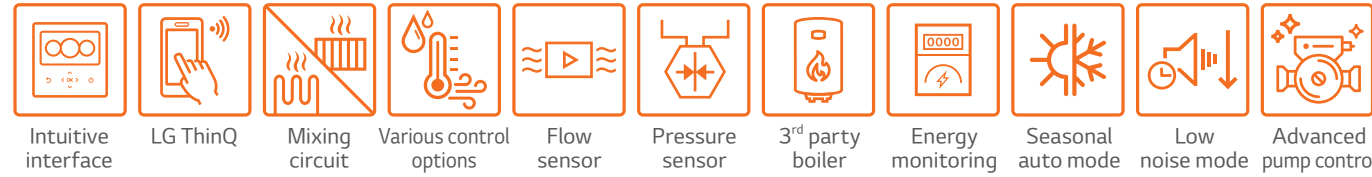
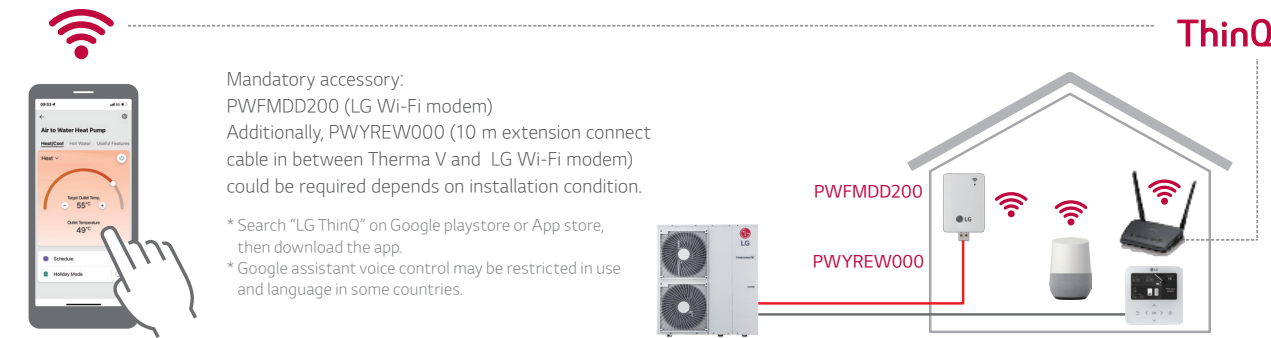


User Convenience



ThinQ Seamless Connectivity

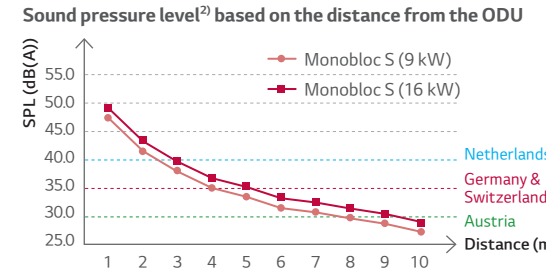
Users can control their Therma V via smart internet devices such as Android or iOS smartphones. Moreover, LG ThinQ works with Google assistant voice control in most EU countries, making it possible to control Therma V using a voice control function.



Reduced Noise Level

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

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



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

Quiet Mark Certified - creating healthy soundscapes for living spaces

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

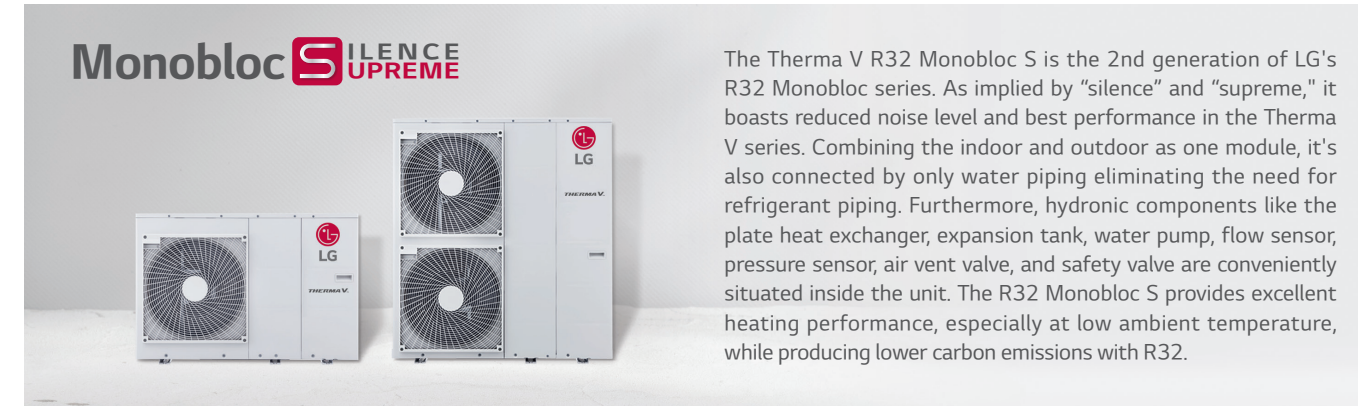
Therma V R32 Monobloc S has received the Quiet Mark certification since it has been designed to reach lower acoustic levels in order to meet homeowner expectations in urban areas.

