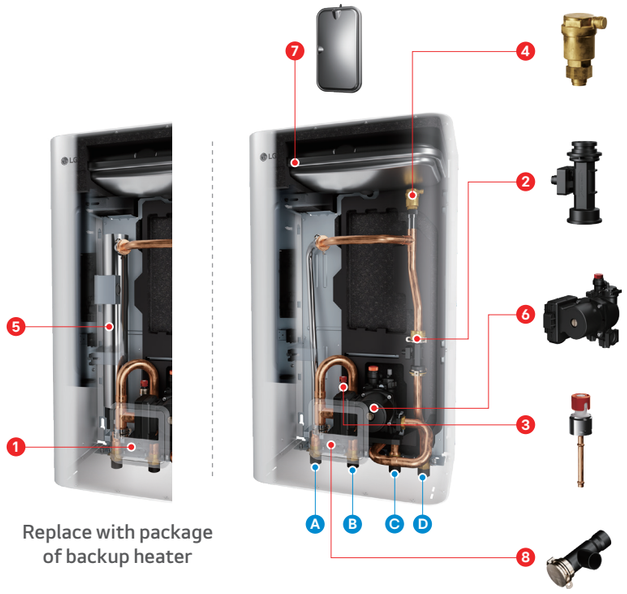
HN1600MC NK1



011-1W0382

Key Components

Hydro Unit



Replace with package of backup heater

Components

1. Standard III remote controller [1] (air temp. sensor integrated)
2. Flow sensor
3. Water pressure sensor
4. Air vent valve
5. Backup electric heater (6 kW, accessory)
6. Water pump
7. Expansion vessel (8 ℓ)
8. Strainer

1) Temperature control class (ERP class) : V

Connections

- A Heating circuit outlet pipe (male PT 1")
- B Heating circuit inlet pipe (male PT 1")
- C Outlet pipe to outdoor unit (male PT 1")
- D Inlet pipe from outdoor unit (male PT 1")

Product Specification

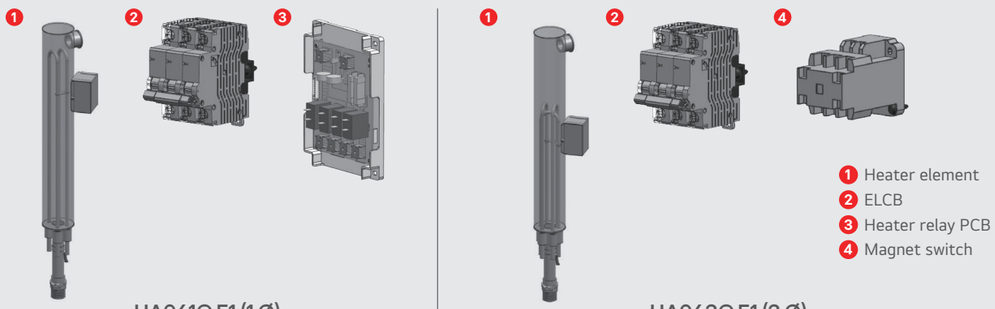
Efficiency Data		Unit	12 kW (1 Ø) 12 kW (3 Ø)	14 kW (1 Ø) 14 kW (3 Ø)	16 kW (1 Ø) 16 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	181 / 137	180 / 136	179 / 135
SCOP (35°C / 55°C)		-	4.60 / 3.50	4.57 / 3.47	4.55 / 3.45
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	61 / 60	62 / 60	63 / 60
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	39 / 38	40 / 38	41 / 38
Sound power level (indoor unit)	Rated	dB(A)	44		
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	36		
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 5.04	14.00 / 4.89	16.00 / 4.80
Air +2°C / water +35°C	Heating capacity / COP	kW / -	11.00 / 3.65	12.00 / 3.63	13.80 / 3.60
Air +7°C / water +55°C	Heating capacity / COP	kW / -	11.00 / 2.90	11.50 / 2.85	12.00 / 2.80
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	12.00 / 4.75	14.00 / 4.30	16.00 / 4.00
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	12.00 / 2.70	14.00 / 2.60	16.00 / 2.50
Outdoor Units		**Unit**	**HU121MRB U30 HU123MRB U30**	**HU141MRB U30 HU143MRB U30**	**HU161MRB U30 HU163MRB U30**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	2,100		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Dimension	H x W x D	mm	1,380 x 950 x 330		
Weight	Net	kg	91.7		
Exterior	Color of chassis / RAL code	-	Warm gray / RAL 7044		
Power supply	Voltage, phase, frequency (1Ø, 3Ø)	V, Ø, Hz	220 - 240, 1, 50 / 380 - 415, 3, 50		
	Standby power consumption	W	60		
	Recommended circuit breaker (1Ø, 3Ø)	A	40 / 16		
Indoor Units		**Unit**	**HN1600MC NK1**		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 65		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Expansion vessel (heating circuit)	Volume	ℓ	8		
Piping connections (water)	Outlet to outdoor unit	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
	Inlet from outdoor unit	inch			
	Outlet to heat load	inch			
	Inlet from heat load	inch			
Dimension	H x W x D	mm	850 x 490 x 315		
Weight	Net	kg	30.5		
Exterior	Color / RAL code	-	Noble white / RAL 9016		

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 HYDROSPLIT HYDRO UNIT

Accessory Parts (Optional Accessory)

Accessory Backup Heater for Hydrosplit Hydro Unit

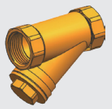


Electrical Specification		Unit	HA061C E1	HA063C E1
Backup heater	Capacity combination	kW	3.0 + 3.0	2.0 +2.0 + 2.0
	Heating steps	Steps	1	1
	Power supply	V, Ø, Hz	220 ~ 240, 1, 50	380 ~ 415, 30, 50
	Rated running current	A	24.0	8.7

* The backup heater should be purchased and installed separately.

Supplied Parts

Strainer



Technical Specification		Details
Material	Body	Brass
	Mesh	Stainless steel (ST304)
Mesh	Mesh no.	30
	Max. particle size	0.6 mm
Piping connection		Female G 1" according to ISO 228-1

* The strainer is supplied with the product, but it needs to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R32 HYDROSPLIT HYDRO UNIT

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU121MRB U30 / HU123MRB U30 + HN1600MC NK1

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	9.66	8.85	8.42	8.29	-	-	-	-
-20	10.13	10.00	9.88	9.75	9.63	-	-	-
-15	11.50	11.50	11.50	11.50	11.50	11.50	-	-
-7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	-
-4	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
-2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
15	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
18	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

HU141MRB U30 / HU143MRB U30 + HN1600MC NK1

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	10.04	9.21	8.76	8.62	-	-	-	-
-20	11.82	11.25	10.95	10.67	10.59	-	-	-
-15	12.52	12.90	13.26	12.88	12.81	12.63	-	-
-7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	-
-4	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
-2	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
2	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
15	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
18	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00

HU161MRB U30 / HU163MRB U30 + HN1600MC NK1

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	10.98	10.00	9.50	9.33	-	-	-	-
-20	13.43	12.54	12.03	11.78	11.47	-	-	-
-15	14.23	14.39	14.50	13.95	13.86	13.12	-	-
-7	16.00	16.00	16.00	16.00	16.00	16.00	16.00	-
-4	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-2	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
2	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
7	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
15	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU121MRB U30 / HU123MRB U30 + HN1600MC NK1

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00
30	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00
40	11.75	12.00	12.00	12.00	12.00	12.00	12.00
45	11.50	12.00	12.00	12.00	12.00	12.00	12.00

HU141MRB U30 / HU143MRB U30 + HN1600MC NK1

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00
30	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35	14.00	14.00	14.00	14.00	14.00	14.00	14.00
40	13.75	14.00	14.00	14.00	14.00	14.00	14.00
45	13.50	14.00	14.00	14.00	14.00	14.00	14.00

HU161MRB U30 / HU163MRB U30 + HN1600MC NK1

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00
30	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35	16.00	16.00	16.00	16.00	16.00	16.00	16.00
40	15.75	16.00	16.00	16.00	16.00	16.00	16.00
45	15.50	16.00	16.00	16.00	16.00	16.00	16.00

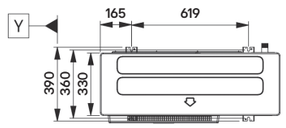
Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

THERMA V R32 HYDROSPLIT HYDRO UNIT

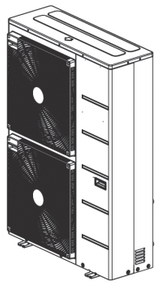
Drawings

[Unit: mm]

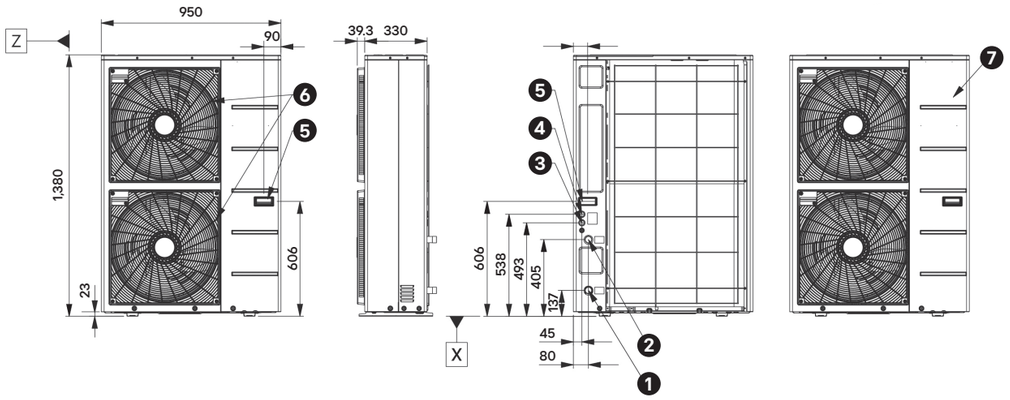
HU121MRB U30 / HU123MRB U30
HU141MRB U30 / HU143MRB U30
HU161MRB U30 / HU163MRB U30



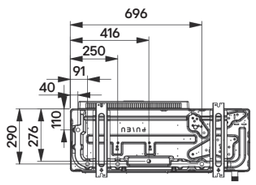
Top view



3D view



Front view | Side view | Back view | Front view



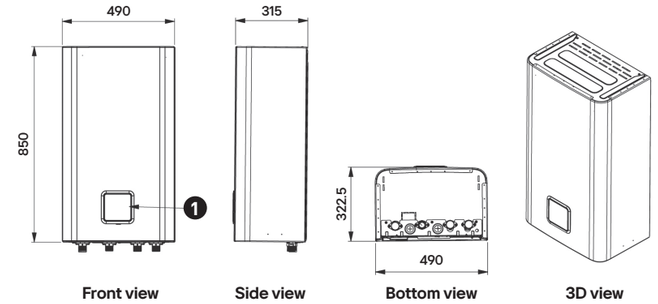
Bottom view

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	-

[Unit: mm]

External

HN1600MC NK1

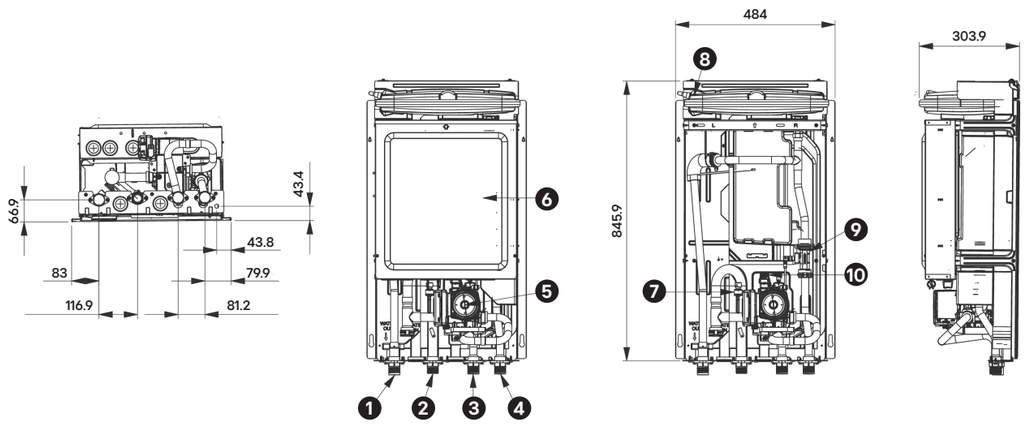


Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Control Panel	Built-in Remote Controller

Internal

HN1600MC NK1



Bottom view | Front view | Back view | Side view

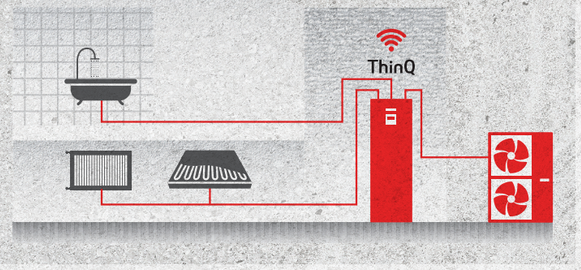
No.	Part Name	Description
1	Heating Circuit Outlet Pipe	Male PT 1" according to ISO 7-1 (Tapered pipe threads)
2	Heating Circuit Inlet Pipe	Male PT 1" according to ISO 7-1 (Tapered pipe threads)
3	Outlet Pipe to Outdoor Unit	Male PT 1" according to ISO 7-1 (Tapered pipe threads)
4	Inlet Pipe to Outdoor Unit	Male PT 1" according to ISO 7-1 (Tapered pipe threads)
5	Water Pump	To Circulate Water Inside the System
6	Control Box	PCB and Terminal Blocks
7	Pressure Sensor	To Measure the Water Pressure (0-2MPa)
8	Expansion Tank	8 Liter, 3/4" Connection
9	Flow Sensor	To Measure the Water Flow Rate (5-80 LPM)
10	Safety Valve	Open at Water Pressure 3 Bar

THERMA V R32 Hydrosplit

COMBI UNIT

Key Features

- Capacity range from12 to 16 kW for renovation and large new build
- No need for F-gas license and simple installation due to no refrigerant piping work
- Operation range down to -25°C
- Maximum flow temperature up to 65°C
- All-in-one Combi Unit with integrated hot water cylinder



Perfect Space-Saving Solution

THERMA V R32 Hydrosplit Combi Unit 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.
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.
Also, it has good installability and maintainability because the indoor unit is located indoors, for example in a machine room.

Application

Certifications

Energy Label

Space heating A+++ 35°C A++ 55°C DHW heating A+ L

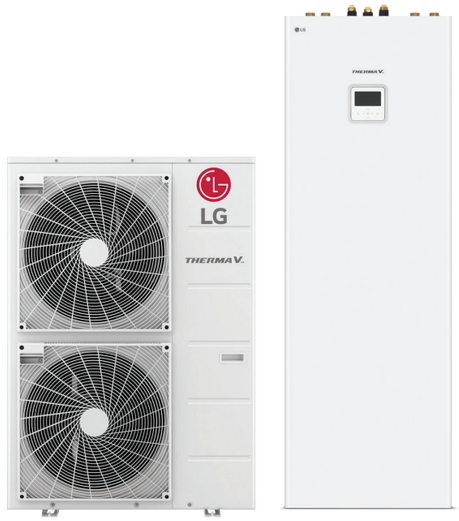
THERMA V R32 HYDROSPLIT COMBI UNIT

Outdoor unit

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

Indoor unit

HN1616Y NB1

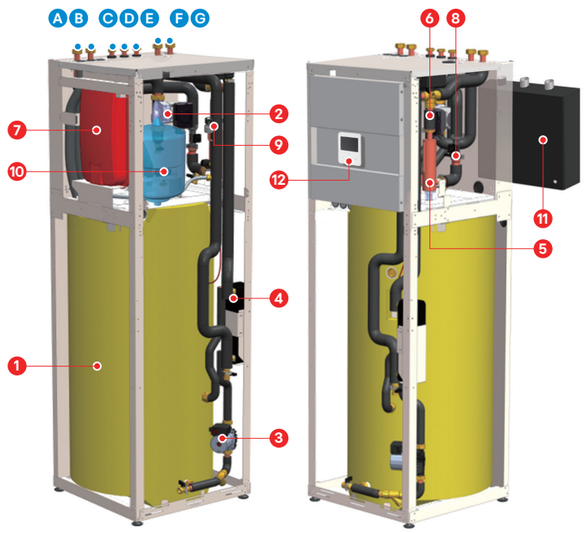


011-1W0466

R32 A+++ 35℃ A++ 55℃ A+ L 65℃ -25℃ ThinQ

Key Components

Combi Unit



Components

1. DHW storage tank (200 ℓ)
2. Main water pump
3. Water pump for DHW charging
4. Plate heat exchanger for DHW (water / DHW)
5. Electric heater (max. 6 kW)
6. 3-way diverting valve
7. Expansion vessel for heating (12 ℓ)
8. Flow sensor
9. Water pressure sensor
10. Expansion vessel for DHW (8 ℓ, option)
11. Buffer tank (40 ℓ, option)
12. Standard III remote controller[1)] (attached on the front panel)

1) Temperature control class (ERP class) : V

Connections

- A Inlet pipe from outdoor unit (female G1")
- B Outlet pipe to outdoor unit (female G1")
- C Domestic hot water outlet pipe (female G3/4")
- D Domestic cold water outlet pipe (female G3/4")
- E DHW recirculation pipe (female G3/4")
- F Heating circuit inlet pipe (female G1")
- G Heating circuit outlet pipe (female G1")

Product Specification

Efficiency Data		Unit	12 kW (1 Ø) 12 kW (3 Ø)	14 kW (1 Ø) 14 kW (3 Ø)	16 kW (1 Ø) 16 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	181 / 137	180 / 136	179 / 135
SCOP (35°C / 55°C)		-	4.60 / 3.50	4.57 / 3.47	4.55 / 3.45
Declared load profile, average climate		-	L	L	L
Water heating efficiency (η_{WH}), average climate		%	120	120	120
COP_{DHW}, average climate		-	2.74	2.74	2.74
Water heating eff. class, average climate		-	A+	A+	A+
Annual energy consumption, DHW (average climate)		kWh	850	850	850
Heating up time acc. to EN 16147 (average climate)		h/mm	1h 25	1h 25	1h 25
Max. usable water volume acc. to EN 16147 (average climate)		ℓ	222	222	222
Declared load profile, warmer climate		-	L	L	L
Water heating efficiency (η_{WH}), warmer climate		%	151	151	151
COP_{DHW}, warmer climate		-	3.43	3.43	3.43
Water heating eff. class, warmer climate		-	A++	A++	A++
Declared load profile, colder climate		-	L	L	L
Water heating efficiency (η_{WH}), colder climate		%	101	101	101
COP_{DHW}, colder climate		-	2.34	2.34	2.34
Water heating eff. class, colder climate		-	A	A	A
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	61 / 60	62 / 60	63 / 60
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	39 / 38	40 / 38	41 / 38
Sound power level (indoor unit)	Rated	dB(A)	43		
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	35		
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	12.00 / 5.04	14.00 / 4.89	16.00 / 4.80
Air +2°C / water +35°C	Heating capacity / COP	kW / -	11.00 / 3.65	12.00 / 3.63	13.80 / 3.60
Air +7°C / water +55°C	Heating capacity / COP	kW / -	11.00 / 2.90	11.50 / 2.85	12.00 / 2.80
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	12.00 / 4.75	14.00 / 4.30	16.00 / 4.00
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	12.00 / 2.70	14.00 / 2.60	16.00 / 2.50

