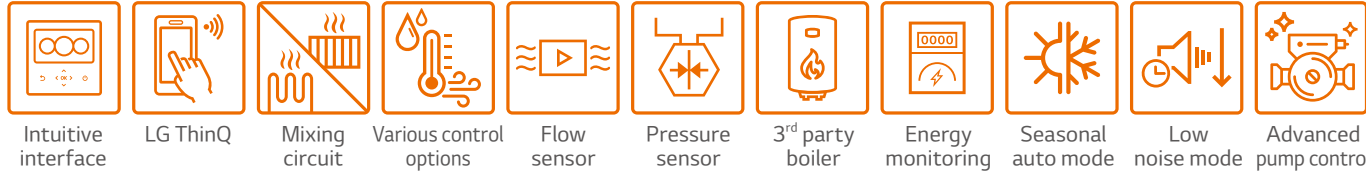
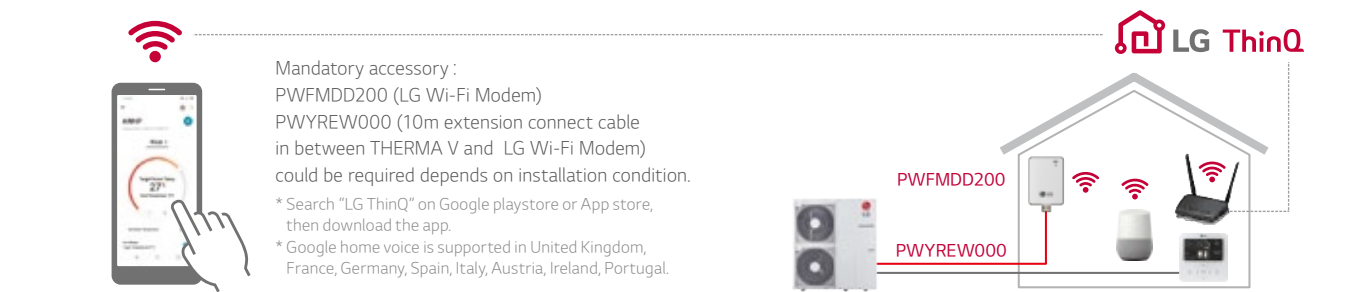


User Convenience



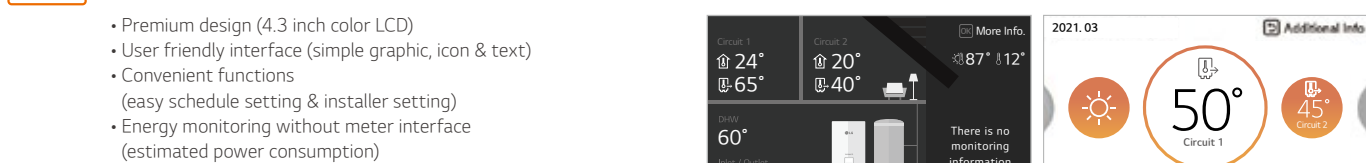
Seamless Connectivity

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



Intuitive Control

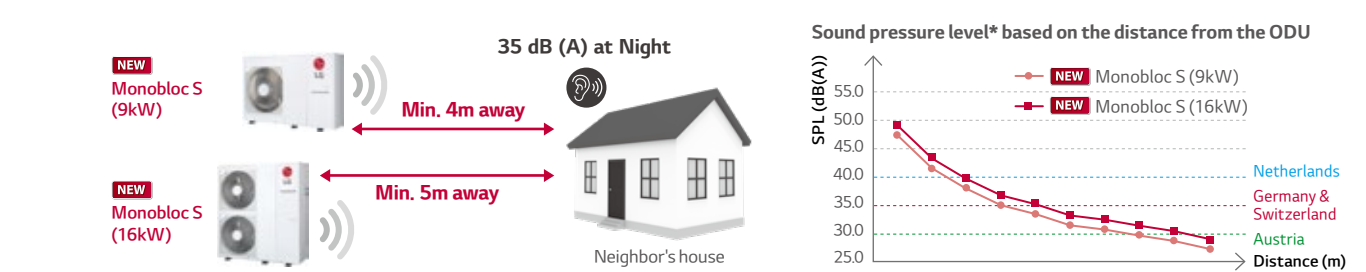
THERMA V is equipped with a new remote controller which supports various functions.



Reduced Noise Level

R32 Monobloc S can be installed at the minimum of 4m away (based on 9kW model & Low noise mode) from neighboring houses while complying with German noise regulation.