Certified products*:
HM051MR U44 / HM071MR U44 / HM091MR U44
HM093MR U44 / HM121MR U34 / HM123MR U34

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



THERMA V™ R32 Monobloc S at a Glance

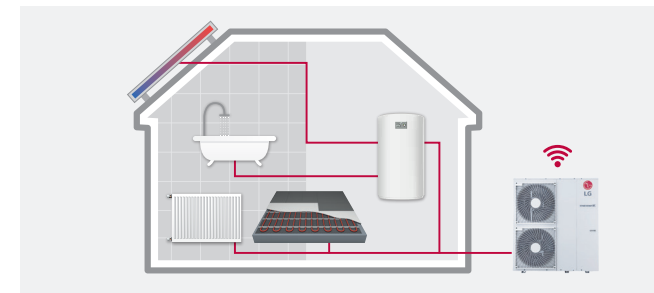


The Therma V R32 Monobloc S is the 2nd generation of LG's R32 Monobloc series. As implied by "silence" and "supreme," it boasts reduced noise level and best performance in the Therma V series. Combining the indoor and outdoor as one module, it's also connected by only water piping eliminating the need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

THERMA V™ R32 Monobloc S

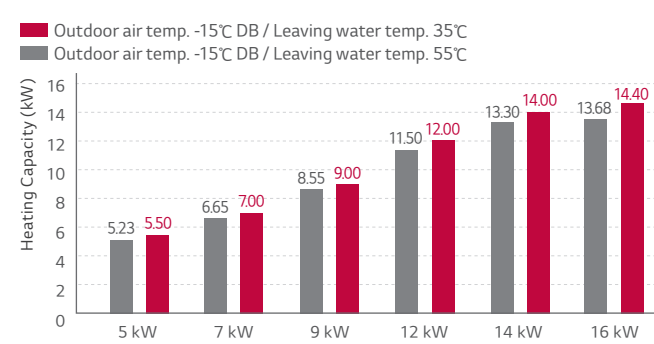
Enhanced installation flexibility

- All-in-one outdoor unit
- Low sound level allowing high installation location flexibility
- ODU with built-in hydronic components: water pump, flow sensor, pressure sensor, expansion tank, air vent, etc.
- User-friendly installation settings interface
- Optional electric backup heater (3 kW or 6 kW)
- Enhanced connectivity for 3rd party backup heater



High efficiency & wide operational range

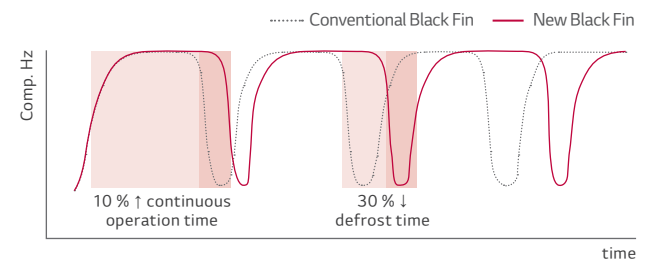
- R32 refrigerant with reduced global warming potential (GWP)
- Less environmental impact with low refrigerant amount
- 100% heating capacity at -15°C OAT (@ LWT 35°C, except for 16 kW model)
- Improved heating operation at defrost condition
- SCOP up to 4.67 (average climate / low temp. application): A+++
- SCOP up to 3.47 (average climate / mid temp. application): A++
- COP up to 4.90 (outdoor air 7°C / leaving water 35°C)
- Leaving water temperature up to 65°C
- Expanded operative range of solar thermal system