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 HYDROSPLIT COMBI UNIT

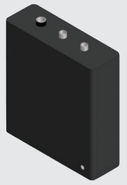
Product Specification

Outdoor Units		Unit	HU121MRB U30 HU123MRB U30	HU141MRB U30 HU143MRB U30	HU161MRB U30 HU163MRB U30
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	2,100		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Dimension	H x W x D	mm	1,380 x 950 x 330		
Weight	Net	kg	91.7		
Exterior	Color of chassis / RAL code	-	Warm gray / RAL 7044		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 - 240, 1, 50 / 380 - 415, 3, 50		
	Standby power consumption	W	60		
	Recommended circuit breaker	A	40 / 16		
Indoor Units		**Unit**	**HN1616Y NB1**		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 65		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Domestic hot water tank	Volume	ℓ	200		
	Tank material	-	Enameled steel		
	Standby losses	-	61		
Expansion vessel (heating circuit)	Volume	ℓ	12		
Electric heater (Case 1 / Case 2 / Case 3)	Capacity combination	kW	2.0 / 2.0 + 2.0 / 2.0 + 2.0 + 2.0		
	Heating steps	Steps	1		
	Power supply	V, Ø, Hz	220 - 240, 1, 50 / 220 - 240, 1, 50 / 380 - 415, 3, 50		
	Rated running current	A	8.7 / 17.4 / 8.7		
Piping connections (water)	Outlet to outdoor unit	inch	Female G1" according to ISO228-1 (parallel pipe threads)		
	Inlet from outdoor unit	inch			
	Outlet to heat load	inch			
	Inlet from heat load	inch			
	Inlet / outlet diameter for DHW	inch	Female G3/4" according to ISO228-1 (parallel pipe threads)		
	Recirculation	inch			
Dimension	H x W x D	mm	1,812 x 601 x 685		
Weight	Net	kg	130.0		
Exterior	Color / RAL code	-	White / RAL 9002		

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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

Accessory Parts (Optional Accessory)

Buffer Tank for Space Heating



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

Electrical Specification		Unit	OSHB-40KT AEU
Water volume		ℓ	40
Dimensions (H x W x D)		mm	518 x 560 x 175
Weight (w/o water)	Product	kg	24

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

Expansion Vessel for DHW

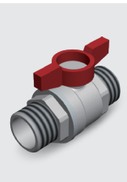
A standard 8 ℓ DHW expansion vessel, that conveniently fits inside the indoor unit, can be installed as an optional accessory. It is provided with an accessory kit that includes a flexible connection tube.

Electrical Specification		Unit	OSHE-12KT AEU
Water volume		ℓ	8
Connection		inch	3/4
Max. pressure		bar	10
Pre-charge		bar	3
Dimensions (H x W 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.

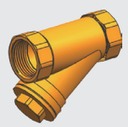
Supplied Parts

Shut-off Valve



Shut-off Valve with Strainer

Strainer



Technical Specification		Unit	Details
Material	Body	-	Brass
	Mesh	-	Stainless steel (STS304)
Mesh	Mesh no.	-	30
	Max. particle size	mm	0.6
Piping connection		-	Female G1" according to ISO 228-1

* The strainer and valves are supplied with the product, but it need to be installed separately.
* This strainer should be installed at the inlet connection of the outdoor unit to protect the clogging of a plate heat exchanger.

THERMA V R32 HYDROSPLIT COMBI UNIT

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU121MRB U30 / HU123MRB U30 + HN1616Y NB1

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	9.66	8.85	8.42	8.29	-	-	-	-
-20	10.13	10.00	9.88	9.75	9.63	-	-	-
-15	11.50	11.50	11.50	11.50	11.50	11.50	-	-
-7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	-
-4	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
-2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
15	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
18	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

HU141MRB U30 / HU143MRB U30 + HN1616Y NB1

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	10.04	9.21	8.76	8.62	-	-	-	-
-20	11.82	11.25	10.95	10.67	10.59	-	-	-
-15	12.52	12.90	13.26	12.88	12.81	12.63	-	-
-7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	-
-4	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
-2	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
2	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
7	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
15	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
18	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00

HU161MRB U30 / HU163MRB U30 + HN1616Y NB1

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	10.98	10.00	9.50	9.33	-	-	-	-
-20	13.43	12.54	12.03	11.78	11.47	-	-	-
-15	14.23	14.39	14.50	13.95	13.86	13.12	-	-
-7	16.00	16.00	16.00	16.00	16.00	16.00	16.00	-
-4	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-2	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
2	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
7	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
15	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU121MRB U30 / HU123MRB U30 + HN1616Y NB1

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20	12.00	12.00	12.00	12.00	12.00	12.00	12.00
30	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35	12.00	12.00	12.00	12.00	12.00	12.00	12.00
40	11.75	12.00	12.00	12.00	12.00	12.00	12.00
45	11.50	12.00	12.00	12.00	12.00	12.00	12.00

HU141MRB U30 / HU143MRB U30 + HN1616Y NB1

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20	14.00	14.00	14.00	14.00	14.00	14.00	14.00
30	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35	14.00	14.00	14.00	14.00	14.00	14.00	14.00
40	13.75	14.00	14.00	14.00	14.00	14.00	14.00
45	13.50	14.00	14.00	14.00	14.00	14.00	14.00

HU161MRB U30 / HU163MRB U30 + HN1616Y NB1

Outdoor Temp. [°C DB]	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C
	Capacity (kW)						
10	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20	16.00	16.00	16.00	16.00	16.00	16.00	16.00
30	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35	16.00	16.00	16.00	16.00	16.00	16.00	16.00
40	15.75	16.00	16.00	16.00	16.00	16.00	16.00
45	15.50	16.00	16.00	16.00	16.00	16.00	16.00

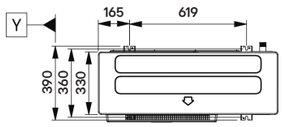
Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

THERMA V R32 HYDROSPLIT COMBI UNIT

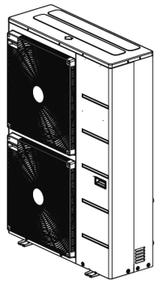
Drawings

[Unit: mm]

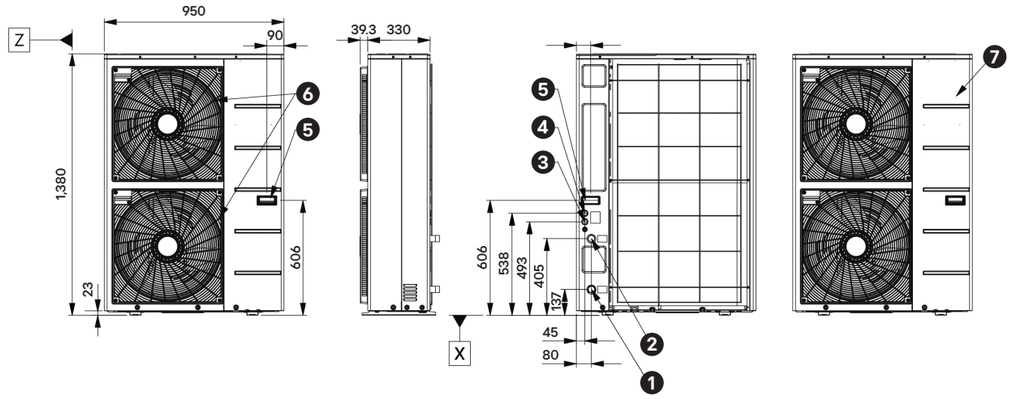
HU121MRB U30 / HU123MRB U30
HU141MRB U30 / HU143MRB U30
HU161MRB U30 / HU163MRB U30



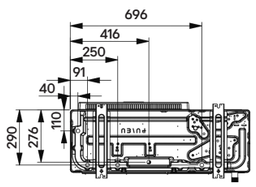
Top view



3D view



Front view | Side view | Back view | Front view

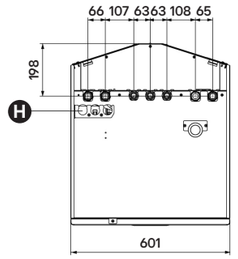


Bottom view

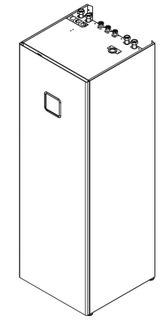
No.	Part Name	Description
1	Entering Water Pipe	Male PT 1" according to ISO 7-1 (Tapered pipe threads)
2	Leaving Water Pipe	Male PT 1" according to ISO 7-1 (Tapered pipe threads)
3	Unit Power	Power Cable Hole
4	Low Voltage	Communication Cable Hole
5	Handle	-
6	Air Outlet	-
7	Side Panel	-

[Unit: mm]

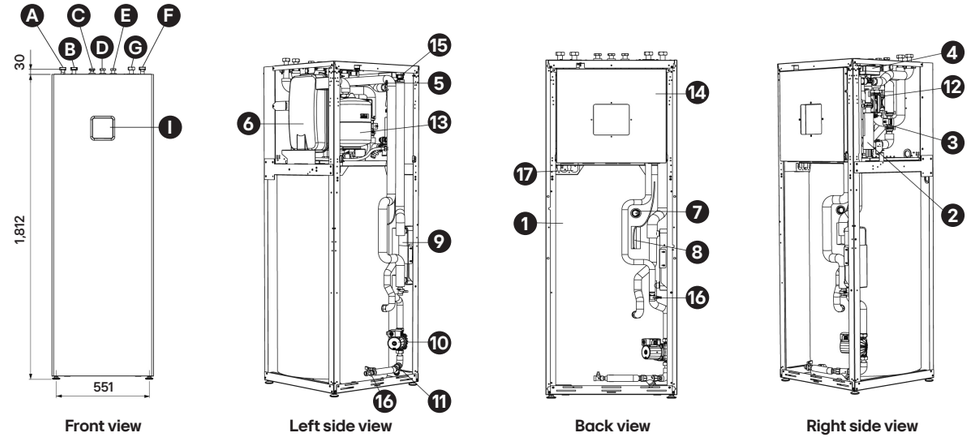
HN1616Y NB1



Top view



3D view



Front view | Left side view | Back view | Right side view

No.	Part Name	Description	No.	Part Name	Description
1	Domestic Hot Water Tank	Domestic Hot Water Tank (200L)	A	Inlet Pipe from Outdoor Unit	Female G1"
2	Electric Heater	200 ℓ	B	Outlet Pipe to Outdoor Unit	Female G1"
3	Flow Sensor	Max. 6 kW	C	Domestic Hot Water Outlet Pipe	Female G3/4"
4	3 Way Valve	To Measure the Water Flow Rate (5-80 LPM)	D	Domestic Cold Water Inlet Pipe	Female G3/4"
5	Water Pressure Sensor	Heating / DHW Circuit	E	Domestic Re-circulation Pipe	Female G3/4"
6	Expansion Vessel	To Measure the Water Pressure (0-2 MPa)	F	Heating Circuit Outlet Pipe	Female G1"
7	Magnesium Anode	12 ℓ for Heating Circuit	G	Heating Circuit Inlet Pipe	Female G1"
8	DHW Tank Sensor	To Prevent Corrosion	H	Electrical Conduits	For electric wiring
9	Plate Heat Exchanger	Temperature Sensor	I	Control Panel	Built-in remote controller
10	DHW Charging Pump	Heat Exchange (Water / DHW tank)			
11	Strainer for DHW Tank	To Circulate Water for DHW Heating			
12	Main Water Pump	Filtering and Stacking Particles			
13	Expansion Vessel	To Circulate Water Inside the System			
14	Control Box	8 ℓ For DHW Circuit (Accessory)			
15	Air Vent	Air Purging when Charging Water			
16	Drain Cock	Valve for Water Draining			
17	Electrical Conduits	For Electric Wiring			

THERMA V™ R32 Split

What is R32 Split

The LG THERMA V Split series is a heat pump that is easy, flexible to install. As the expression “split” suggests, the outdoor and indoor units are connected by refrigerant piping, thus freezing will not compromise this unit regardless of outdoor ambient temperatures.

Key Features

- Capacity range from 4 and 6 kW for new build and 5 to 9 kW for new build or small renovation
- ErP Energy Labeling A+++ / A++ for space heating (Average Climate 35°C / 55°C LWT)
- Maximum flow temperature up to 55°C (4/6 kW) and 65°C (5/7/9 kW)
- Operation range down to -20°C (4/6 kW) and -25°C (5/7/9 kW)

4/6 kW

R32 · A+++ 35°C · A++ 55°C · A+ L · 55°C · -20°C · ThinQ

5/7/9 kW

R32 · A+++ 35°C · A++ 55°C · A+ L (5, 7kW) XL (9kW) · 65°C · -25°C · ThinQ

Product Range

Phase	Capacity (kW)	Indoor Unit		Outdoor Unit
		Hydro Unit	Combi Unit	
1Ø	4	HN0613M NK5	HN0613T NK0	HU041MR U20
	6			HU061MR U20
	5	HN091MR NK5	HN0913T NK0	HU051MR U44
	7			HU071MR U44
	9			HU091MR U44

HIGHLIGHT OF R32 SPLIT

Browse now

No Potential Risk of Piping Freezing

- Robust to cold ambient thanks to refrigerant piping
- No exposed piping freezing even during prolonged blackouts

High Installation Flexibility Not Restricted by the Site Condition

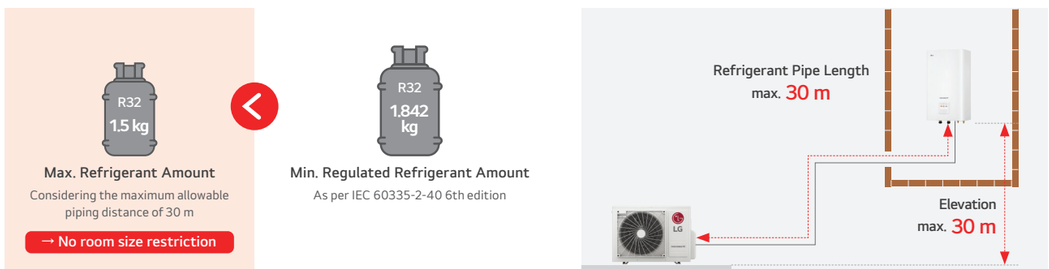
- Light weight and compact size
- Allows a maximum refrigerant pipe length of 50 m and offers 3-way piping connection availability (R32 Split 5/7/9 kW Split)
- Eliminates minimum floor area requirements due to R32 refrigerant (R32 Split 4/6 kW)

Small Refrigerant Amount

ONLY 4 / 6 kW

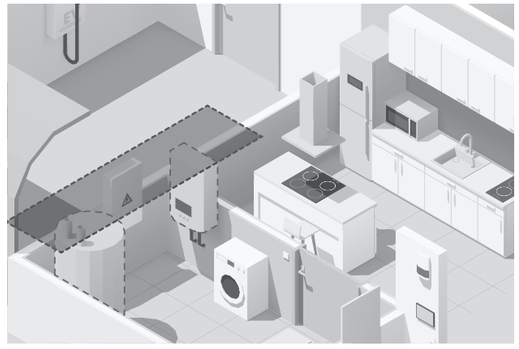
Free from Minimum Floor Area Requirements Due to R32 Refrigerant

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.

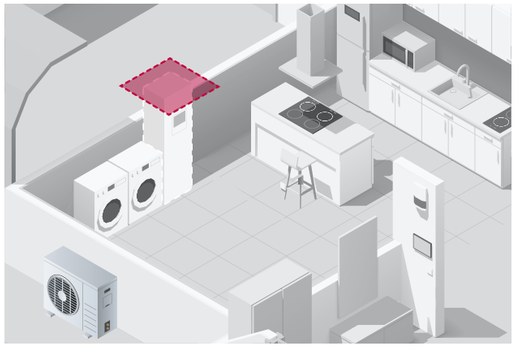


All-in-one Integration (Combi Unit)

THERMA V R32 Split Combi Unit is the perfect space-saving solution for residential application thanks to its fully integrated hot water tank. Unlike in the case of typical separate installation, in this all-in-one 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 Combi Unit is easy to set up and operate while it demonstrates outstanding reliability and efficiency.



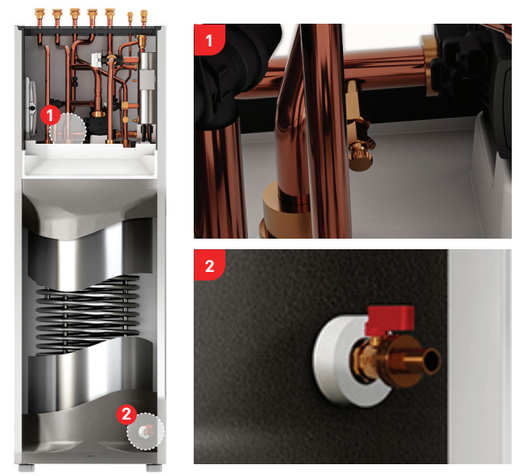
Conventional



LG THERMA V R32 Split Combi Unit
(less installation space required)

Easy Draining System

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



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™ R32 Split

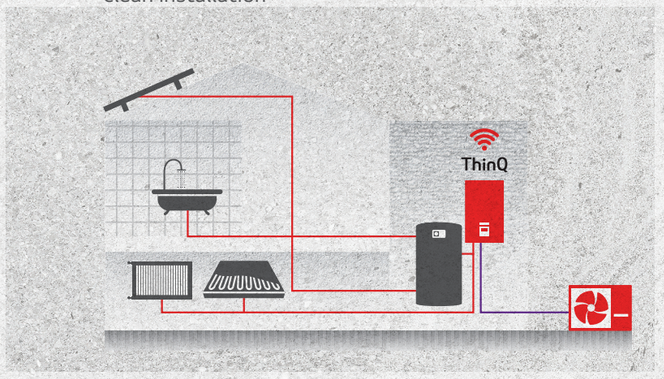
HYDRO UNIT

Effortless Installation, Cold-Weather Resistance

THERMA V Split Hydro Unit is a combination of an outdoor unit and an indoor Hydro Unit with built-in hydronic components such as a plate heat exchanger, backup heater, expansion tank and water pump.