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)	45 dB (A) (07:00 - 19:00)
	Evening	-	35 dB (A) (19:00 - 22:00)	-	-
	Night Time	35 dB (A) (22:00 - 06:00)	30 dB (A) (22:00 - 06:00)	35 dB (A) (19:00 - 07:00)	40 dB (A) (19:00 - 07:00)



Seasonal Auto Mode

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



R32 Monobloc S at a Glance



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 (3kW or 6kW)
- 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 16kW 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

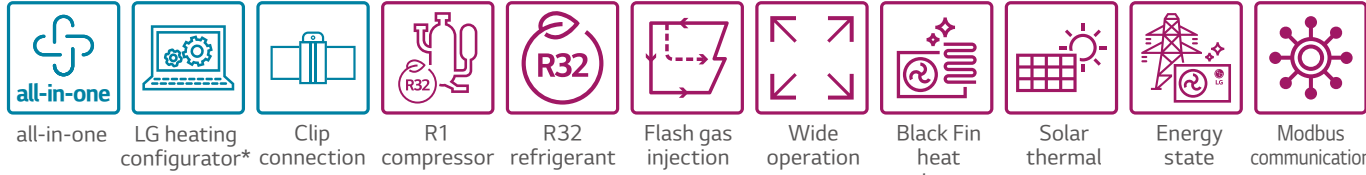
Innovative design & technology

- 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

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