Innovative design & technology

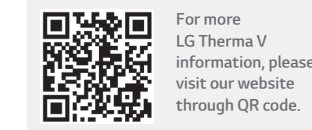
- Improved heat exchanger design (new Black Fin)
- Built-in water flow & pressure sensors to monitor real-time water circuit
- Advanced water pump control (optimal flow rate, fixed capacity, fixed flow rate, fixed ΔT)
- Enhanced 2nd circuit control logic
- Energy monitoring of estimated power consumption via remote controller
- Modbus connectivity without gateway
- Control for DHW recirculation pump based on schedule

Heating operation at defrost condition



→ 10% increase in overall operating rate during defrost condition
* This result is based on LG internal test and it can be different depending on actual environment.

Product	Capacity (kW)	Unit		Appearance
		1 Ø	3 Ø	
R32 Monobloc S	5	HM051MR U44	-	
	7	HM071MR U44	-	
	9	HM091MR U44	NEW HM093MR U44	
	12	HM121MR U34	HM123MR U34	
	14	HM141MR U34	HM143MR U34	
	16	HM161MR U34	HM163MR U34	



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

THERMA V™ R32 Monobloc S



Easy Installation



All-in-one solution
LG heating configurator* connection
Clip connection

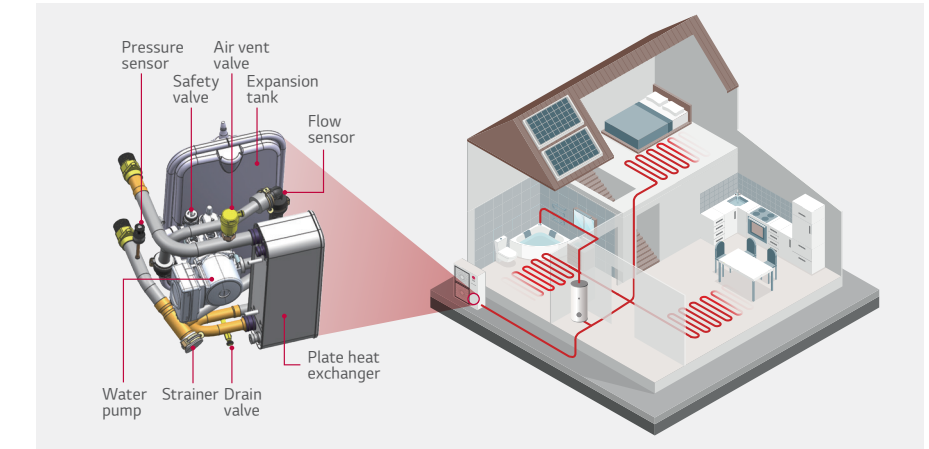
Excellent Performance & Efficiency



R32 compressor
R32 refrigerant
Flash gas injection
Wide operation range
Black Fin heat exchanger
Solar thermal
Energy state
Modbus communication

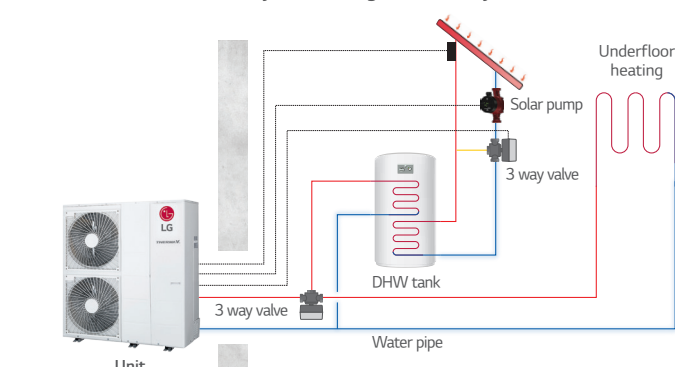
Monobloc Concept

R32 Monobloc S is an all-in-one concept, with its reduced weight allowing quicker and easier installations.
• Additional hydronic components are included in the package
• Easier and quicker installation without refrigerant piping work