Key Features

- Capacity range from 4 and 6 kW for new build and 5 to 9 kW for new build or small renovation
- Maximum flow temperature up to 55°C (4/6 kW) and 65°C (5/7/9 kW)
- Operation range down to -20℃ (4/6 kW) and -25℃ (5/7/9 kW)
- High level hydronic components integration for fast and clean installation



Application

Certifications

Energy Label

Space heating A+++ 35℃ A++ 55℃

THERMA V R32 SPLIT HYDRO UNIT (4 / 6 kW)

Outdoor unit

HU041MR U20
HU061MR U20

Indoor unit

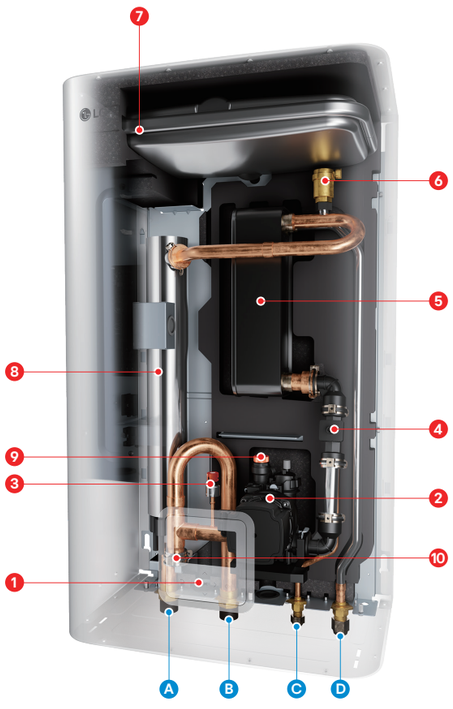
HN0613M NK5

011-1W0567

R32 A+++ 35℃ A++ 55℃ 55℃ -20℃ ThinQ

Key Components

Hydro Unit



Components

1. Standard III remote controller [1] (air temp. sensor integrated)
2. Water pump
3. Water pressure sensor
4. Flow sensor
5. Plate type heat exchanger (ref/water)
6. Air vent valve
7. Expansion vessel (8 ℓ)
8. Back up electric heater (3 kW)
9. Safety valve
10. Strainer

1) Temperature control class (ERP class) : V

Connections

- A Heating circuit outlet pipe (male PT 1" *)
- B Heating circuit inlet pipe (male PT 1" *)
- C Refrigerant liquid pipe (SAE 1/4" with connector **)
- D Refrigerant gas pipe (SAE 1/2" with connector **)

* According to ISO 7-1 (tapered pipe threads)
** In case of Split 4/6 kW model, the adaptors provided with the outdoor unit must be separately installed on the gas/liquid connection of the indoor unit when connecting the refrigerant pipe. After installing the adaptors, the liquid and gas connection size becomes Ø 6.35 (1/4 inch) and Ø 12.7 (1/2 inch) respectively.

Product Specification

Efficiency Data		Unit	4 kW (1 Ø)	6 kW (1 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	183 / 126	183 / 126
SCOP (35°C / 55°C)		-	4.65 / 3.23	4.65 / 3.23
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	57 / 56	58 / 57
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	35 / 34	36 / 35
Sound power level (indoor unit)	Rated	dB(A)	44	
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	36	
Nominal Capacity and COP/EER				
Air +7°C / water +35°C	Heating capacity / COP	kW / -	4.00 / 5.10	6.00 / 4.95
Air +2°C / water +35°C	Heating capacity / COP	kW / -	3.60 / 3.75	4.80 / 3.65
Air -7°C / water +35°C	Heating capacity / COP	kW / -	4.00 / 3.08	6.00 / 2.98
Air +7°C / water +55°C	Heating capacity / COP	kW / -	3.70 / 2.85	4.60 / 2.90
Air -7°C / water +55°C	Heating capacity / COP	kW / -	3.70 / 1.80	4.60 / 1.80
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	4.00 / 4.80	6.00 / 4.80
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	4.00 / 3.40	6.00 / 3.20
Outdoor Units		**Unit**	**HU041MR U20**	**HU061MR U20**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-20 ~ 35	
	Cooling (Min. ~ Max.)	°C	5 ~ 48	
Refrigerant	Type	-	R32	
	GWP	-	675	
	Precharged amount	g	1,100	
Piping connections (water)	Gas / Liquid	mm(inch)	Ø 12.7 (1/2) / Ø 6.35 (1/4)	
	Length standard / Max.	m	5 / 30	
	Level difference Max.	m	30	
	Max. length without additional charge	m	10	
	Mass of additional ref. charge	g/m	20	
Dimension	H x W x D	mm	650 x 870 x 330	
Weight	Net	kg	44.7	
Exterior	Color of chassis / RAL code	-	Warm gray / RAL 7044	
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 - 240, 1, 50	
	Standby power consumption	W	20	
	Recommended circuit breaker	A	16	20
Indoor Units		**Unit**	**HN0613M NK5**	
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 55	
	Cooling (Min. ~ Max.)	°C	5 ~ 27	
	DHW (Min. ~ Max.)	°C	15 ~ 80	
Expansion vessel (heating circuit)	Volume	ℓ	8	
Backup heater	Capacity combination	kW	1.5 + 1.5	
	Heating steps	Steps	2	
	Power supply	V, Ø, Hz	220 - 240, 1, 50	
	Rated running current	A	13.0	
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
Piping connections (ref.)	Gas / Liquid	mm(inch)	Ø 12.7 (1/2) / Ø 6.35 (1/4)	
Dimension	H x W x D	mm	850 x 490 x 315	
Weight	Net	kg	37.8	
Exterior	Color / RAL code	-	Noble white / RAL 9016	

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 50 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 SPLIT
HYDRO UNIT (4 / 6 kW)

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU041MR U20 + HN0613M NK5

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

HU061MR U20 + HN0613M NK5

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

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU041MR U20 + HN0613M NK5

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

HU061MR U20 + HN0613M NK5

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

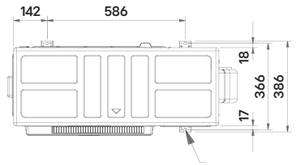
Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

THERMA V R32 SPLIT
HYDRO UNIT (4 / 6 kW)

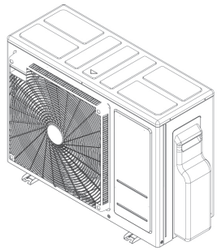
Drawings

[Unit: mm]

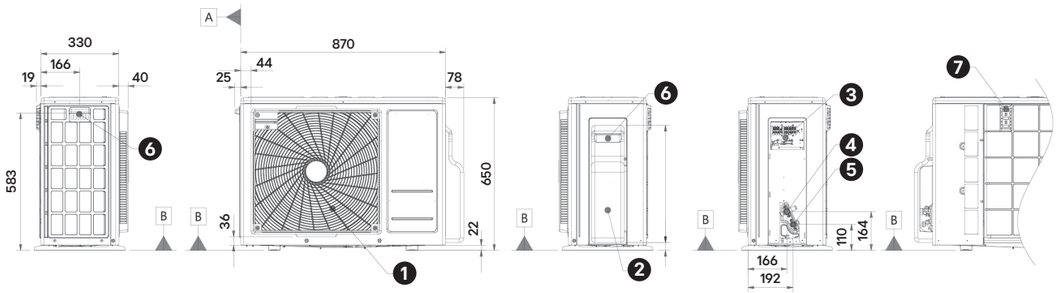
HU041MR U20 / HU061MR U20



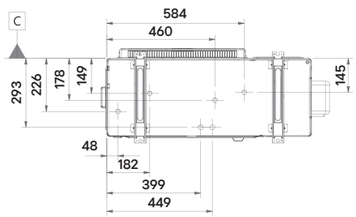
Top view



3D view



Side view | Front view | Side view | Side view | Back view



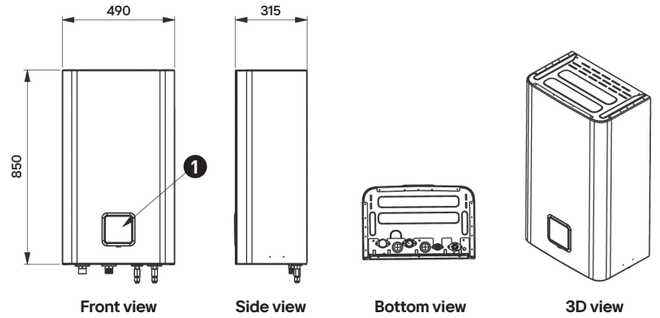
Bottom view

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	-

[Unit: mm]

External

HN0613M NK5

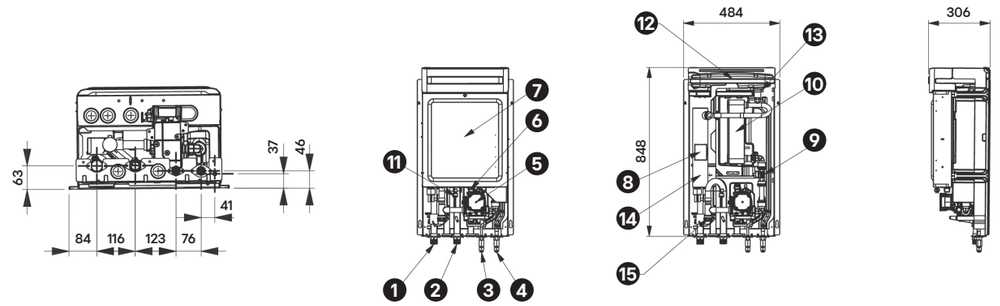


Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Control Panel	Built-in Remote Controller

Internal

HN0613M NK5



Top view | Front view | Back view | Side view

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.

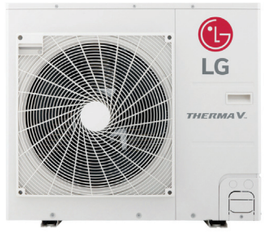
THERMA V R32 SPLIT HYDRO UNIT (5 / 7 / 9 kW)

Outdoor unit

HU051MR U44
HU071MR U44
HU091MR U44

Indoor unit

HN091MR NK5

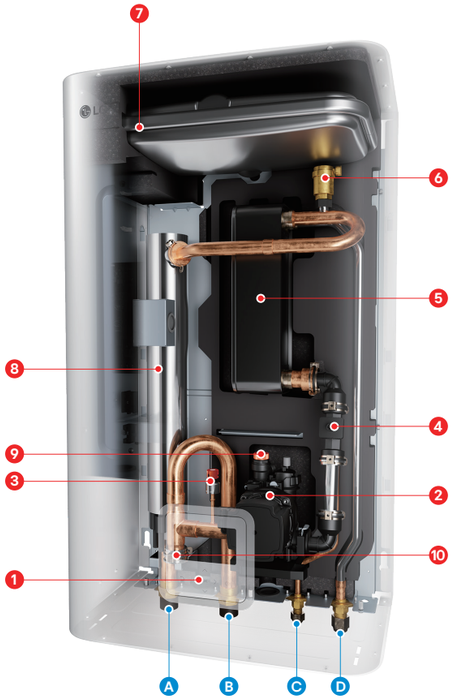


011-1W0315

R32 A+++ 35℃ A++ 55℃ 65℃ -25℃ ThinQ

Key Components

Hydro Unit



Components

1. Standard III remote controller [1] (air temp. sensor integrated)
2. Water pump
3. Water pressure sensor
4. Flow sensor
5. Plate type heat exchanger (ref/water)
6. Air vent valve
7. Expansion vessel (8 ℓ)
8. Back up electric heater (3 kW)
9. Safety valve
10. Strainer

1) Temperature control class (ERP class) : V

Connections

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

* According to ISO 7-1 (tapered pipe threads)

Product Specification

Efficiency Data		Unit	5 kW (1 Ø)	7 kW (1 Ø)	9 kW (1 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	183 / 126	183 / 126	183 / 126
SCOP (35°C / 55°C)		-	4.65 / 3.23	4.65 / 3.23	4.65 / 3.23
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	60 / 58		
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	38 / 36		
Sound power level (indoor unit)	Rated	dB(A)	44		
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	36		
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	5.50 / 4.90	7.00 / 4.90	9.00 / 4.65
Air +2°C / water +35°C	Heating capacity / COP	kW / -	3.30 / 3.52	4.20 / 3.51	5.40 / 3.50
Air +7°C / water +55°C	Heating capacity / COP	kW / -	5.50 / 2.70	5.50 / 2.70	5.50 / 2.70
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	5.50 / 4.60	7.00 / 4.50	9.00 / 4.20
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	5.50 / 2.80	7.00 / 2.70	9.00 / 2.60
Outdoor Units		**Unit**	**HU051MR U44**	**HU071MR U44**	**HU091MR U44**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	1,500		
Piping connections (water)	Gas / Liquid	mm(inch)	Ø 12.7 (5/8) / Ø 9.52 (3/8)		
	Length standard / Max.	m	5 / 50		
	Level difference Max.	m	30		
	Max. length without additional charge	m	10		
	Mass of additional ref. charge	g/m	40		
Dimension	H x W x D	mm	834 x 950 x 330		
Weight	Net	kg	60.0		
Exterior	Color of chassis / RAL code	-	Warm gray / RAL 7044		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 - 240, 1, 50		
	Standby power consumption	W	20		
	Recommended circuit breaker	A	20	25	30
Indoor Units		**Unit**	**HN091MR NK5**		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 65		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Expansion vessel (heating circuit)	Volume	ℓ	8		
Backup heater	Capacity combination	kW	3.0 + 3.0		
	Heating steps	Steps	2		
	Power supply	V, Ø, Hz	220 - 240, 1, 50		
	Rated running current	A	25.0		
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Piping connections (ref.)	Gas / Liquid	mm(inch)	Ø 15.88 (5/8) / Ø 9.52 (3/8)		
Dimension	H x W x D	mm	850 x 490 x 315		
Weight	Net	kg	38.1		
Exterior	Color / RAL code	-	Noble white / RAL 9016		

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 SPLIT HYDRO UNIT (5 / 7 / 9 kW)

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU051MR U44 + HN091MR NK5

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

HU071MR U44 + HN091MR NK5

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

HU091MR U44 + HN091MR NK5

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	6.40	6.20	6.00	5.80	-	-	-	-
-20	7.23	7.00	6.77	6.54	6.31	-	-	-
-15	8.06	7.80	7.54	7.28	7.02	6.76	-	-
-7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35	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),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU051MR U44 + HN091MR NK5

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

HU071MR U44 + HN091MR NK5

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

HU091MR U44 + HN091MR NK5

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

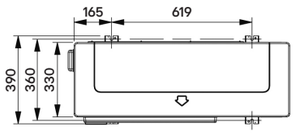
Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

THERMA V R32 SPLIT
HYDRO UNIT (5 / 7 / 9 kW)

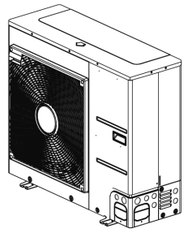
Drawings

[Unit: mm]

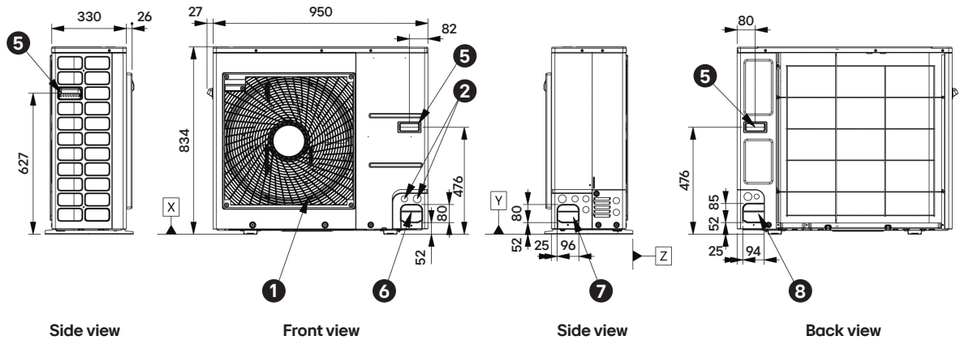
HU051MR U44 / HU071MR U44 / HU091MR U44



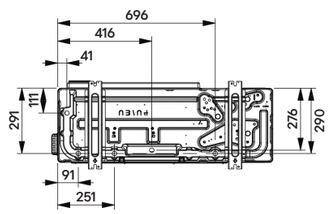
Top view



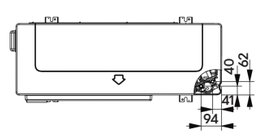
3D view



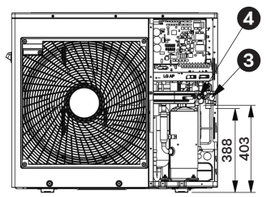
Side view | Front view | Side view | Back view



Bottom view



Internal top view



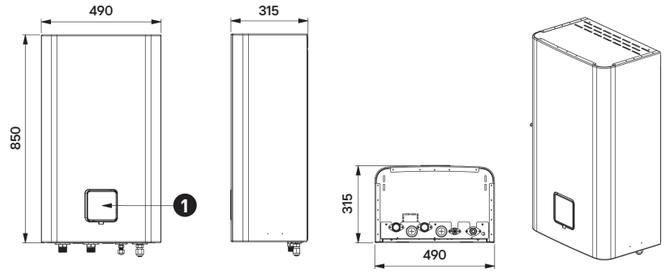
Internal front view

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)	-

[Unit: mm]

External

HN091MR NK5

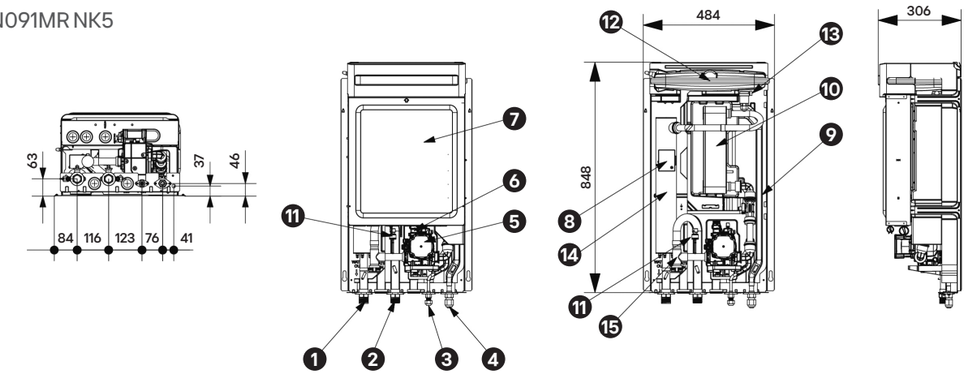


Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Control Panel	Built-in Remote Controller

Internal

HN091MR NK5



Bottom view | Front view | Back view | Side view

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

THERMA V™ R32 Split

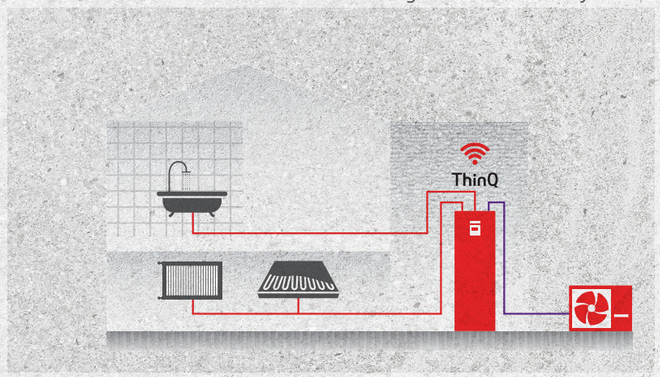
COMBI UNIT

All-in-one Integration

The LG THERMA V R32 Split Combi Unit is a domestic hot water supply, space heating and cooling solution that conveniently combines an indoor hot water tank with a separate outdoor unit.
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.