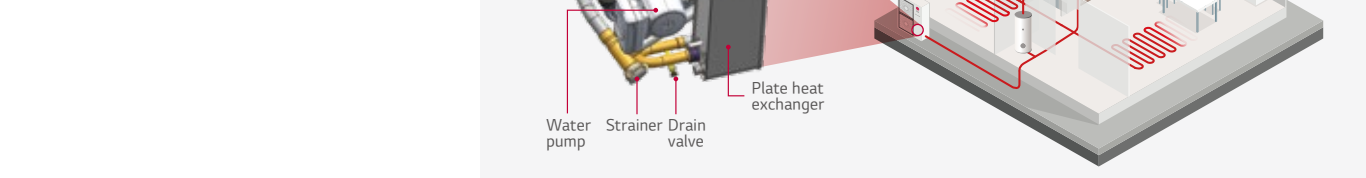


EASY INSTALLATION



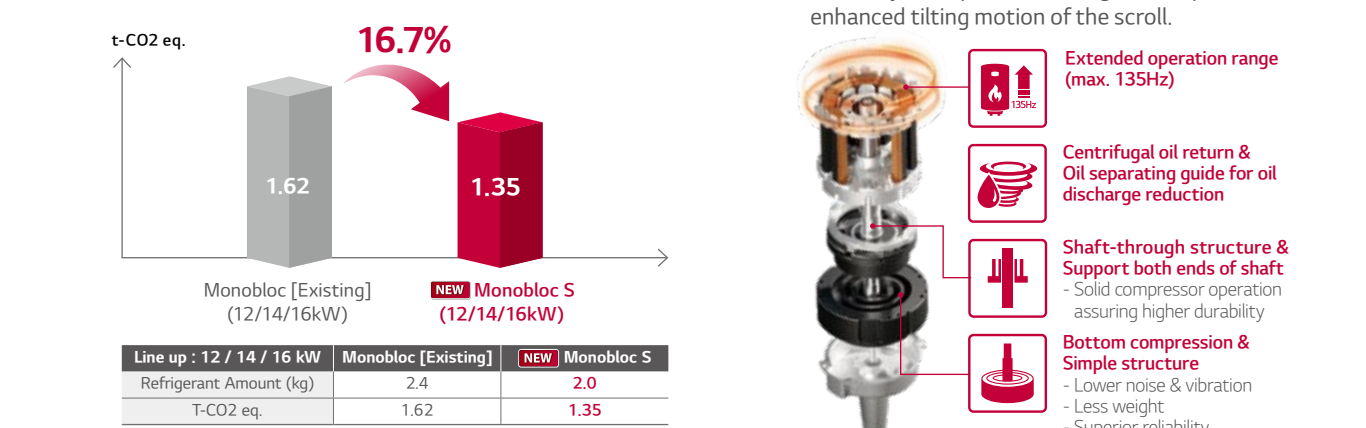
Monobloc Concept

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



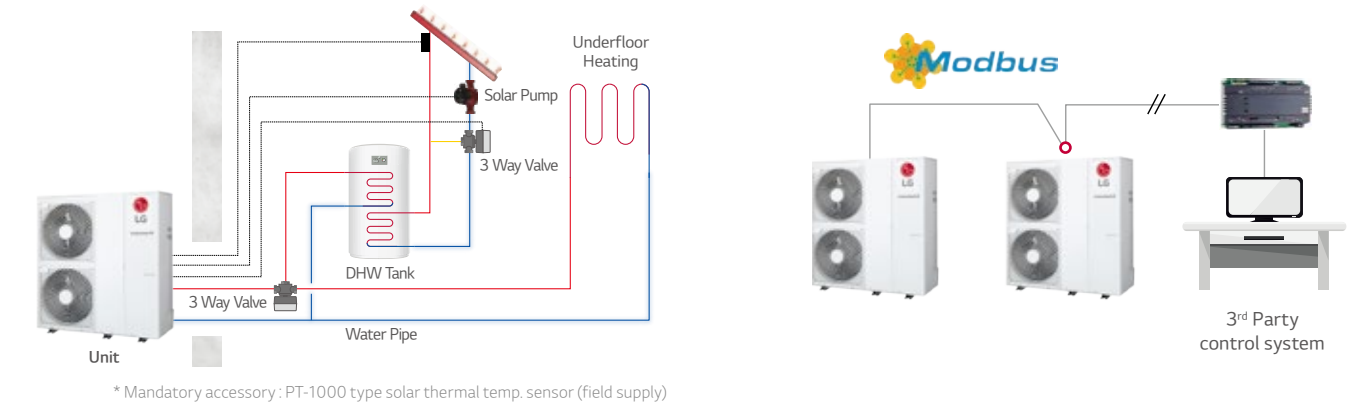
Less Environmental Impact

R32 Monobloc S produces less carbon emission by reducing the amount of refrigerant in the system compared to current model.



Combination with Solar Thermal System

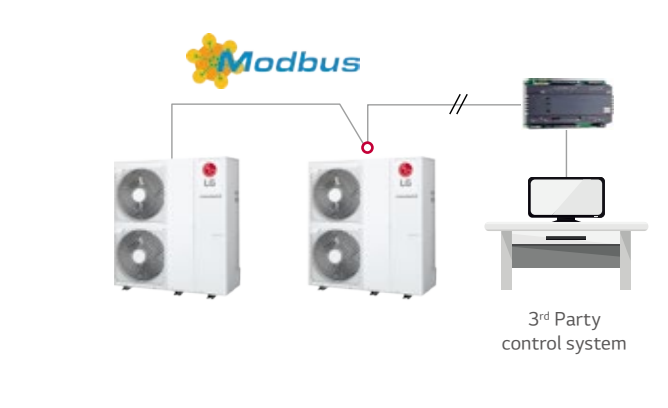
By combining the solar system with Therma V, the efficiency of DHW heating operation can be maximized.



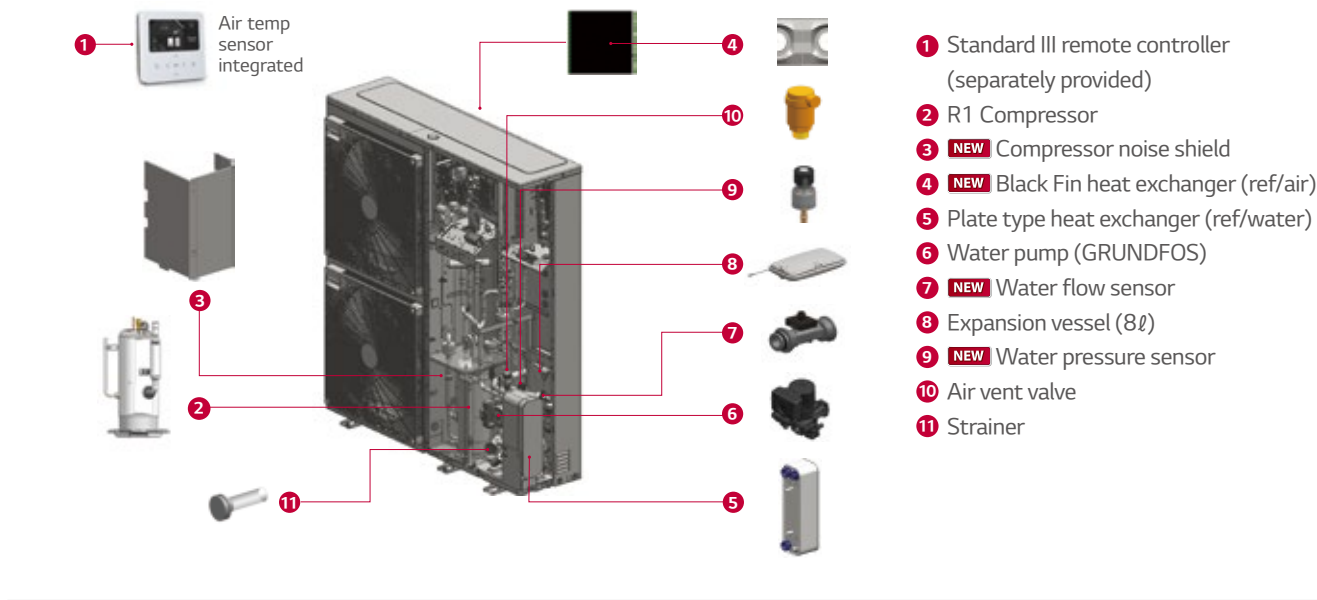
* Mandatory accessory: PT-1000 type solar thermal temp. sensor (field supply)