Combination With Solar Thermal System

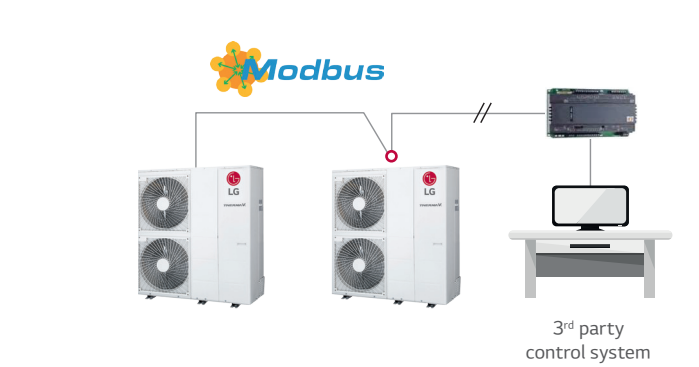
The efficiency of DHW heating operation can be further maximized, by combining the solar system with Therma V.



* Mandatory accessory: PT-1000 type solar thermal temp. sensor (field supply)

Direct Modbus Communication

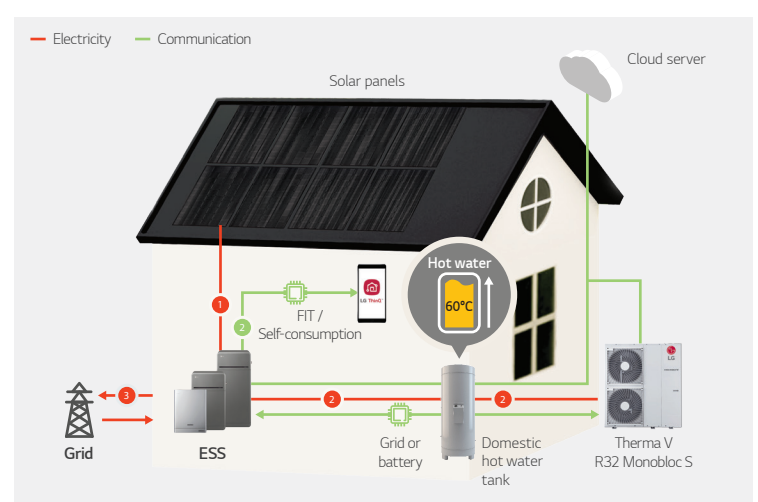
R32 Monobloc S can be connected and controlled by a 3rd party control system using Modbus protocol directly, without Modbus RTU gateway.



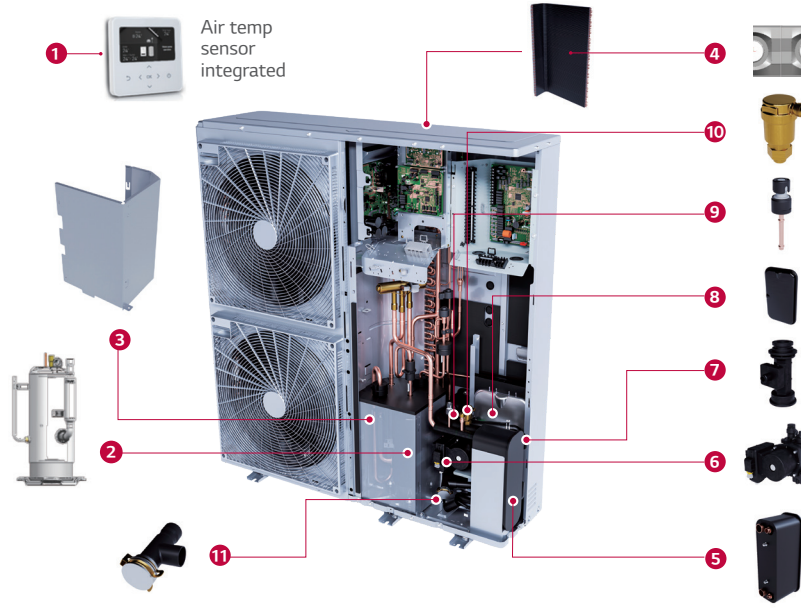
Energy States Interlock

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

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



Key Components



- 1) Standard III remote controller¹⁾
- 2) R1 compressor
- 3) Compressor noise shield
- 4) Black Fin heat exchanger (ref / air)
- 5) Plate type heat exchanger (ref / water)
- 6) Water pump
- 7) Water flow sensor
- 8) Expansion vessel (8 l)
- 9) Water pressure sensor
- 10) Air vent valve
- 11) Strainer

1) The remote controller is supplied with the product, but it needs to be installed separately.