Key Features

- Capacity range from 4 and 6 kW for new build and 5 to 9 kW for new build or small renovation
- Maximum flow temperature up to 55°C (4/6 kW) and 65°C (5/7/9 kW)
- Operation range down to -20°C (4/6 kW) and -25°C (5/7/9 kW)
- All-in-one Combi Unit with integrated hot water cylinder



Application

Certifications

Energy Label

Space heating A+++ 35°C / 55°C DHW heating A+ L

Profile L (4/6 kW)
Profile L (5/7 kW)
Profile XL (9 kW)

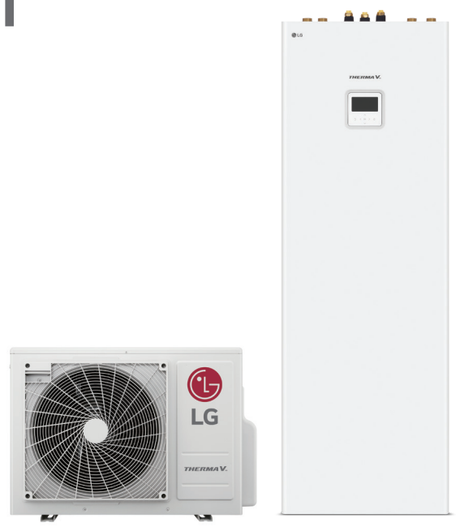
THERMA V R32 SPLIT COMBI UNIT (4 / 6 kW)

Outdoor unit

HU041MR U20
HU061MR U20

Indoor unit

HN0613T NK0

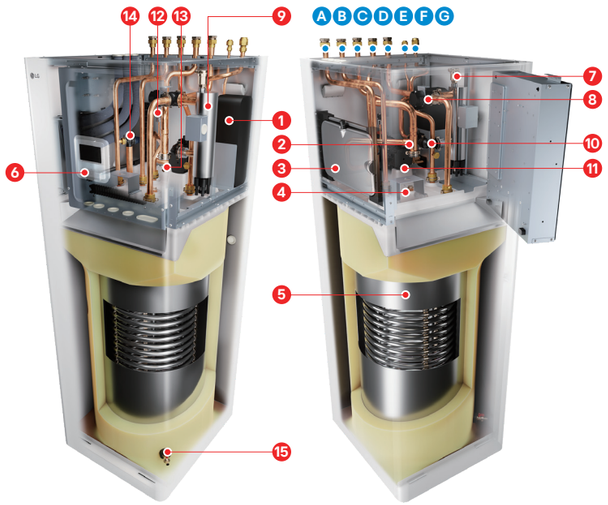


011-1W0578

R32 · A+++ 35℃ · A++ 55℃ · A+ L · 55℃ · -20℃ ThinQ

Key Components

Combi Unit



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 exchanger
6. Standard III remote controller [1] (air temp. sensor integrated)
7. Air vent valve
8. 3 Way diverting valve (DC)
9. Electric back-up heater (3 kW)
10. Water flow sensor
11. Main water pump with air vent and safety valve (water circuit, 3 bar)
12. Water pressure sensor
13. Drain valve for water circuit
14. Safety valve (DHW tank, 10 bar)
15. Drain valve for DHW tank

1) Temperature control class (ERP class) : V

Connections

- A DHW 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" *)
- E Heating circuit outlet pipe (female G1" *)
- F Refrigerant liquid pipe (SAE 1/4" with connector **)
- G Refrigerant gas pipe (SAE 1/2" with connector **)

* According to ISO 228-1 (parallel pipe threads)
** In case of Split 4/6 kW model, the adaptors provided with the outdoor unit must be separately installed on the gas/liquid connection of the indoor unit when connecting the refrigerant pipe. After installing the adaptors, the liquid and gas connection size becomes Ø 6.35 (1/4 inch) and Ø 12.7 (1/2 inch) respectively.

Product Specification

Efficiency Data		Unit	4 kW (1 Ø)	6 kW (1 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	183 / 126	183 / 126
SCOP (35°C / 55°C)		-	4.65 / 3.23	4.65 / 3.23
Declared load profile, average climate		-	L	L
Water heating efficiency (η_{WH}), average climate		%	133	133
COP_{DHW}, average climate		-	3.15	3.15
Water heating eff. class, average climate		-	A+	A+
Annual energy consumption, DHW (average climate)		kWh	770	770
Heating up time acc. to EN 16147 (average climate)		h/mm	1h 45	1h 45
Max. usable water volume acc. to EN 16147 (average climate)		ℓ	220	220
Declared load profile, warmer climate		-	L	L
Water heating efficiency (η_{WH}), warmer climate		%	160	160
COP_{DHW}, warmer climate		-	3.69	3.69
Water heating eff. class, warmer climate		-	A++	A++
Declared load profile, colder climate		-	L	L
Water heating efficiency (η_{WH}), colder climate		%	110	110
COP_{DHW}, colder climate		-	2.54	2.54
Water heating eff. class, colder climate		-	A	A
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	57 / 56	58 / 57
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	35 / 34	36 / 35
Sound power level (indoor unit)	Rated	dB(A)	42	
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	34	
Nominal Capacity and COP/EER				
Air +7°C / water +35°C	Heating capacity / COP	kW / -	4.00 / 5.10	6.00 / 4.95
Air +2°C / water +35°C	Heating capacity / COP	kW / -	3.60 / 3.75	4.80 / 3.65
Air -7°C / water +35°C	Heating capacity / COP	kW / -	4.00 / 3.08	6.00 / 2.98
Air +7°C / water +55°C	Heating capacity / COP	kW / -	3.70 / 2.85	4.60 / 2.90
Air -7°C / water +55°C	Heating capacity / COP	kW / -	3.70 / 1.80	4.60 / 1.80
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	4.00 / 4.80	6.00 / 4.80
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	4.00 / 3.40	6.00 / 3.20

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 not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 50 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 SPLIT COMBI UNIT (4 / 6 kW)

Product Specification

Outdoor Units		Unit	HU041MR U20	HU061MR U20
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-20 ~ 35	
	Cooling (Min. ~ Max.)	°C	5 ~ 48	
Refrigerant	Type	-	R32	
	GWP	-	675	
	Precharged amount	g	1,100	
Piping connections (water)	Gas / Liquid	mm(inch)	Ø 12.7 (1/2) / Ø 6.35 (1/4)	
	Length standard / Max.		5 / 30	
	Level difference Max.		30	
	Max. length without additional charge		10	
	Mass of additional ref. charge		20	
Dimension	H x W x D	mm	650 x 870 x 330	
Weight	Net	kg	44.7	
Exterior	Color of chassis / RAL code	-	Warm gray / RAL 7044	
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 - 240, 1, 50	
	Standby power consumption	W	20	
	Recommended circuit breaker	A	16	20

Indoor Units		Unit	HN0613T NK0
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 55
	Cooling (Min. ~ Max.)	°C	5 ~ 27
	DHW (Min. ~ Max.)	°C	15 ~ 80
Domestic hot water tank	Volume	ℓ	200
	Tank material	-	Duplex stainless steel
	Standby losses	-	60
Expansion vessel (heating circuit)	Volume	ℓ	8
Electric heater	Capacity combination	kW	3.0
	Heating steps	Steps	1
	Power supply	V, Ø, Hz	220 - 240, 1, 50
	Rated running current	A	13.0
Piping connections (water)	Inlet / outlet diameter for space heating	inch	Female G1" according to ISO228-1 (parallel pipe threads)
	Inlet / outlet diameter for DHW	inch	
	Recirculation	inch	
Piping connections (ref.)	Gas / Liquid	mm(inch)	Ø 12.7 (1/2) / Ø 6.35 (1/4)
Dimension	H x W x D	mm	1,750 x 600 x 660
Weight	Net	kg	118.0
Exterior	Color / RAL code	-	White / RAL 9016

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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 50 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 SPLIT COMBI UNIT (4 / 6 kW)

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU041MR U20 + HN0613T NK0

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

HU061MR U20 + HN0613T NK0

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

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU041MR U20 + HN0613T NK0

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

HU061MR U20 + HN0613T NK0

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

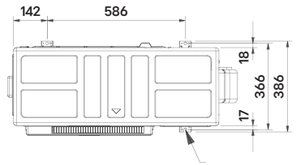
Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

THERMA V R32 SPLIT COMBI UNIT (4 / 6 kW)

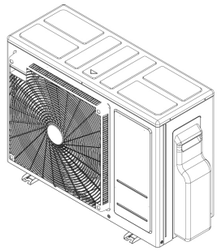
Drawings

[Unit: mm]

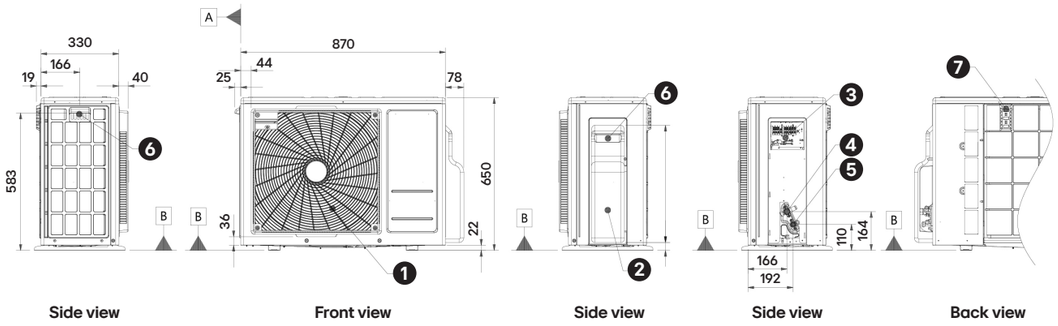
HU041MR U20 / HU061MR U20



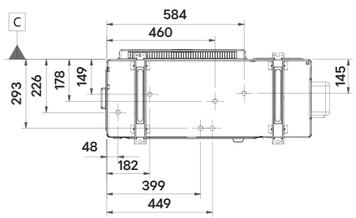
Top view



3D view



Side view | Front view | Side view | Side view | Back view



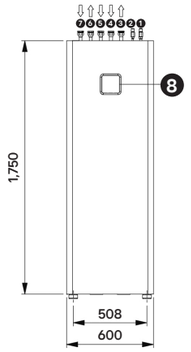
Bottom view

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	-

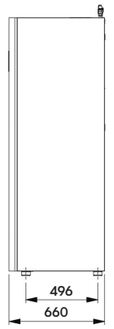
[Unit: mm]

External

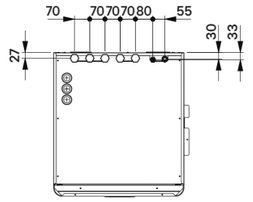
HN0613T NK0



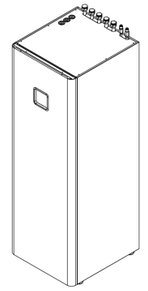
Front view



Side view



Bottom view



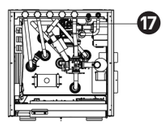
3D view

No.	Part Name	Description
1	Refrigerant Gas Pipe	SAE 1/2" [1]
2	Refrigerant Liquid Pipe	SAE 1/4" [1]
3	Heating Circuit Outlet Pipe	Female G1" according to ISO228-1 (Parallel pipe threads)
4	Heating Circuit Inlet Pipe	
5	Domestic Cold Water Inlet Pipe	
6	Domestic Cold Water Outlet Pipe	
7	DHW Re-circulation Pipe	
8	Control Panel	Built-in Remote Controller

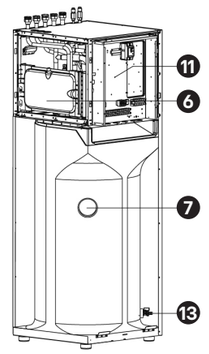
1) When connecting the refrigerant pipe, the adaptors provided with the outdoor unit must be installed on the connection of the indoor units.

Internal

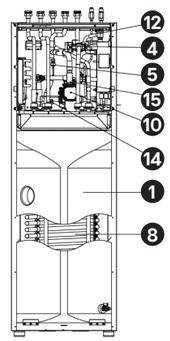
HN0613T NK0



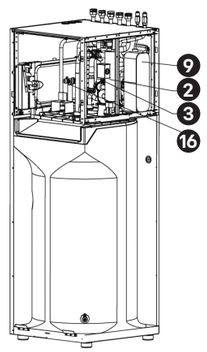
Bottom view



Left side view



Front view



Right side view

No.	Part Name	Description	No.	Part Name	Description
1	DHW tank	Domestic Hot Water Tank (200L)	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	8 ℓ 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)			

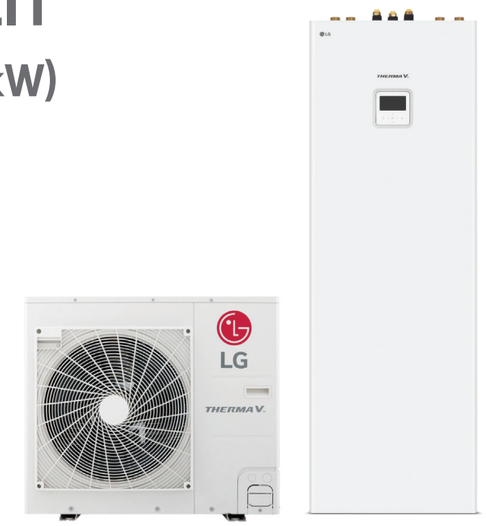
THERMA V R32 SPLIT COMBI UNIT (5 / 7 / 9 kW)

Outdoor unit

HU051MR U44
HU071MR U44
HU091MR U44

Indoor unit

HN0913T NK0

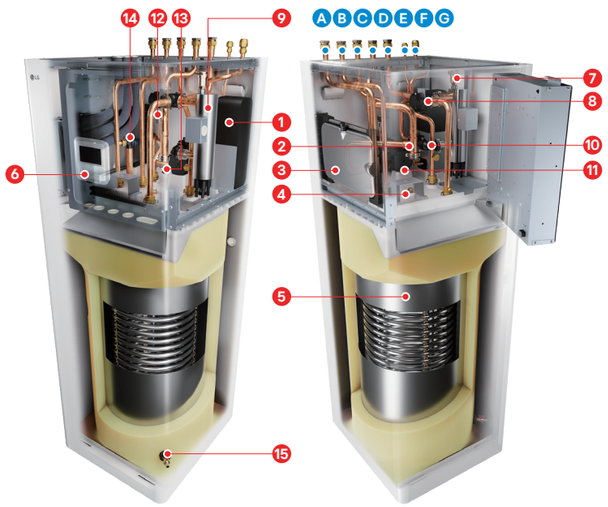


011-1W0526

R32 | A+++ 35℃ | A++ 55℃ | A+ 5/7 kW: L 9 kw: XL | 65℃ | -25℃ | ThinQ

Key Components

Combi Unit



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 exchanger
6. Standard III remote controller [1] (air temp. sensor integrated)
7. Air vent valve
8. 3 Way diverting valve (DC)
9. Electric back-up heater (3 kW)
10. Water flow sensor
11. Main water pump with air vent and safety valve (water circuit, 3 bar)
12. Water pressure sensor
13. Drain valve for water circuit
14. Safety valve (DHW tank, 10 bar)
15. Drain valve for DHW tank

1) Temperature control class (ERP class) : V

Connections

A. DHW 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" *)
E. Heating circuit outlet pipe (female G1" *)
F. Refrigerant liquid pipe (SAE 3/8")
G. Refrigerant gas pipe (SAE 5/8")

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

Product Specification

Efficiency Data		Unit	5 kW (1 Ø)	7 kW (1 Ø)	9 kW (1 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	183 / 126	183 / 126	183 / 126
SCOP (35°C / 55°C)		-	4.65 / 3.23	4.65 / 3.23	4.65 / 3.23
Declared load profile, average climate		-	L	L	XL
Water heating efficiency (η_{WH}), average climate		%	133	133	140
COP_{DHW}, average climate		-	3.15	3.15	3.40
Water heating eff. class, average climate		-	A+	A+	A+
Annual energy consumption, DHW (average climate)		kWh	770	770	1,196
Heating up time acc. to EN 16147 (average climate)		h/mm	1h 44	1h 44	1h 44
Max. usable water volume acc. to EN 16147 (average climate)		ℓ	250	250	250
Declared load profile, warmer climate		-	L	L	XL
Water heating efficiency (η_{WH}), warmer climate		%	160	160	170
COP_{DHW}, warmer climate		-	3.69	3.69	4.10
Water heating eff. class, warmer climate		-	A++	A++	A++
Declared load profile, colder climate		-	L	L	XL
Water heating efficiency (η_{WH}), colder climate		%	110	110	115
COP_{DHW}, colder climate		-	2.54	2.54	2.65
Water heating eff. class, colder climate		-	A	A	A
Sound power level (outdoor unit)	Rated / low noise mode	dB(A)	60 / 58		
Sound pressure level at 5m (outdoor unit)	Rated / low noise mode	dB(A)	38 / 36		
Sound power level (indoor unit)	Rated	dB(A)	42		
Sound pressure level at 1m (indoor unit)	Rated	dB(A)	34		
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	5.50 / 4.90	7.00 / 4.90	9.00 / 4.65
Air +2°C / water +35°C	Heating capacity / COP	kW / -	3.30 / 3.52	4.20 / 3.51	5.40 / 3.50
Air +7°C / water +55°C	Heating capacity / COP	kW / -	5.50 / 2.70	5.50 / 2.70	5.50 / 2.70
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	5.50 / 4.60	7.00 / 4.50	9.00 / 4.20
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	5.50 / 2.80	7.00 / 2.70	9.00 / 2.60

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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 SPLIT COMBI UNIT (5 / 7 / 9 kW)