Direct Modbus Communication

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

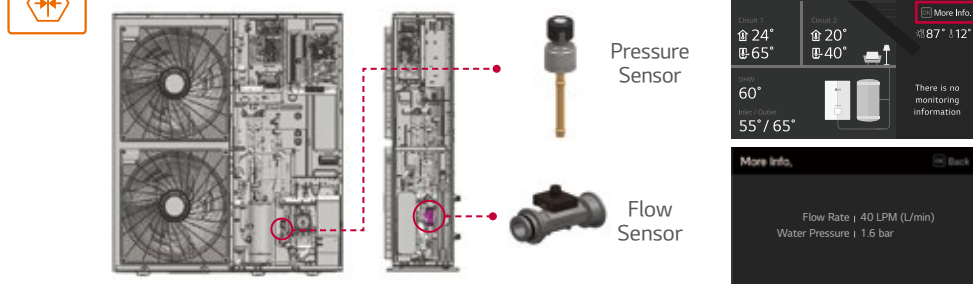


Key Components



Water Circuit Monitoring

It is possible to monitor via remote controller not only temperature of water circuit but also flow rate and pressure. These information provides installers with more reliable information for easier installation and maintenance (periodic strainer cleaning).



Available information on the screen

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

Advanced Pump Control Options

Various pump operation options contribute to energy savings by providing optimum water pump control and reliable product operation.

Options	Description	Water Flow Change as per load condition
Pump Capacity	It operates with the capacity set for the water pump. (range 10 - 100%)	No
Fixed Flow Rate	Automatically controlled to maintain the set flow rate. (5, 7, 9kW range: 8 ~ 26 LPM / 12, 14, 16kW range: 17 ~ 46 LPM)	No
Fixed ΔT*	Automatically controlled to maintain the set ΔT. (range 5 ~ 13°C)	Yes
Optimal Flow Rate (default)	ΔT is changed as per Target Temp.	Yes

*ΔT = temperature difference between inlet and outlet water temperature.

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, Ø, 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 3C	4.0 x 3C	2.5 x 4C
Communication Cable (H07RN-F)	mm ² x cores	0.75 x 4C		