Energy Monitoring via Remote Controller and ThinQ

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

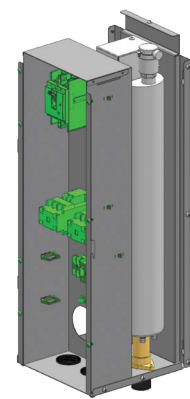
- Instant power consumption
- Power consumption by period (daily, weekly, monthly, yearly): categorized as Heat, Cool, and DHW
- Produced Heat output by period (daily, weekly, monthly, yearly)²⁾
- Renewable energy by period (daily, weekly, monthly, yearly)^{3) 4)}



LG ThinQ app. screen⁴⁾

- 1) To use LG ThinQ, LG Wi-Fi modem (PWFMDD200) is required.
- 2) When using antifreeze, it will not be available.
- 3) This energy information is only available with LG ThinQ in Spain.
- 4) This image is intended to help you understand, and there may be some differences in actual use.

Accessory Backup Heater



Technical specification		Unit	HA031M E1	HA061M E1	HA063M E1
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, \emptyset , Hz	220 ~ 240, 1, 50		380 - 415, 3, 50
Current (rated)		A	12.5	25.0	8.7
Circuit breaker (ELCB)		A	25	40	25
Dimensions (W x H x D)		mm	210 x 607 x 217		
Power cable (included earth, H07RN-F)		mm ² x cores	1.5 x 3 C	4.0 x 3 C	2.5 x 4 C
Communication cable (H07RN-F)		mm ² x cores	0.75 x 4 C		

Nominal Capacity and Nominal Input

Description	OAT ¹⁾ (DB)	LWT ²⁾ (DB)	Unit	HM051MR U44	HM071MR U44	HM091MR U44	HM121MR U34	HM141MR U34	HM161MR U34
				HM093MR U44	HM123MR U34	HM143MR U34	HM163MR U34		
Nominal capacity	Heating	7°C / 35°C	kW	5.50	7.00	9.00	12.00	14.00	16.00
		7°C / 55°C		5.50	5.50	5.50	11.00	11.50	12.00
		2°C / 35°C		4.40	5.60	6.80	11.00	12.00	13.80
	Cooling	35°C / 18°C		5.50	7.00	9.00	12.00	14.00	16.00
		35°C / 7°C		5.50	7.00	9.00	12.00	14.00	16.00
		7°C / 35°C		1.17	1.49	1.96	2.45	2.92	3.40
Nominal power input	Heating	7°C / 55°C	kW	2.04	2.04	2.04	3.79	4.04	4.29
		7°C / 35°C		1.22	1.58	1.94	3.01	3.31	3.83
		2°C / 35°C		1.17	1.56	2.14	2.53	3.26	4.00
	Cooling	35°C / 18°C		1.67	2.19	2.90	3.64	4.24	5.16
		35°C / 7°C		1.70	2.19	2.90	3.64	4.24	5.16
		7°C / 35°C		4.70	4.70	4.60	4.90	4.80	4.70
COP	Heating	7°C / 55°C	W/W	2.70	2.70	2.70	2.90	2.85	2.80
		7°C / 35°C		3.60	3.55	3.50	3.65	3.63	3.60
		2°C / 35°C		4.70	4.50	4.20	4.75	4.70	4.60
	Cooling	35°C / 18°C		3.30	3.20	3.10	3.30	3.30	3.10
		35°C / 7°C		3.30	3.20	3.10	3.30	3.30	3.10
		7°C / 35°C		3.30	3.20	3.10	3.30	3.30	3.10