Product Specification

Outdoor Units		Unit	HU051MR U44	HU071MR U44	HU091MR U44
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35		
	Cooling (Min. ~ Max.)	°C	5 ~ 48		
Refrigerant	Type	-	R32		
	GWP	-	675		
	Precharged amount	g	1,500		
Piping connections (water)	Gas / Liquid	mm(inch)	Ø 15.88 (5/8) / Ø 9.52 (3/8)		
	Length standard / Max.		5 / 50		
	Level difference Max.		30		
	Max. length without additional charge		10		
	Mass of additional ref. charge		40		
Dimension	H x W x D	mm	834 x 950 x 330		
Weight	Net	kg	60.0		
Exterior	Color of chassis / RAL code	-	Warm gray / RAL 7044		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 - 240, 1, 50		
	Standby power consumption	W	20		
	Recommended circuit breaker	A	20	25	30
Indoor Units		**Unit**	**HN0913T NK0**		
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 65		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Domestic hot water tank	Volume	ℓ	200		
	Tank material	-	Duplex stainless steel		
	Standby losses	-	60		
Expansion vessel (heating circuit)	Volume	ℓ	8		
Electric heater	Capacity combination	kW	3.0		
	Heating steps	Steps	1		
	Power supply	V, Ø, Hz	220 - 240, 1, 50		
	Rated running current	A	13.0		
Piping connections (water)	Inlet / outlet diameter for space heating	inch	Female G1" according to ISO228-1 (parallel pipe threads)		
	Inlet / outlet diameter for DHW	inch			
	Recirculation	inch			
Piping connections (ref.)	Gas / Liquid	mm(inch)	Ø 15.88 (5/8) / Ø 9.52 (3/8)		
Dimension	H x W x D	mm	1,750 x 600 x 660		
Weight	Net	kg	118.0		
Exterior	Color / RAL code	-	White / RAL 9016		

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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

THERMA V R32 SPLIT COMBI UNIT (5 / 7 / 9 kW)

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HU051MR U44 + HN0913T NK0

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

HU071MR U44 + HN0913T NK0

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	5.00	4.85	4.71	4.56	-	-	-	-
-20	5.58	5.43	5.27	5.11	4.95	-	-	-
-15	6.17	6.00	5.83	5.66	5.49	5.32	-	-
-7	7.00	7.00	7.00	7.00	7.00	7.00	6.49	-
-4	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
-2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
2	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
7	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
10	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
18	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

HU091MR U44 + HN0913T NK0

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C
	Capacity (kW)							
-25	6.40	6.20	6.00	5.80	-	-	-	-
-20	7.23	7.00	6.77	6.54	6.31	-	-	-
-15	8.06	7.80	7.54	7.28	7.02	7.10	-	-
-7	9.00	9.00	9.00	9.00	9.00	9.00	8.60	-
-4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35	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),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HU051MR U44 + HN0913T NK0

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

HU071MR U44 + HN0913T NK0

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

HU091MR U44 + HN0913T NK0

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

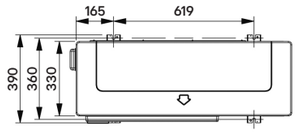
Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

THERMA V R32 SPLIT COMBI UNIT (5 / 7 / 9 kW)

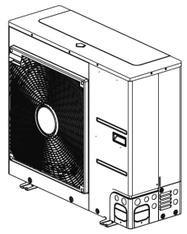
Drawings

[Unit: mm]

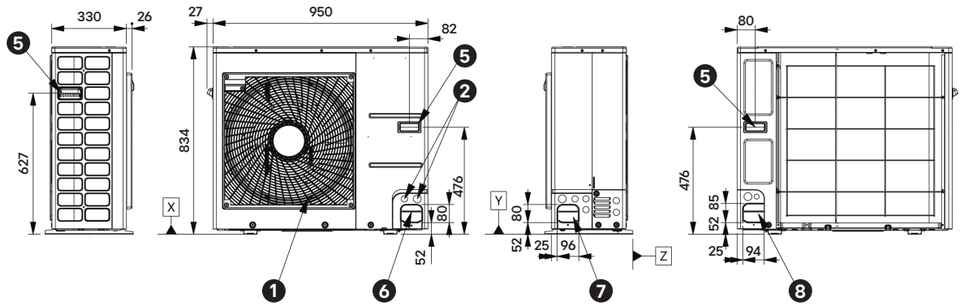
HU051MR U44 / HU071MR U44 / HU091MR U44



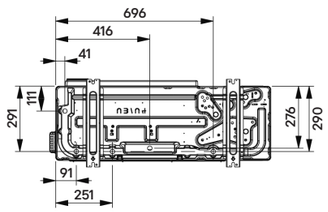
Top view



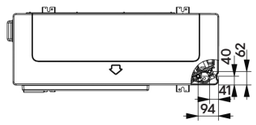
3D view



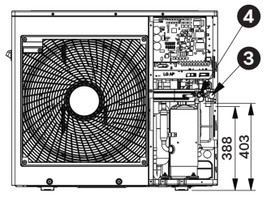
Side view | Front view | Side view | Back view



Bottom view



Internal top view



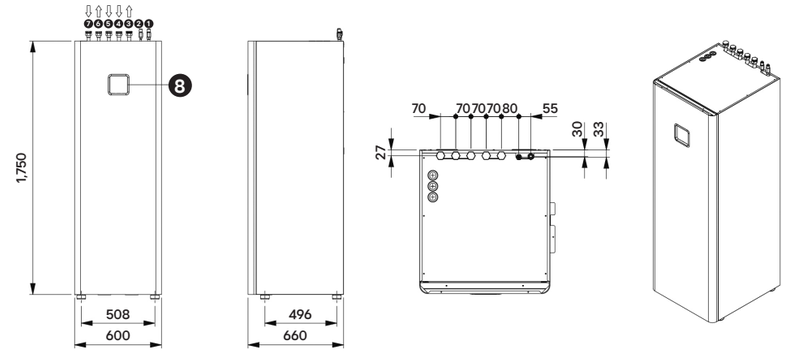
Internal front view

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)	-

[Unit: mm]

External

HN0913T NK0

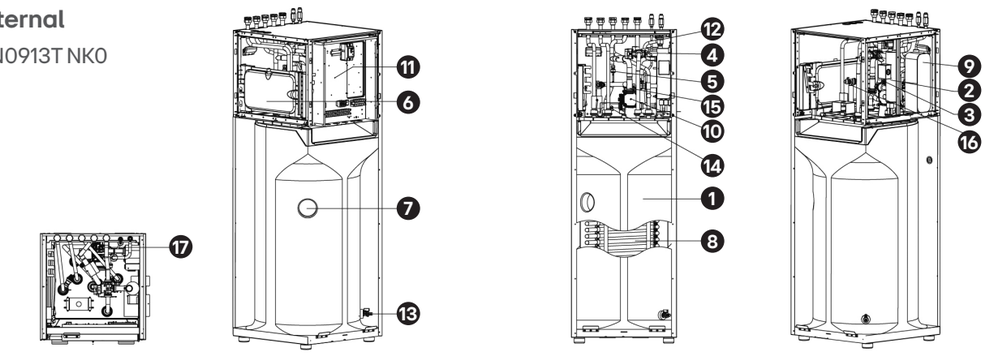


Front view | Side view | Bottom view | 3D view

No.	Part Name	Description
1	Refrigerant Gas Pipe	SAE 5/8"
2	Refrigerant Liquid Pipe	SAE 5/8"
3	Heating Circuit Outlet Pipe	Female G1" according to ISO228-1 (Parallel pipe threads)
4	Heating Circuit Inlet Pipe	
5	Domestic Cold Water Inlet Pipe	
6	Domestic Cold Water Outlet Pipe	
7	DHW Re-circulation Pipe	
8	Control Panel	Built-in Remote Controller

Internal

HN0913T NK0



Bottom view | Left side view | Front view | Right side view

No.	Part Name	Description	No.	Part Name	Description
1	DHW tank	Domestic Hot Water Tank (200L)	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	8 ℓ 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)			

What is Heat Pump Water Heater

A Heat Pump Water Heater (HPWH) is an advanced, energy-efficient water heating solution that utilizes heat pump technology to heat water more sustainably than traditional water heaters. A heat pump water heater extracts ambient heat from the air and transfers it to the water, significantly reducing energy consumption and lower utility bills while providing reliable hot water for home.
Ideal for residential applications, these systems offer an eco-conscious alternative to traditional water heating methods, making them a smart choice for sustainable living.

Key Features

- Wide capacity range from 100 to 270 ℓ to suit various household members
- LG's unique design provides harmony in various installation places
- Energy class A+ applies to all models
- Simple installation due to no refrigerant piping work
- Connect and control anytime, anywhere with LG ThinQ
- Max. water temperature up to 75°C (R290 models only, with heating element)
- Includes SG Ready function (SG Ready models only)

DHW Heating | A+ M 100 ℓ | A+ L 150/200/270 ℓ | ThinQ

Product Range

Description			Model Name	Remark
Power	Type	Volume		
1 Ø, 230 V, 50 Hz	Round Type	100 ℓ	WH10ESF0 HA	SG Ready model
		150 ℓ	WH15ESF0 HA	
		200 ℓ	WH20ESF0 CA	
	Square Type	200 ℓ	WH20STR2 FA	
		270 ℓ	WH27STR2 FA	
		200 ℓ	WH20S F5	-
		270 ℓ	WH27S F5	-

HIGHLIGHT OF HEAT PUMP WATER HEATER

Stylish Design

New White Essence Design

Differentiated Design

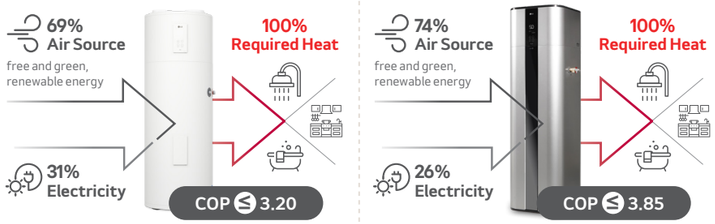
LG's exclusive square design and sophisticated color scheme complement any interior.

DESIGN AWARD 2020

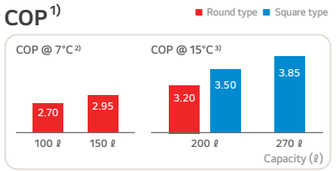
reddot winner 2020

High Efficiency Operation

Exceptional Efficiency



COP [1)]



Achieving the highest ErP energy grade A+ for DHW heating

A+ 4) M 100 ℓ

A+ 5) L 150/200/270 ℓ

1) COP test conditions are base on EN16147 and EN 12102
2) 100 / 150ℓ models COP at air temperature 7°C and water temperature 10°C to 54°C with duct.
3) 200 / 270ℓ models COP at air temperature 15°C and water temperature 10°C to 54°C with duct.
4) Profile M: WH10ESF0.HA
5) Profile L: WH15ESF0.HA / WH20ESF0.CA / WH20S.F5 / WH27S.F5 / WH20STR2.FA / WH27STR2.FA

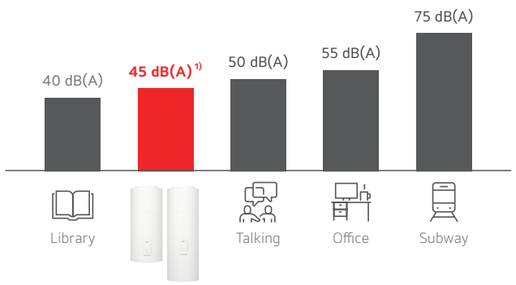
Comfortable Environment

Experience Warmth in Perfect Silence

Since the noise level is below 45 dB(A) [1)], it provides a comfortable environment even in indoor installation scenes.

Sound levels	Round type			Square type	
	100 ℓ	150 ℓ	200 ℓ	200 ℓ	270 ℓ
Sound power level [dB(A)] [2)]	45	45	53	55	55
Sound pressure level [dB(A)] [2) 3)]	38	38	38	38	38

Users will hardly recognize the water heater operating, as it runs quietly and creates a calm, peaceful environment.



1) Based on 100 / 150ℓ model (WH**ESF0.HA)
2) Rated sound power / pressure level was measured on the rated condition in accordance with EN 12102-02 and ISO 3741
3) Sound pressure level measured at 2 m away from the unit

Convenience

Smart Control by LG ThinQ

Users can control their THERMA V via smart internet devices such as Android or iOS smartphones. With the LG ThinQ app, users can easily control and monitor the heat pump water heater, checking for current water temperatures, setting operating schedules and more.

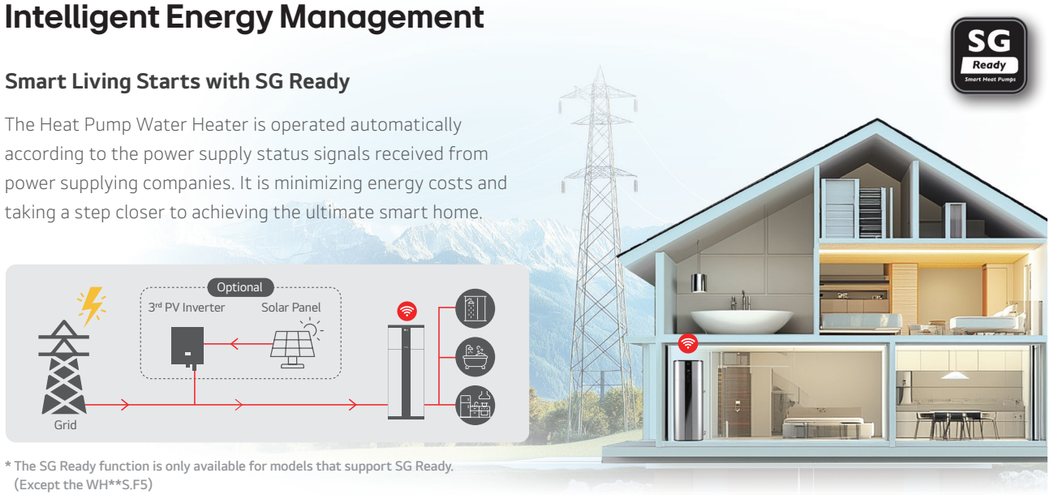
GET IT ON Google Play

Download on the App Store

Intelligent Energy Management

Smart Living Starts with SG Ready

The Heat Pump Water Heater is operated automatically according to the power supply status signals received from power supplying companies. It is minimizing energy costs and taking a step closer to achieving the ultimate smart home.



* The SG Ready function is only available for models that support SG Ready. (Except the WH**S.F5)

Easy to Use

Choose Simple and Quick Comfort Mode

Users can select from four operating modes, allowing for easy customization of the product to effectively meet their individual needs.

Heat pump mode

Auto mode

Turbo mode

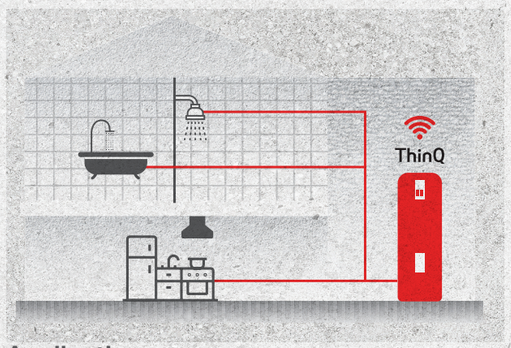
Vacation mode

THERMA V™ R290

HEAT PUMP WATER HEATER
(100 / 150 / 200 ℓ)

Key Features

- Capacity range from 100, 150 and 200 ℓ
- New round type design with essence white color
- Natural refrigerant R290 with low GWP (3)
- Connect and control anytime, anywhere with LG ThinQ
- Max. water temperature up to 75 °C with heating element
- Includes SG Ready function



Fits Perfectly with All Your Needs

The new refrigerant technology allows the unit to efficiently reach outlet temperatures of up to 75°C. Available in sizes ranging from 100 to 200 liters, the unit is developed to meet the capacity needs of each household. Designed with modern living in mind, the R290 Heat Pump Water Heater blends seamlessly into any indoor space.

Application

DHW Heating

Certifications

SG Ready
Smart Heat Pumps

Energy Label

DHW Heating

A+ M
100 ℓ

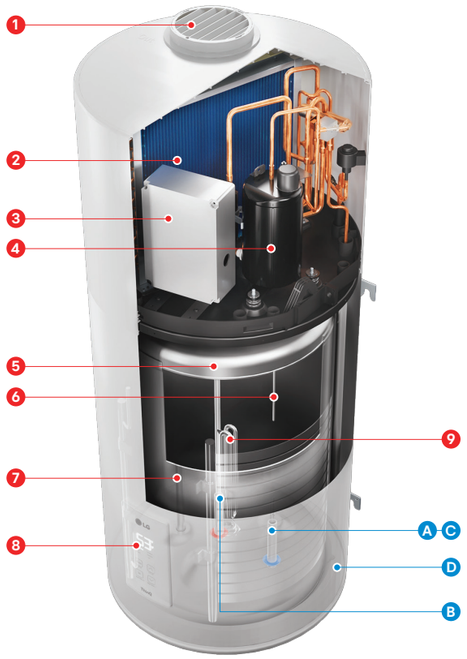
A+ L
150 / 200 ℓ

THERMA V R290
HEAT PUMP WATER HEATER (100 / 150 ℓ)

WH10ESF0 HA
WH15ESF0 HA

Key Components

Heat Pump Water Heater (Wall Mount)



Components

1. Duct connector
2. Evaporator
3. Control box
4. Compressor
5. Water tank
6. ICCP [1] (Ti)
7. Anode road (Mg)
8. Display
9. Electric heater

Connections

- A Water inlet (G 1/2")
- B Water outlet (G 1/2")
- C Pressure relief valve (accessory)
- D Condensate drain (G 3/4")

Product Specification

Indoor Units		Unit	WH10ESF0.HA	WH15ESF0.HA
Capacity	Volume (nominal)	ℓ	100	150
Refrigerant	Type	-	R290	
	GWP	-	3	
	Pre-charged amount	g	148	
Efficiency	COP (7°C)	-	2.70	2.95
	Energy class (7°C)	-	A+	A+
	Annual energy consumption (7°C)	kWh	438	812
Performance	Operation range	°C	-7 ~ 48	
	Max. water temperature with heat pump	°C	60	
	Max. water temperature with heating element	°C	75	
	Heating element	kW	1.2	1.2
	Sound power level	dB(A)	45	45
	Sound pressure level at 2 m (Auto mode)	dB(A)	38	38
	V40	ℓ	110	173
	Load profile	-	M	L
	Operation mode	-	Turbo / Auto / Heat pump / Vacation / Anti legionella	
Compressor	Type	-	Constant speed rotary	
Piping connections	Water inlet / outlet	inch	G 1/2"	
Dimension	H x W x D	mm	1,280 x 540 x 565	1,620 x 540 x 565
Weight	Net	kg	64	75
Exterior	Color of chassis / RAL code	-	Essence white / RAL 9003	
Safety valve	Type	-	Pressure relief valve	
IP Class		-	IPX4	
Anode type		-	Mg + ICCP [1]	
Tank material		-	Enameled steel	
Power supply	Voltage, phase, frequency	V, Ø, Hz	230, 1, 50	
	Recommended circuit breaker	A	16	
Additional function	Wi-Fi (ThinQ)	-	O	
	SG Ready	-	O	