Nominal Capacity and Nominal Input

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

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

Product Specification

Technical Specification			Unit	HM051MR U44	HM071MR U44	HM091MR U44	HM121MR U34 (10) HM123MR U34 (30)	HM141MR U34 (10) HM143MR U34 (30)	HM161MR U34 (10) HM163MR U34 (30)
Water Side	Operation Range (Leaving Water Temp.)	Heating	Min. - Max.	°C DB	15 - 65				
		Cooling			5 - 27 (16 - 27) ¹⁾				
	DHW	15 - 80 ²⁾							
	Water Pump	Model	-	Grundfos UPM3K 20-75 CHBL		Grundfos UPML 20-105 CHBL			
	Flow Sensor	Measuring Range	l/min	5 - 80					
	Water Pressure Sensor	Measuring Range	bar (G)	0 - 20					
	Expansion Vessel	Volume	Max.	8					
		Inlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)					
Piping Connections	Water Circuit	Outlet	Male PT 1" according to ISO 7-1 (tapered pipe threads)						
Strainer	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	46.0	
Refrigerant Side	Operation Range (Outdoor Temp.)	Heating	Min - Max	°C DB	-25 - 35				
		Cooling			5 - 48				
	Compressor	Type	-	Hermetic Sealed Scroll					
		Type	-	R32					
	Refrigerant	GWP (Global Warming Potential)	-	675					
		Precharged Amount	g	1,400		2,000			
		t-CO2 eq	-	0.945		1.350			
	Sound Power Level	Heating	Rated Low Noise Mode	dB(A)	54	55	60	61	57
Sound Pressure Level (at 5m)	Heating	Rated	dB(A)	32	33	38	39	35	
		Low Noise Mode	dB(A)	32	33	34	35	38	
Dimensions	Unit	W × H × D	mm	1,239 × 834 × 330					
Weight	Unit	kg	89.0	1,239 × 834 × 330					
Exterior	Color / RAL Code	-	118.6						
		-	Warm Gray / RAL 7044						
Power Supply	Voltage, Phase, Frequency	V, Ø, Hz	220-240, 1, 50						
	Rated	A	5.2	6.6	8.7	10.1 / 10.9 / 30 / 36			
	Running Current	Cooling	A	5.2	6.9	9.5	10.1 / 11.2 / 30 / 37		
	Recommended Circuit Breaker	A	16	20	25	10.1 / 14.4 / 30 / 48			
			16	20	25	10.1 / 17.7 / 30 / 55			

1) When fan coil unit not used.

2) DHW 58~80°C Operating is available only when the booster heater is operating.

Note

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

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

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

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

installation in free-field.

Therefore, these values can be increased owing to ambient conditions during operation.

Rated sound power level is according to the EN12102-1 under conditions of the EN14825.

4. Performances are accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation.

* Rated running current: Outdoor Temp. 7°CDB / 6°CWB, LWT 35°C

5. This product contains fluorinated greenhouse gases.

Seasonal Energy Efficiency

Description	Average Climate Water Outlet 35°C	Unit	HM051MR U44	HM071MR U44	HM091MR U44
SCOP	-	W/W	4.46	4.48	4.55
Seasonal Space Heating Efficiency (η _s)	-	%	175	176	179
Seasonal Space Heating Eff. Class (A+++ to D Scale)	-	-	A+++	A+++	A+++
SCOP	-	-	3.20	3.20	3.20
Seasonal Space Heating Efficiency (η _s)	-	%	125	125	125
Seasonal Space Heating Eff. Class (A+++ to D Scale)	-	-	A++	A++	A++

ENERGY LABEL R1 Compressor[®] Black Fin LG ThinQ

* EHPA & MCS label under development.

Description	Average Climate Water Outlet 55°C	Unit	HM121MR U34 HM123MR U34	HM141MR U34 HM143MR U34	HM161MR U34 HM163MR U34
SCOP	-	-	4.67	4.62	4.53
Seasonal Space Heating Efficiency (η _s)	-	%	184	182	178
Seasonal Space Heating Eff. Class (A+++ to D Scale)	-	-	A+++	A+++	A+++
SCOP	-	-	3.47	3.46	3.45
Seasonal Space Heating Efficiency (η _s)	-	%	136	135	135
Seasonal Space Heating Eff. Class (A+++ to D Scale)	-	-	A++	A++	A++

ENERGY LABEL R1 Compressor[®] Black Fin LG ThinQ

* EHPA & MCS label under development.

Performance Table for Heating Operation

Maximum Heating Capacity (Including Defrost Effect)

HM051MR 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
TC	TC	TC	TC	TC	TC	TC	TC	TC
-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
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
TC	TC	TC	TC	TC	TC	TC	TC	TC
-25°C DB	5.85	5.85	5.85	5.85	6.10	6.65	7.00	7.00
-20°C DB	6.43	6.43	6.43	6.43	6.65	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
-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
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

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
TC	TC	TC	TC	TC	TC	TC	TC	TC
-25°C DB	6.20	6.20	6.20	6.20	7.22	8.55	9.00	9.00
-20°C DB	7.60	7.60	7.60	7.60	8.55	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
-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
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

HM051MR U44

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

HM071MR U44

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
TC	TC	TC	TC	TC	TC	TC	TC
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
30°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
40°C DB	6.36	6.45	6.55	6.61	6.77	6.84	6.94
45°C DB	5.71	5.82	5.92	5.99	6.10	6.17	6.24

HM