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

Product Specification

Technical specification		Unit	HM051MR U44	HM071MR U44	HM091MR U44	HM121MR U34	HM141MR U34	HM161MR U34	
Water side	Operation range (leaving water temp.)	Heating	15 ~ 65						
		Cooling	5 ~ 27 (16 ~ 27) ¹⁾						
	Water pump	Type	Canned type for hot water circulation						
		Measuring range	5 ~ 80						
	Flow sensor	Measuring range	0 ~ 20						
		Measuring range	0 ~ 20						
	Expansion vessel	Volume	Max	8					
		Inlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)					
	Piping connections	Outlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)					
		Max particle size / Material	mm / -	0.6 / Stainless steel					
	Safety valve	Pressure limit	Upper limit	3.0					
		Rated water flow rate	at LWT 35°C	l/min	15.8	20.1	25.9	34.5	40.3
Refrigerant side	Operation range (outdoor temp.)	Heating	-25 ~ 35						
		Cooling	5 ~ 48						
	Compressor	Type	Hermetic sealed scroll						
		Refrigerant	GWP (Global Warming Potential)	R32					
Sound power level	Heating	Rated noise mode	dB (A)						
		Low noise mode	dB (A)						
		Rated	dB (A)						
Sound pressure level (at 5 m)	Heating	Rated noise mode	dB(A)						
		Low noise mode	dB(A)						
		Rated	dB(A)						
Dimensions	Unit	W x H x D			mm				
	Weight	kg			kg				
Exterior	Color / RAL code		Warm gray / RAL 7044						
	Voltage, phase, frequency		220-240, 1, 50 / 380-415, 3, 50						
	Power supply	Rated	A		A				
running current		A		A					
Recommended circuit breaker		A		A					

1) When a fan coil unit is not used.

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

Note: 1. Due to our policy of innovation some specifications may be changed without notification.

2. Wiring cable size must comply with the applicable local and national codes. Especially the power cable and circuit breaker should be selected in accordance with that.

3. Sound power level is measured on the rated condition in accordance with ISO 9614 standard.

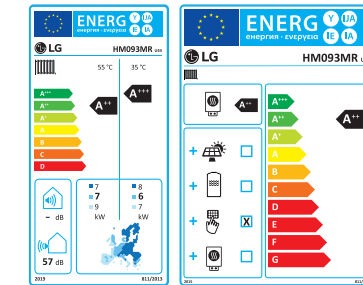
4. Sound pressure level is converted from sound power level based on tonality penalty of 0 dB and 119.1.

5. This product contains fluorinated greenhouse gases.

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

Seasonal Energy Efficiency

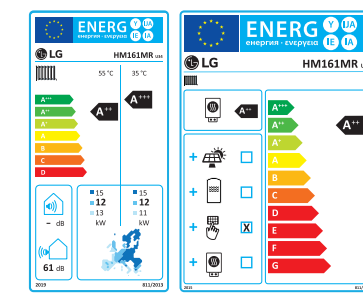
Description	Unit	HM051MR U44	HM071MR U44	HM091MR U44	HM093MR U44	HM121MR U34	HM141MR U34	HM161MR U34
Space heating (according to EN14825)	SCOP		%					
	Average climate water outlet 35°C	Seasonal space heating efficiency (η _s)	175	176	179			
		Seasonal space heating eff. class (A+++ to D scale)	A+++	A+++	A+++			
	Average climate water outlet 55°C	SCOP	125	125	125			
Seasonal space heating eff. class (A+++ to D scale)		A++	A++	A++				



* 9 kW 3 \emptyset model.
* A+++ to D scale.

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

Description	Unit	HM121MR U34	HM141MR U34	HM161MR U34	
Space heating (according to EN 14825)	SCOP		%		
	Average climate water outlet 35°C	Seasonal space heating efficiency (η _s)	184	182	178
		Seasonal space heating eff. class (A+++ to D scale)	A+++	A+++	A+++
	Average climate water outlet 55°C	SCOP	3.47	3.46	3.45
Seasonal space heating eff. class (A+++ to D scale)		A++	A++	A++	



* 16 kW 1 \emptyset model.
* A+++ to D scale.

Performance Table for Heating Operation

5 / 7 / 9 kW

Maximum heating capacity (including defrost effect)

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

HM071MR U44

Outdoor temperature	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
-25°C DB	5.85	5.85	5.85	5.85	6.10	-	-	-
-20°C DB	6.43	6.43	6.43	6.43	6.65	-	-	-
-15°C DB	7.00	7.00	7.00	7.00	7.22	-	-	-
-7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
-4°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
-2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
18°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

HM091MR U44 / HM093MR U44

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

Performance Table for Cooling Operation

Maximum cooling capacity

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

HM071MR U44

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