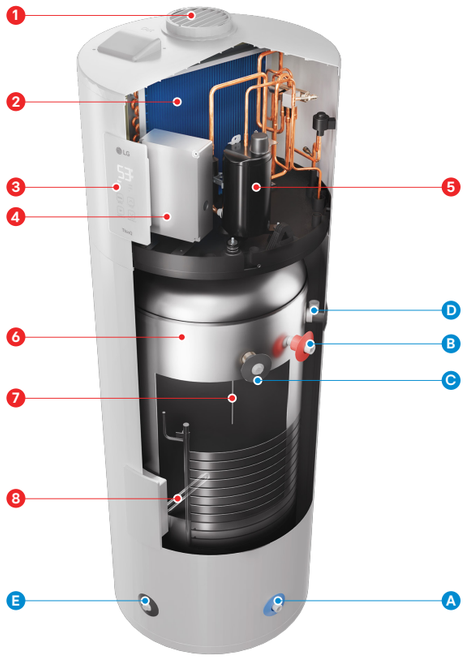
1) Impressed current cathodic protection

THERMA V R290
HEAT PUMP WATER HEATER (200 ℓ)

WH20ESF0 CA

Key Components

Heat Pump Water Heater (Floor Standing)



Components

1. Duct connector
2. Evaporator
3. Display
4. Control box
5. Compressor
6. Water tank
7. ICCP [1] (Ti)
8. Electric heater

Connections

- A Water inlet (G 3/4")
- B Water outlet (G 3/4")
- C T&P relief valve (accessory)
- D Condensate drain (G 3/4")
- E Drain valve (accessory)

Product Specification

Indoor Units		Unit	WH20ESF0.CA
Capacity	Volume (nominal)	ℓ	200
Refrigerant	Type	-	R290
	GWP	-	3
	Pre-charged amount	g	150
Efficiency	COP (15°C)	-	3.20
	Energy class (15°C)	-	A+
	Annual energy consumption (15°C)	kWh	770
Performance	Operation range	°C	-7 ~ 48
	Max. water temperature with heat pump	°C	60
	Max. water temperature with heating element	°C	75
	Heating element	kW	2.0
	Sound power level	dB(A)	53
	Sound pressure level at 2 m (Auto mode)	dB(A)	38
	V40	ℓ	260
	Load profile	-	L
	Operation mode	-	Turbo / Auto / Heat pump / Vacation / Anti legionella
Compressor	Type	-	Constant speed rotary
Piping connections	Water inlet / outlet	inch	G 3/4"
Dimension	H x W x D	mm	1,708 x 600 x 608
Weight	Net	kg	92
Exterior	Color of chassis / RAL code	-	Essence white / RAL 9003
Safety valve	Type	-	T&P relief valve
IP Class		-	IPX1
Anode type		-	ICCP [1]
Tank material		-	Enameled steel
Power supply	Voltage, phase, frequency	V, Ø, Hz	230, 1, 50
	Recommended circuit breaker	A	16
Additional function	Wi-Fi (ThinQ)	-	O
	SG Ready	-	O

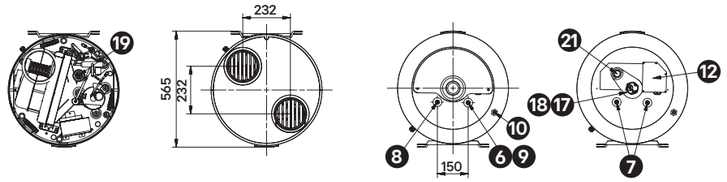
1) Impressed current cathodic protection

THERMA V R290
HEAT PUMP WATER HEATER (100 / 150 / 200 ℓ)

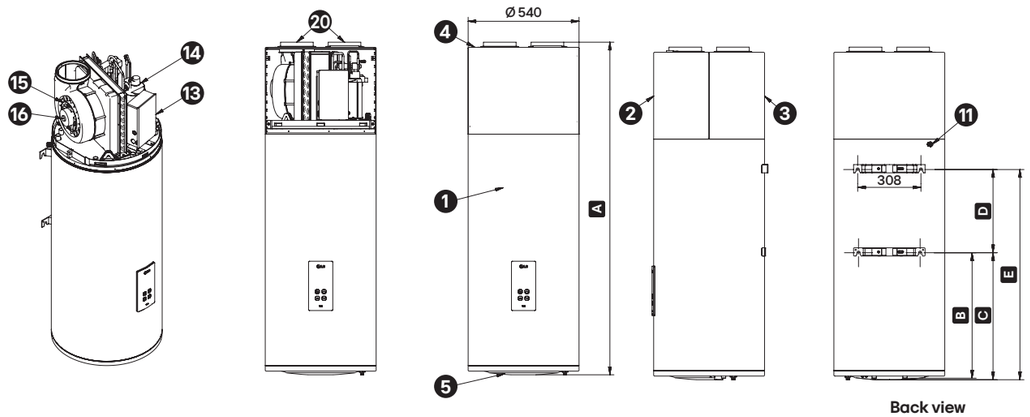
Drawings

[Unit: mm]

WH10ESF0 HA
WH15ESF0 HA



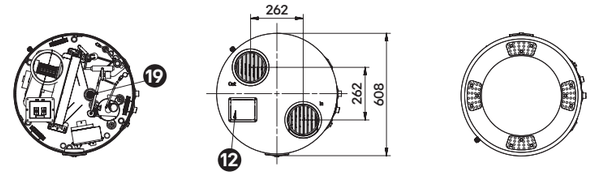
Top view | Bottom view | Bottom view



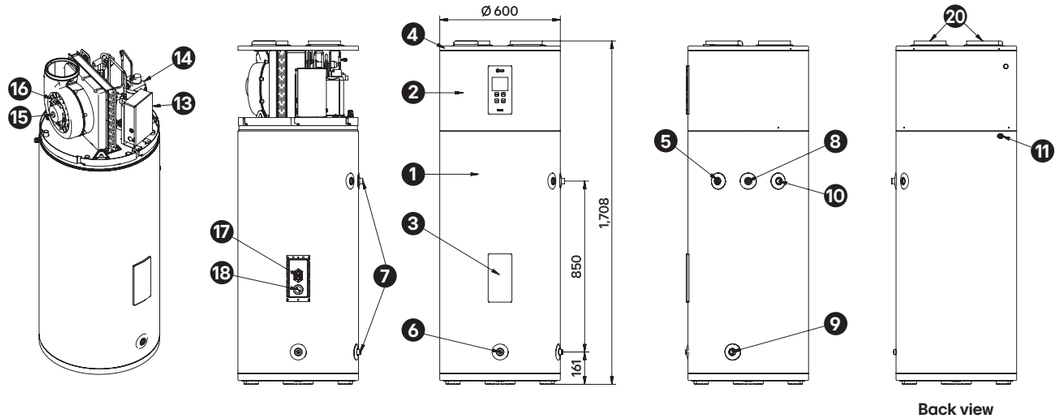
Back view

[Unit: mm]

WH20ESF0 CA



Top view | Bottom view



Back view

No.	Part Name	Description	No.	Part Name	Description
1	Water Tank	100 ℓ / 150 ℓ	12	Connecting Box Cover	For SG Signal
2	Front Panel	-	13	C/Box Case	-
3	Rear Panel	-	14	Compressor	WHP00950PSV
4	Top Cover	-	15	Motor	15 W
5	Bottom Cover	-	16	Fan Propeller	Centrifugal Fan
6	P Valve (Accessories)	0.75 M Pa, Open	17	ECO	Emergency Cut Off (83°C)
7	Dielectric Union (Accessories)	2 EA, Water In & Out	18	Heating Element	1 EA, 1,200 W, 230 V
8	Outlet Pipe	Water Out, G 1/2	19	ICCP	Ti
9	Inlet Pipe	Water In, G 1/2	20	Duct Connector	160 Ø Duct Available
10	Condensate Drain	15 mm	21	Anode Rod	Ø 21.3 200
11	Power Cable	1.5 x 3			

	100 ℓ	150 ℓ
A	1,280	1,620
B	90	611
C	98	619
D	585	405
E	683	1,023

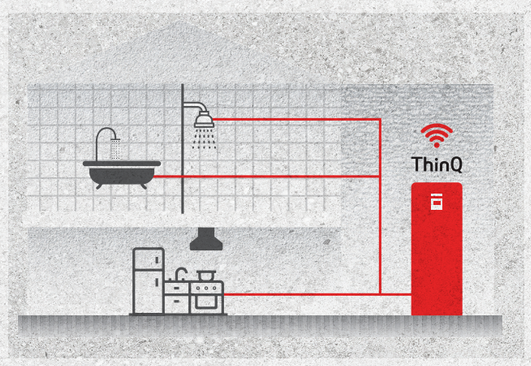
No.	Part Name	Description	No.	Part Name	Description
1	Water Tank	200 ℓ	11	Power Cable	1.5 x 3
2	Front Panel	-	12	Connecting Box Cover	For SG Signal
3	Heater Cover	-	13	C/Box Case	-
4	Top Cover	-	14	Compressor	WHP01750PSV
5	T/P Valve (Accessories)	1.0 M Pa, 80°C Open	15	Motor	30 W
6	Drain Valve (Accessories)	G 3/4	16	Fan Propeller	Centrifugal Fan
7	Dielectric Union (Accessories)	2 EA, Water In & Out	17	ECO	Emergency Cut Off (90°C)
8	Outlet Pipe	Water Out, G 3/4	18	Heating Element	1 EA, 2,000 W, 230 V
9	Inlet Pipe	Water In, G 3/4	19	ICCP	Ti
10	Condensate Drain	19 mm	20	Duct Connector	160 Ø Duct Available

THERMA V™ R134a

HEAT PUMP WATER HEATER
(200 / 270 ℓ)

Key Features

- Capacity range from 200, 270 ℓ
- LG's unique square design with luxury silver color
- High efficiency with dual inverter compressor
- Connect and control anytime, anywhere with LG ThinQ
- Fast hot water production using two heating elements in Turbo mode
- Includes SG Ready function (SG Ready models only)
- Red Dot and iF Design Award Winner in 2020



iF DESIGN AWARD 2020

reddot winner 2020

Perfect Fit
Maximum Efficiency

Featuring a unique and elegant design, the R134a Heat Pump Water Heater is available in two capacity ranges of 200 and 270 ℓ. It features outstanding efficiency and low noise thanks to the dual inverter compressor, and has excellent connectivity and controllability such as SG ready and LG ThinQ.

Application

Certifications

1) 2)

SG Ready Smart Heat Pumps

1) WH20S.F5 / WH27S.F5
2) WH20STR2.FA / WH27STR2.FA

Energy Label

DHW Heating

A+ L

200 / 270 ℓ

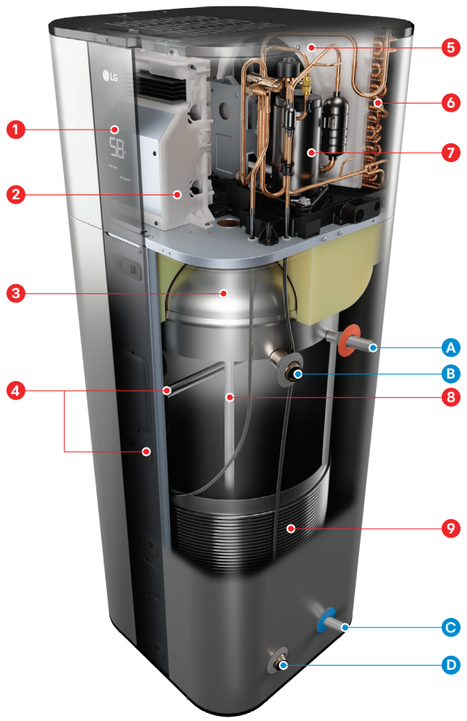
THERMA V R134a
HEAT PUMP WATER HEATER (200 / 270 ℓ)

WH20STR2 FA [1)]
WH27STR2 FA [1)]
WH20S F5
WH27S F5

1) Available SG ready function

Key Components

Heat Pump Water Heater



Components

1. Display screen
2. Inverter drive
3. Water tank
4. Electric heaters, 2 x 2 kW
5. Fan
6. Evaporator
7. Dual inverter compressor
8. Anode (ICCP [1)])
9. Ref. piping coil

Connections

- A Water outlet (NPT 3/4")
- B Opening for T&P relief valve
- C Water inlet (NPT 3/4")
- D Opening for drain valve

Technical Specification

Indoor Units		Unit	WH20STR2 FA WH20S F5	WH27STR2 FA WH27S F5
Capacity	Volume (nominal)	ℓ	200	270
Refrigerant	Type	-	R134a	
	GWP	-	1,430	
	Pre-charged amount	g	650	750
Efficiency	COP (7°C / 15°C)	-	3.30 / 3.50	3.45 / 3.85
	Energy class (7°C / 15°C)	-	A+ / A+	A+ / A+
	Annual energy consumption (7°C / 15°C)	kWh	756 / 709	712 / 646
Performance	Operation range	°C	-5 ~ 48	
	Max. water temperature with heat pump	°C	50	
	Max. water temperature with heating element	°C	60	
	Heating element	kW	2.0 + 2.0	2.0 + 2.0
	Sound power level	dB(A)	55	55
	Sound pressure level at 2 m (Auto mode)	dB(A)	38	38
	V40	ℓ	260	360
	Load profile	-	L	L
	Operation mode	-	Turbo / Auto / Heat pump / Vacation / Anti legionella	
Compressor	Type	-	Inverter twin rotary	
Piping connections	Water inlet / outlet	inch	G 3/4"	
Dimension	H x W x D	mm	1,625 x 580 x 582	2,008 x 580 x 582
Weight	Net	kg	102	119
Exterior	Color of chassis / RAL code	-	Luxury silver / RAL 9006	
Safety valve	Type	-	T&P relief valve	
IP Class		-	IPX1	
Anode type		-	ICCP [1)]	
Tank material		-	Enameled steel	
Power supply	Voltage, phase, frequency	V, Ø, Hz	230, 1, 50	
	Recommended circuit breaker	A	15	
Additional function	Wi-Fi (ThinQ)	-	O	
	SG Ready	-	Not supported for WH**S.F5 Supported in WH**STR2.FA	

1) Impressed current cathodic protection

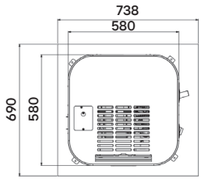
Accessory Name	Model Name	Figure	Applicable Product	Feature
Duct accessory	PHDCLA0.ELGTEEU		R134a Heat pump water heater	Duct accessories are necessary for duct installation.

THERMA V R134a
HEAT PUMP WATER HEATER (200 / 270 ℓ)

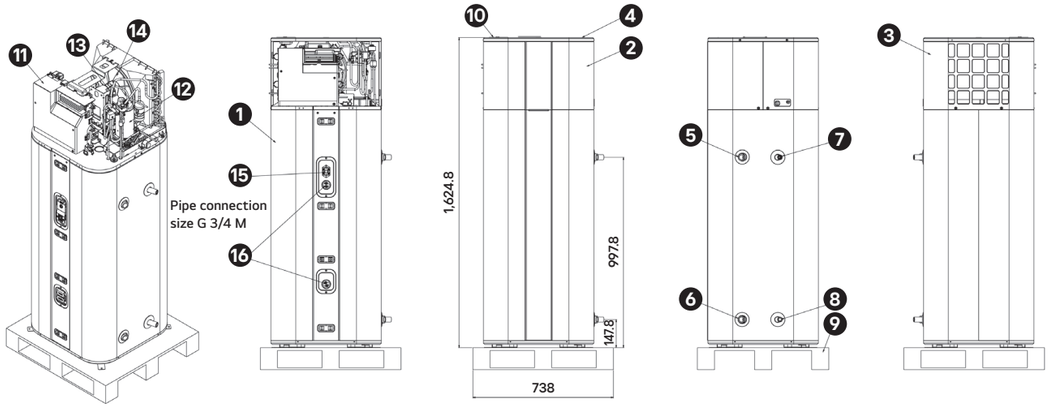
Drawings

[Unit: mm]

WH20STR2 FA
WH20S F5



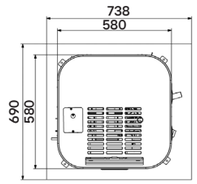
Top view



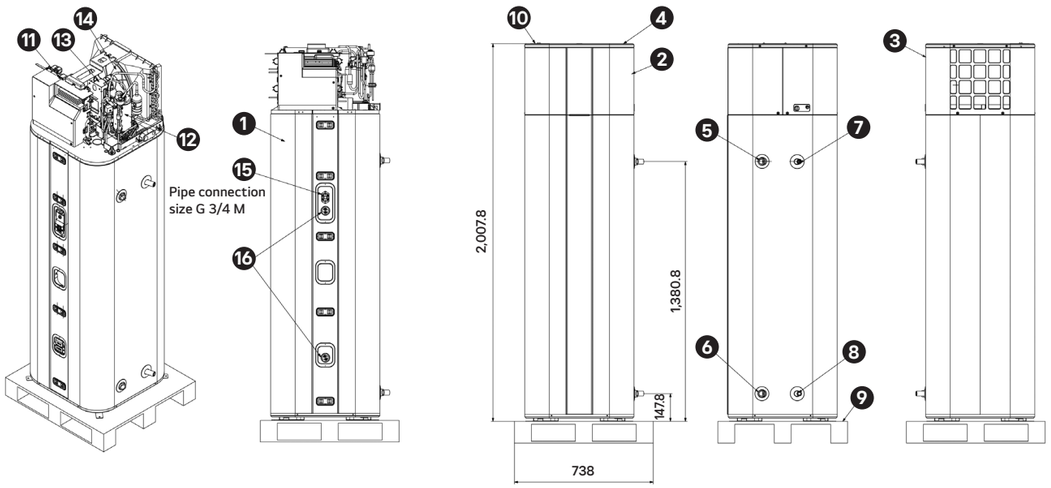
Internal 3D view | Internal front view | Front view | Side view | Back view

[Unit: mm]

WH27STR2 FA
WH27S F5



Top view



Internal 3D view | Internal front view | Front view | Side view | Back view

No.	Part Name	Description	No.	Part Name	Description
1	Water Tank	200 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	Heating Element	2 EA, 2,000 W+2,000 W, 220 ~ 240 V

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	Heating Element	2 EA, 2,000 W+2,000 W, 220 ~ 240 V

SOLUTIONS

COLLECTIVE SOLUTIONS

MONOBLOC

190 R32 Monobloc 51 kW

CASCADE SOLUTION

200 Cascade Control Unit

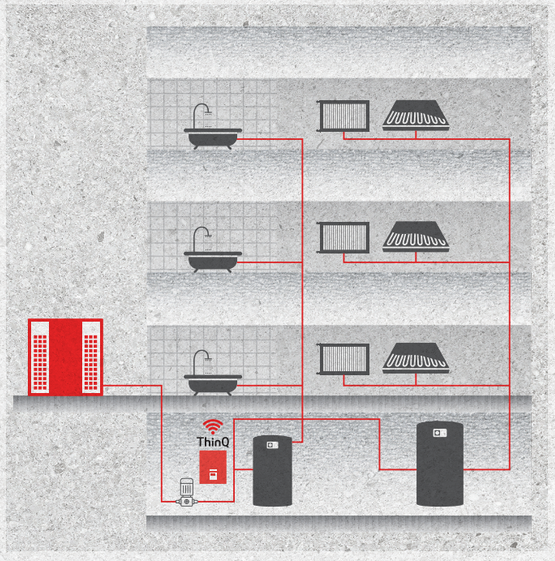
THERMA V™ R32 Monobloc 51 kW

Compact Yet Powerful

The innovative Collective Solution R32 Monobloc 51 kW delivers efficient performance for large residential spaces with easy installation and inherently safe operation. Compact and lightweight, yet with high capacity and high efficiency, it is ideal for multi-family homes and light commercials.

What is R32 Monobloc 51 kW

The LG R32 Monobloc 51 kW is a large capacity heat pump that provides a collective central heating solution for multi-family houses or light commercial buildings. Ideal for locations that require reliable heating and cooling year-round, this air to water heat pump offers a versatile solution.
Operating efficiently as a single system, it is well-suited for various commercial spaces including multi family house, office buildings, schools and universities.



Key Features

- Fits to Multi-family homes (MFH) or light commercial buildings
- ErP Energy Labeling A++ / A++ for space heating (Average Climate 35°C / 55°C LWT)
- 100% Heating capacity at -10°C outdoor temperature
- Maximum flow temperature up to 60°C
- Operation range down to -25°C
- Compact size and light weight
- Easy installation with no refrigerant piping work
- Convenient wiring with Control Unit installed indoor
- Enhanced control connectivity aligned with THERMA V lineup

R32 · Space heating · A+++ 35℃ · A++ 55℃ · 60℃ · -25℃ · ThinQ

Product Range

Description		Indoor Unit Control Unit	Outdoor Unit
3 Ø	51 kW	PHCSL0 ENCXLEU	HM513MR UXC0

HIGHLIGHT OF R32 MONOBLOC 51 kW

Browse now

Large Capacity THERMA V

Just Simply Install a Large Capacity Heat Pump Instead of Multiple Small Heat Pumps

Installing a high-capacity heat pump system provides efficient and powerful heating while handling high thermal loads.
The R32 Monobloc 51 kW ensures centralized heat production, simplify installation, and optimize space utilization.
Perfect suitable solution for buildings with high & variable thermal loads (commercial, multi-residential, industrial).

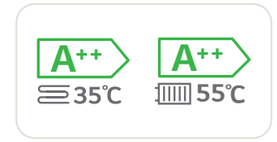
- Well-suited large capacity heat pump for multi family house and various commercial spaces including office buildings, schools and universities
- Centralized solution for both new built and renovation projects
- No refrigerant work require (Plug and play concept)

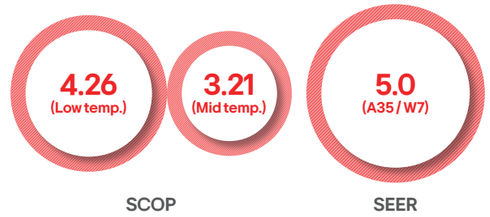
Excellent Performance

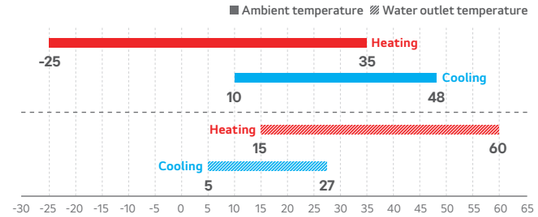
High Energy Efficiency

- High heating efficiency SCOP 4.26 / 3.21 (Low / Mid temp.)
- High cooling efficiency SEER 5.0 (A35 / W7)
- 100% Heating capacity at -10°C outdoor temperature

Achieving the highest ErP energy grade A++ / A++ for space heating







Space Optimization

Handy Installation with Small Size and Weight

- Light weight and small size, easy to install
- Ideal for buildings with limited space or where compact installation is required.

Simplified and Centralized Solution

- Easy to design and manage the entire system, with fewer points of failure and simpler hydraulic and electrical connections.
- Easy and cost effective to monitor and maintain with only one unit

THERMA V R32 MONOBLOC 51 kW

Outdoor unit
HM513MR UXC0

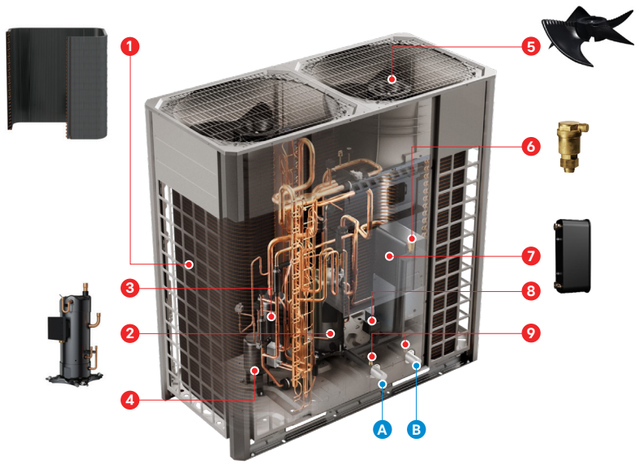
Indoor unit
PHCSL0 ENCXLEU

011-1W1049

R32 · A++ 35℃ · A++ 55℃ · 60℃ · -25℃ · ThinQ

Key Components

Outdoor Unit



Components
1. Black Fin heat exchanger (air / ref.)
2. Compressor
3. Accumulator
4. Receiver
5. Biomimetic fan
6. Air vent
7. Plate heat exchanger
8. Flow Switch
9. Inlet / Outlet Temp. sensor

Connections
- A Leaving water pipe (male PT 1-1/2")
- B Entering water pipe (male PT 1-1/2")

Indoor Unit (Control Unit)

Components
1. Standard III remote controller [1)]

1) Temperature control class (ERP class) : V

Product Specification

Efficiency Data		Unit	51 kW (3 Ø)
Seasonal space heating eff. class (35°C / 55°C)		-	A++ / A++
Seasonal space heating efficiency (η_s) (35°C / 55°C)		%	167 / 125
SCOP (35°C / 55°C)		-	4.26 / 3.21
Sound power level	Rated / low noise mode (heating)	dB(A)	82 / 75
Sound pressure level at 10m	Rated / low noise mode (heating)	dB(A)	54 / 47
Nominal Capacity and COP/EER			
Air +7°C / water +35°C	Heating capacity / COP	kW / -	51.0 / 4.30
Air +2°C / water +35°C	Heating capacity / COP	kW / -	51.0 / 3.40
Air -7°C / water +35°C	Heating capacity / COP	kW / -	5.10 / 2.50
Air +7°C / water +55°C	Heating capacity / COP	kW / -	51.0 / 2.80
Air -7°C / water +55°C	Heating capacity / COP	kW / -	40.0 / 1.67
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	51.0 / 4.50
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	51.0 / 3.10
Outdoor Units		**Unit**	**HM513MR UXC0**
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35
	Cooling (Min. ~ Max.)	°C	10 ~ 48
Refrigerant	Type	-	R32
	GWP	-	675
	Precharged amount	kg	10
Piping connections (water)	Inlet / outlet diameter	inch	Male PT 1-1/2" according to ISO 7-1 (tapered pipe threads)
Plate heat exchanger	Rated water flow rate	LPM	146
	Minimum flow rate (flow switch trigger point)	LPM	100
Dimension	H x W x D	mm	1,690 x 1,640 x 825
Weight	Net	kg	335
Exterior	Color of chassis / RAL code	-	Morning gray & dawn gray / RAL 7038 & RAL 7037
Power supply	Voltage, phase, frequency	V, Ø, Hz	380 ~ 415, 3, 50
	Standby power consumption	W	20
	Recommended circuit breaker	A	50
Indoor Units		**Unit**	**PHCSL0 ENCXLEU**
Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	25 ~ 60 (65) [7)]
	Cooling (Min. ~ Max.)	°C	5 ~ 27
	DHW (Min. ~ Max.)	°C	25 ~ 80
Dimension	H x W x D	mm	490 x 420 x 141
Weight	Net	kg	6.8
Exterior	Color / RAL code	-	Essence white / RAL 9003
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50
	Recommended circuit breaker	A	10

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 EN 12102-1 and ISO 9614. Sound pressure level is not a value declared on Eurovent Program and 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 according to ErP regulation.
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).
7. The leaving water temperature of 65°C is possible only when a backup heater is installed.
8. DHW 55~80°C Operating is available only when the booster heater is operating.

THERMA V R32
MONOBLOC 51 kW

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HM513MR UXC0

Outdoor Temp. [°C DB]	LWT 30 °C	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C
	Capacity (kW)						
-25	30.3	29.3	25.3	19.2	-	-	-
-22	34.0	32.0	27.0	23.0	-	-	-
-20	37.1	36.8	35.3	32.8	29.6	-	-
-17	43.2	42.5	41.8	40.6	39.0	-	-
-15	47.3	46.4	46.1	45.8	45.3	40.0	-
-12	49.5	49.2	47.9	47.8	46.3	41.9	-
-10	51.0	51.0	49.2	49.1	47.0	43.1	36.0
-7	51.0	51.0	51.0	51.0	48.0	45.0	42.0
-2	51.0	51.0	51.0	51.0	51.0	51.0	47.5
2	51.0	51.0	51.0	51.0	51.0	51.0	51.0
7	51.0	51.0	51.0	51.0	51.0	51.0	51.0
10	51.0	51.0	51.0	51.0	51.0	51.0	51.0
15	51.0	51.0	51.0	51.0	51.0	51.0	51.0
20	51.0	51.0	51.0	51.0	51.0	51.0	51.0
25	51.0	51.0	51.0	51.0	51.0	51.0	51.0
30	-	51.0	51.0	51.0	51.0	51.0	51.0
35	-	-	51.0	51.0	51.0	51.0	51.0

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum cooling capacity

HM513MR UXC0

Outdoor Temp. [°C DB]	LWT 5 °C	LWT 7 °C	LWT 10 °C	LWT 13 °C	LWT 15 °C	LWT 18 °C	LWT 20 °C	LWT 22 °C	LWT 27 °C
	Capacity (kW)								
10	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
20	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
30	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
35	48.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
40	46.5	48.8	51.0	51.0	51.0	51.0	51.0	51.0	51.0
45	44.0	48.5	50.5	51.0	51.0	51.0	51.0	51.0	51.0
48	42.5	43.8	45.8	48.3	51.0	51.0	51.0	51.0	51.0

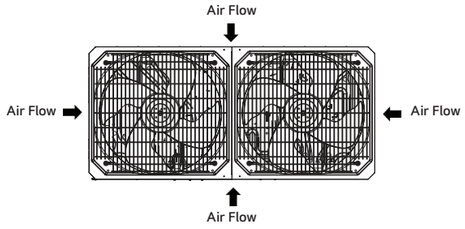
Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C),
   LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.

THERMA V R32 MONOBLOC 51 kW

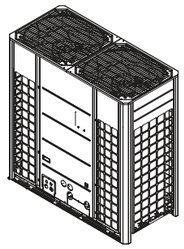
Drawings

[Unit: mm]

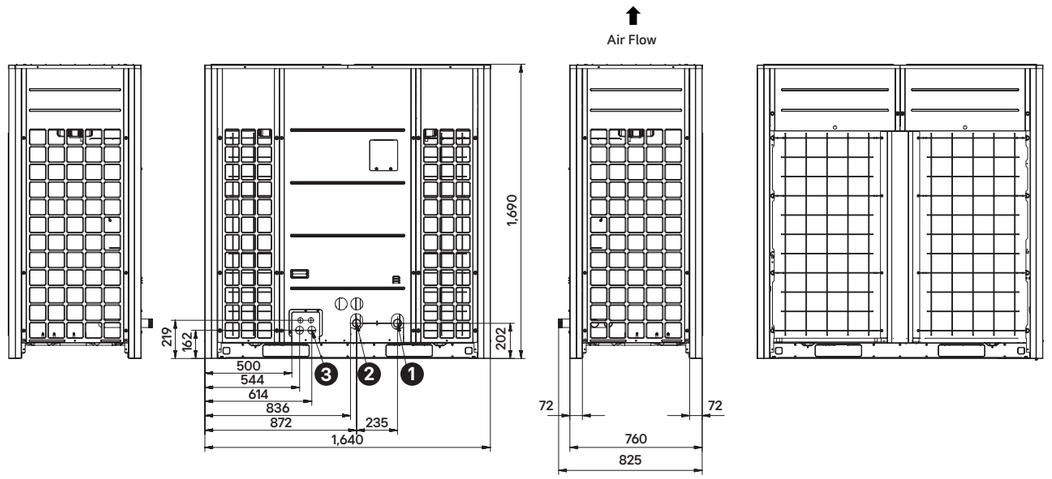
HM513MR UXC0



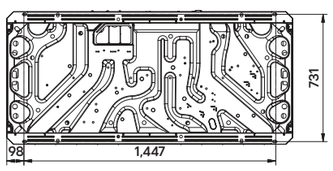
Top view



3D view



Side view | Front view | Side view | Back view

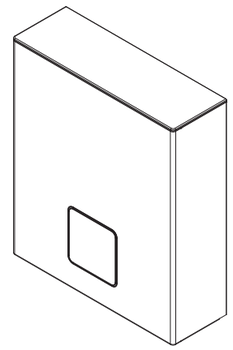


Bottom view

No.	Part Name	Description
1	Entering Water Pipe	Male PT 1-1/2" according to ISO 7-1 (Tapered pipe threads)
2	Leaving Water Pipe	Male PT 1-1/2" according to ISO 7-1 (Tapered pipe threads)
3	Access to Electrical Terminals	Power, Communication cables

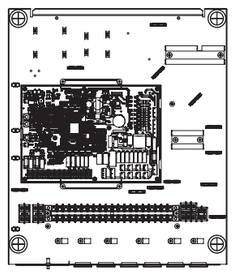
[Unit: mm]

PHCSL0 ENCXLEU

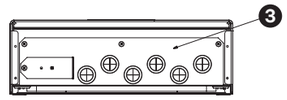


3D view

Front view | Side view



Internal view



Bottom view

No.	Part Name	Description
1	Remote Controller Assembly	Built-in Remote Controller
2	Panel Assembly.Front	SGMCD1 M08 ESSENCE WHITE PCM
3	Panel Assembly.Indoor	PCB and Terminal Blocks
4	Cover	MOLD ABS

Flexible Combination, Great Scalability

Cascade system offers efficient performance across all heating capacity ranges, adapting to fluctuating demand while maintaining reliability and reducing unnecessary energy consumption.
If necessary, it enables easy addition or removal of units according to the changes of thermal requirements such as renovation or Insulation improvement work, even after installation.

What is Cascade Control Unit

The LG Cascade Control Unit is an advanced heating solution designed to manage up to 8 units of the THERMA V system with a single controller. This centralized control enhances system efficiency and simplifies operation, making it an ideal choice for optimizing heat pump performance in multi-unit applications.

Key Features

- Up to 8 outdoor units [1] can be operated as one system
- Heating demands up to 128 kW can be covered through flexible combination in same capacity models [1]
- Easy to configure as no separate indoor unit or control devices are required except for the cascade control unit
- Extremely quiet and high efficient operation combining with R290 Monobloc over wide heating capacity ranges
- Intuitive interface through a 4.3 inch full-touch / full-color display and motion graphics
- Optimized Runtime Control for stable operation and maintenance
- Alternating defrost operation that Individual units enter into the defrost operation sequentially
- Emergency operation for various emergency situations

Compatible Line-up

- R290 Monobloc [2]

Description	R290 Monobloc Outdoor Unit	
	1 Ø	3 Ø
7 kW	HM071HF UB40	HM073HF UB40
9 kW	HM091HF UB40	HM093HF UB40
12 kW	HM121HF UB60	HM123HF UB60
14 kW	HM141HF UB60	HM143HF UB60
16 kW	HM161HF UB60	HM163HF UB60

1) All units connected to Cascade Control Unit must be configured with models of the same capacity.
2) Only R290 Monobloc outdoor units manufactured after June of 2025 are compatible with Cascade Control Unit.

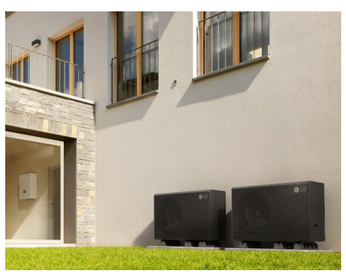
THERMA V
CASCADE CONTROL UNIT

Cascade Solution for THERMA V

No Need to Install Separate Indoor Units; Just Connect the Outdoor Units

The cascade system allows more than one heat pump unit to work together to meet a property's heating, cooling and hot water needs. It is the perfect solution for buildings with variable thermal loads. (Residential Collective Housing, light commercial)
Installing a Cascade Heat Pump system offers several significant advantages in terms of Performance, Flexibility, and Energy efficiency.

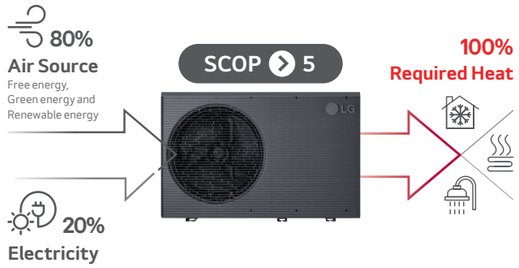
- Modularity and scalability
- Optimal operation
- Installation flexibility
- Built-in redundancy and maintenance



Browse now

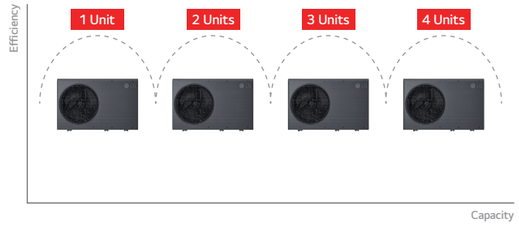
High Efficient Operation

Exceptional Efficiency Exceeding SCOP 5 [1)]



1) Based on Average Climate and Low Temperature (35°C) condition

High efficient operation over wide heating capacity ranges

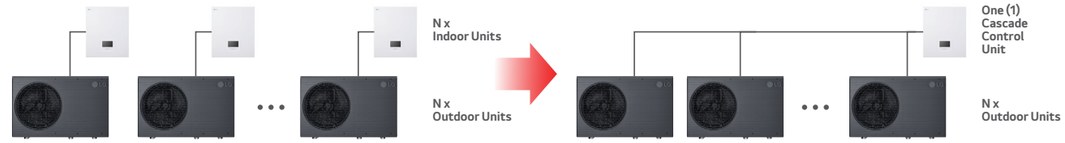


As it uses the highly efficient R290 Monobloc outdoor units, LG Cascade system also provides excellent efficiency across a wide range of capacities.

Easy Installation

Simplified Configuration and Wiring

Customer can save significant costs by reducing the cost for of purchasing and installing multiple indoor units (Control Units).



One Cascade Control Unit directly controls multiple outdoor units.

Extremely Quiet Operation

Extremely Quiet Operation Using the R290 Monobloc

QUIET MARK
UK & EU only[1)]

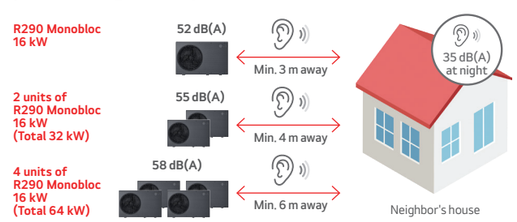
Extremely low noise level unit available today

- The sound power level of 49 dB(A) @12kW is outstanding in the market.

Sound power level	R290 Monobloc				
	7 kW	9 kW	12 kW	14 kW	16 kW
Heating / Rated	49	50	49	51	52

1) The certification (Quite Mark) for R290 Monobloc is valid for UK & EU territories only until Dec. 31st of 2025.

LG Cascade system with R290 Monobloc outdoor units provides a significantly now noise level.



THERMA V
CASCADE CONTROL UNIT

Indoor unit

PHCM0 ENCXLEU

Product Specification

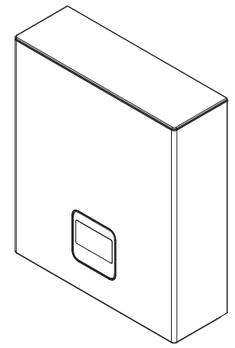
Indoor Unit		Unit	PHCM0 ENCXLEU
Operation range (leaving water temperature when combined to R290 Monobloc)	Heating (Min. ~ Max.)	°C	15 ~ 70
	Cooling (Min. ~ Max.)	°C	5 ~ 27
	DHW (Min. ~ Max.)	°C	15 ~ 80
Dimension	H x W x D	mm	490 x 420 x 141
Weight	Net	kg	6.9
Exterior	Color of chassis / RAL code	-	Essence white / RAL 9003
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50
	Recommended circuit breaker	A	10

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. DHW 65 ~ 80°C Operating is available only when the booster heater is operating.

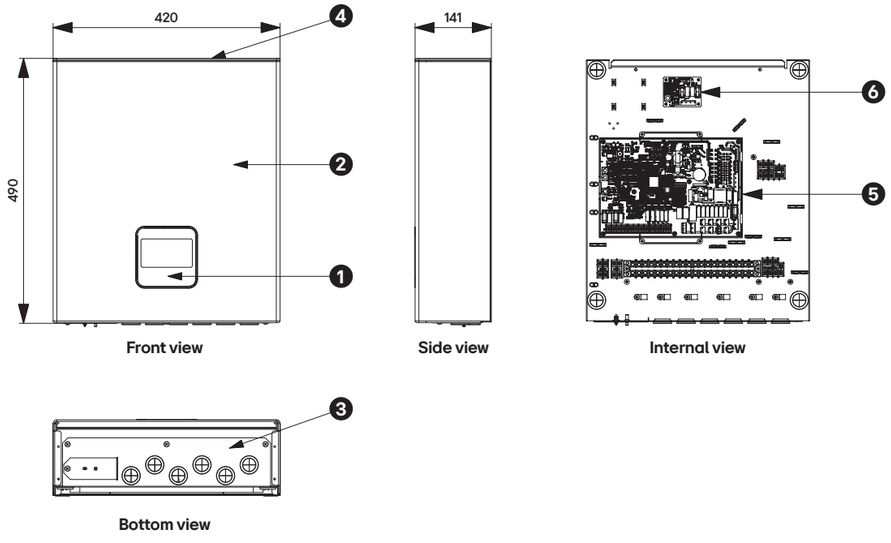
Drawings

[Unit: mm]

PHCM0 ENCXLEU



3D view



Front view | Side view | Internal view

Bottom view

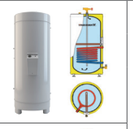
No.	Part Name	Description
1	Remote Controller Assembly	Built-in Remote Controller
2	Panel Assembly.Front	SGMCD1 M08 ESSENCE WHITE PCM
3	Base Assembly.Indoor	PCB and Terminal Blocks
4	Cover	MOLD ABS
5	PCB Assembly.Main	AWHP Cascade_Main PCBA
6	PCB Assembly.Sub	AWHP Cascade_Sub PCBA

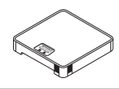
ACCESSORIES

208 Accessories Provided by LG
212 Electric Backup Heater
214 LG Wi-Fi Modem
215 Domestic Hot Water Tank

THERMA V ACCESSORIES

Accessories Provided by LG

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Sensors	Room temperature sensor	PQRSTA0		All except for R32 Monobloc 51 kW and Cascade Control Unit	Room temperature based control	To detect room air temperature for room temperature based control	• Max. wire length: 15 m
	Thermistor for 2nd circuit or e/heater	PRSTAT5K10		All THERMA V products	2nd circuit (mixing circuit)	To detect 2nd circuit temperature when using 2nd circuit function	• 5 kΩ thermistor, 10 m
	Outdoor air temperature sensor	PHATS0		R290 Monobloc, R32 Monobloc S Ⅱ, R32 Monobloc 51 kW	Weather-dependent operation	To detect outdoor air temperature more accurately for weather-dependent operation especially when the outdoor unit is exposed to sunlight	• Max. wire length: 12 m • optional accessory - i.e pre-installed air sensor (mounted at grille of outdoor unit) will be used for weather-dependent operation if the outdoor air temperature sensor is not installed
	Water tank sensor	PHRSTA0		All except for Combi Units	Domestic hot water heating	To detect DHW tank temperature	• Included in DHW tank kit • Max. wire length: 12 m * A harness that can be connected to PCB-connector TB_SENSOR/BUFFER is included in this accessory produced after 1st of March 2024.
				R290 Monobloc, R32 Monobloc S Ⅱ, R32 Monobloc 51 kW	Buffer tank temperature based control	To detect the temperature at the top of the buffer tank or at its outlet pipe if a big buffer tank is connected in parallel to the heat pump	
Valves	3 way valve	OSHA-3 V		All except for Combi Units	Domestic hot water heating	To divert water flow between space heating and DHW heating	• Size: DN 20 G 1" connection, male threaded
	Thermostatic mixing valve	OSHA-MV		Regardless of the model	Domestic hot water supply	To blend hot water with cold water for ensuring constant, safe shower and bath outlet temp.	• Size: 3/4" DN20 male threaded
		OSHA-MV1					• Size: 1" DN25 male threaded
DHW Tanks	Domestic hot water tank (single coil)	OSHW-200 F		All except for Combi Units	Domestic hot water heating	To generate and store domestic hot water	• Storage volume: 200 ℓ, 300 ℓ, 500 ℓ • Type: internal single coil • Material: stainless steel • Capacity of booster heater: 2.4 kW
		OSHW-300 F					
		OSHW-500 F					
	Domestic hot water tank (double coil)	OSHW-300 FD					• Storage volume: 300 ℓ • Type: internal double coil • Material: stainless steel • Capacity of booster heater: 2.4 kW
Installation kits	Domestic hot water tank kit	PHLTA		Hydro Unit for Split & Hydrosplit	Domestic hot water heating	To control an external DHW booster heater	• Parts included: DHW tank sensor (thermistor), circuit breaker, relay
		PHLTB		R32 Monobloc S, R32 Monobloc S Ⅱ			• Parts included: DHW tank sensor (thermistor), circuit breaker, relay, multi harness
	Solar thermal kit	PHLLA		All except for Combi Units	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
Installation kits	Electric back-up heater	HA031M E2		R32 Monobloc S, R32 Monobloc S Ⅱ	Capacity back up & emergency operation	To supplement insufficient capacity	• Heater capacity: 3 kW • Number of heating coil: 1ea (3.0 kW) • Size (W x H x D): 210 x 607 x 217 • Power: 220 ~ 240 V, 1 Ø
		HA061M E2					• Heater capacity: 6 kW • Number of heating coil: 2 ea (3.0 + 3.0 kW) • Size (W x H x D) : 210 x 607 x 217 • Power: 220 ~ 240 V, 1 Ø
		HA063M E2					• Heater capacity: 6 kW • Number of heating coil: 3 ea (2.0 + 2.0 + 2.0 kW) • Size (W x H x D) : 210 x 607 x 217 • Power: 380 ~ 415 V, 3 Ø
		HA061C E1		R32 Hydrosplit Hydro Unit (HN1600MC NK1)	Capacity back Up & emergency operation	To supplement insufficient capacity	• Heater capacity: 6 kW • Number of heating coil: 2 ea (3.0 + 3.0 kW) • Power: 220-240 V, 1 Ø
		HA063C E1					• Heater capacity: 6 kW • Number of heating coil: 3 ea (2.0 + 2.0 + 2.0 kW) • Power: 380-415 V, 3 Ø
Vessel	Buffer tank for space heating	OSHB-40KT		R32 Hydrosplit Combi Unit	-	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
	Buffer tank for space heating	OSHE-12KT		R32 Hydrosplit Combi Unit	-	To absorb the pressure variations in the DHW tank due to changing temperatures	• Volume: 8 ℓ • Connection: 3/4" • Max. pressure: 10 bar • Size (W x H x D): 416 x 238 x 502
ETC	Extension wire for a wired remote controller	PZCWRC1		All THERMA V products	-	To extend the wire between the wired remote controller and the indoor unit	• Length: 10 m
	Extension cable for Wi-Fi modem	PWYREW000		All THERMA V products	Wi-Fi control via LG ThinQ	To extend a wire between the WI-Fi modem and the indoor unit	• Length: 10 m
	2-remote control wire	PZCWRC2		All except for R32 Monobloc 51 kW and Cascade Control Unit	2 remote control	To connect an additional remote controller (Slave)	• Length: 0.25 m
	Drain pan	PHDPB		R32 Split Hydro Unit (NK4 suffix), R410A Split Hydro Unit (NK3 suffix)	Cooling operation	To collect condensed water in the indoor unit during the cooling operation	-
		PHDPC		R290 Monobloc, R32 Hydrosplit , R32 Split Hydro Unit (NK5 suffix), R410A Split Hydro Unit (NK5 suffix)			
	Cover plate	PDC-HK10		All except for Monobloc unit and Cascade Control Unit	-	To fill the blank space of the indoor unit front panel when the remote controller is relocated indoors.	-
	Downward piping kit	PHDW36B0		R290 Monobloc	-	To change the piping direction from backside to downward	-
		PHDW60B0					

THERMA V ACCESSORIES

Accessories Provided by LG

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Remote Controller	Wired remote controller	PREMTW101		All except for R32 Monobloc 51 kW and Cascade Control Unit	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, 9.6 m) and 2 remote cable (PZCWRC2, 0.25 m) are included
Central Controller	AC Ez Touch [1]	PACEZA000		All THERMA V products except for R290 Monobloc, R32 Monobloc S Ⅱ, R32 Monobloc 51 kW and Cascade Control Unit	Centralized control	To control the AWHP using LG central controller	• 5 inch color display • User-friendly control with iconographic interface (touch screen) • Max. 32 unit control • Total 200 schedule events (weekly / monthly / yearly / exception day) • Operation history • Remote controller lock (all, temp, mode) • PC access supported (IPv6 supported) • DI 1 ea (emergency stop only) • Size (W x H x D): 137 x 121 x 25
	AC Smart 5 [1]	PACS5A000					• 10.2 inch color display • User-friendly control with iconographic interface (touch screen) • Max. IDU 64 • Total 100 schedule events (weekly / monthly / yearly / exception day) • History / operation trend • Interlock with 3rd party equipment (ACS IO, ACU IO module is needed) • Error alarm by e-mail • Remote controller lock (all, temp, mode) • Map view (visual navigation) • Web access supported with HTML5 (PC, smartphone, tablet) • DI 2 ea, DO 2 ea • BACnet IP/ modbus TCP protocol support • Size (W x H x D): 253.2 x 167.7 x 28.9
	ACP 5 [1]	PACP5A000					• Web access controller • Max. 128 unit control • Total 100 schedule events (weekly / monthly / yearly / exception day) • History / operation trend • Interlock with 3rd party equipment (ACS IO, ACU IO module is needed) • Error alarm by e-mail • Remote controller lock (all, temp, mode) • Map view (visual navigation) • DI 10 ea, DO 4 ea • BACnet IP/ modbus TCP protocol support • Lonworks protocol support* (max. 64 unit control) • Size (W x H x D): 270 x 155 x 65

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

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Gateway	Modbus RTU gateway	PMBUSB00A		All except for R32 Monobloc 51 kW	Centralized control	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
	PI485 gateway for THERMA V [1]	PP485A00T		All except for R290 Monobloc, R32 Monobloc S Ⅱ and R32 Monobloc 51 kW		To communicate and control through the central controller (converting LG protocol to RS485 protocol)	• 1 for each outdoor unit • Power: supplied by outdoor unit
Dry contact	Simple dry contact	PDRYCB000		All THERMA V products	-	To connect between the AWHP and external devices to control various functions	• 1 Set per 1 unit • 1 Input contact for turning on/off • Input power: 220 ~ 240 V • 2 output contacts - Operation status - Error status
	Dry contact for thermostat	PDRYCB320					• 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
ETC	LG Wi-Fi modem	PWFMDD200		All THERMA V products	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
	Cloud gateway [1]	PWFMDB200		R290 Monobloc, R32 Monobloc S Ⅱ, R32 Split Combi Unit, New Hydro Unit for Split & Hydrosplit	LG BECON cloud service	For remote control, monitoring and diagnosis	• Max 16 indoor units • RS485: 1 channel (LGAP) • Wired/wireless LAN • Power: 12 V DC • Size (W x H x D): 120 x 120 x 29
	Meter interface	PENKTH000		All THERMA V products	Energy monitoring	To measure production / consumption power	• 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

1) PI485 Gateway (PP485A00T) should be installed on outdoor unit to use the central controller and cloud gateway.
In the case of R290 Monobloc and R32 Monobloc S II, PI485 G/W is built-in, so there is no need to purchase it separately.

THERMA V ACCESSORIES
ELECTRIC BACKUP HEATER

Electric Backup Heater

HA031M E2
HA061M E2
HA063M E2

* Compatible with R32 Monobloc S and R32 Monobloc S II series

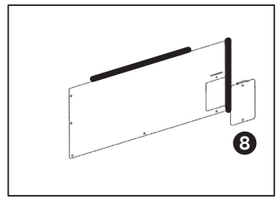
Backup Heater Specification

Electrical Specification		Unit	HA031M E2	HA061M E2	HA063M E2
Backup heater	Type	-	Sheath		
	Number of heating coil	EA	1	2	3
	Capacity combination	kW	3.0	3.0 + 3.0	2.0 + 2.0 + 2.0
	Heating steps	Step	1	2	1
	Power supply	V, Ø, Hz	220 ~ 240, 1, 50		380 ~ 415, 3, 50
	Rated running current	A	12.5	25.0	8.7
	Dimensions (H x W x D)	mm	607 x 210 x 217		
	Net weight (unit)	kg	12.8	13.4	13.1
Wiring connections	Power supply cable (included earth, H07RN-F)	mm² x cores	1.5 x 3 C	4.0 x 3 C	2.5 x 4 C
	Communication cable (H07RN-F)	mm² x cores	0.75 x 4 C		0.75 x 2 C

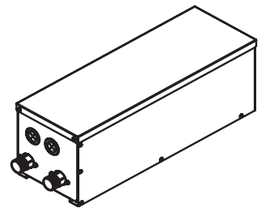
Note
1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes.
   Especially the power cable and circuit breaker should be selected in accordance with that.

Drawings

[Unit: mm]

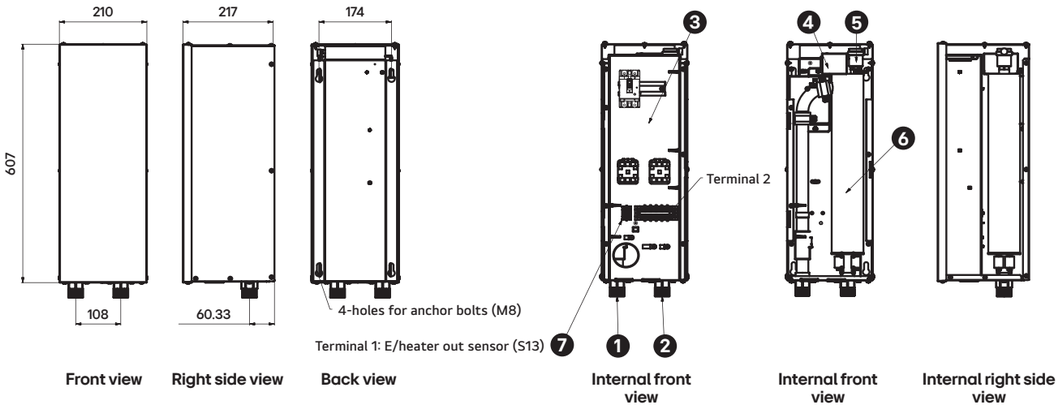


Right side panel detail



3D view

Top view



Front view | Right side view | Back view | Internal front view | Internal front view | Internal right side view

Bottom view

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	Support the Space Heating at Very Cold Temperature and in Case of Emergency
7	Backup Heater Outlet Sensor	Connect to Unit (Heat pump)
8	Access Hole for Air Vent Valve	Access Hole for Operating the Air Vent Valve During Water Charging

THERMA V ACCESSORIES

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 ENCXLEU
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 v7.0 (Nougat) or higher, iPhone iOS 11.0 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

Single coil　　Double coil

Technical Specification		Unit	OSHW-200F	OSHW-300F	OSHW-500F	OSHW-300FD
General characteristics	Water volume	ℓ	200	300	500	300
	Diameter	mm	640	640	810	640
	Height	mm	1,350	1,850	1,900	1,850
	Net weight	kg	61	100	146	106
	Tank materials	-	STS : F18	STS : F18	STS : F18	STS : F18
	Color	-	Gray (RAL 7035)	Gray (RAL 7035)	Gray (RAL 7035)	Gray (RAL 7035)
Specification of electric back up	Additional electric heater	W	2,400	2,400	2,400	2,400
	Power supply	V, Ø, Hz	230, 1, 50 (60)	230, 1, 50 (60)	230, 1, 50 (60)	230, 1, 50 (60)
	Adjustable thermostat	°C	0 ~ 90	0 ~ 90	0 ~ 90	0 ~ 90
Specification of heat exchanger	Exchanger type	-	Internal single coil	Internal single coil	Internal single coil	Internal double coil
	Material exchanger	-	STS : F18	STS : F18	STS : F18	STS : F18
	Maximum water temp.	°C	90	90	90	90
	Coil surface	m^2	2.3	3.1	4.8	3.1 + 1
Water connections	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)
	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	¾ BSP female	1 BSP female	1 BSP female	1 BSP female
Energy efficiency class (A+ to F scale)		-	B	B	B	B
Standing heat loss		W	61	70	83	70

Technical Specification	
Domestic hot water tank installation kit	PHLTA (R290 Monobloc, Hydro Unit for Split & Hydrosplit), PHLTB (Monobloc)

Technical Specification	
Thermostatic mixing valve (3/4" DN20)	OSHA-MV
Thermostatic mixing valve (1" DN25)	OSHA-MV1
3 way valve	OSHA-3V