

# #Care For Where You Live



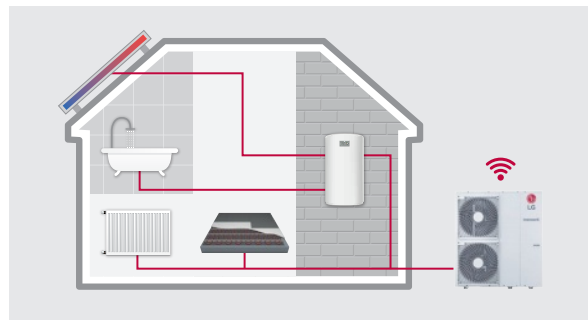
# THERMAV™



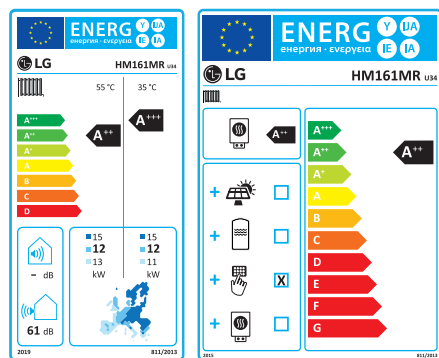








## Energy label

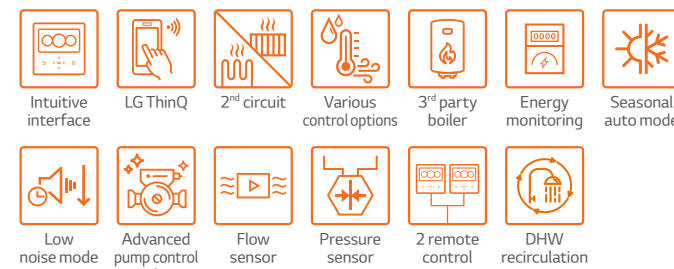


\* 16 kW 10 model.  
\* A+++ to D scale.

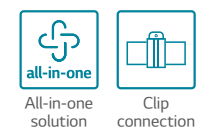
## Excellent performance & efficiency



## User convenience



## Easy installation & maintenance

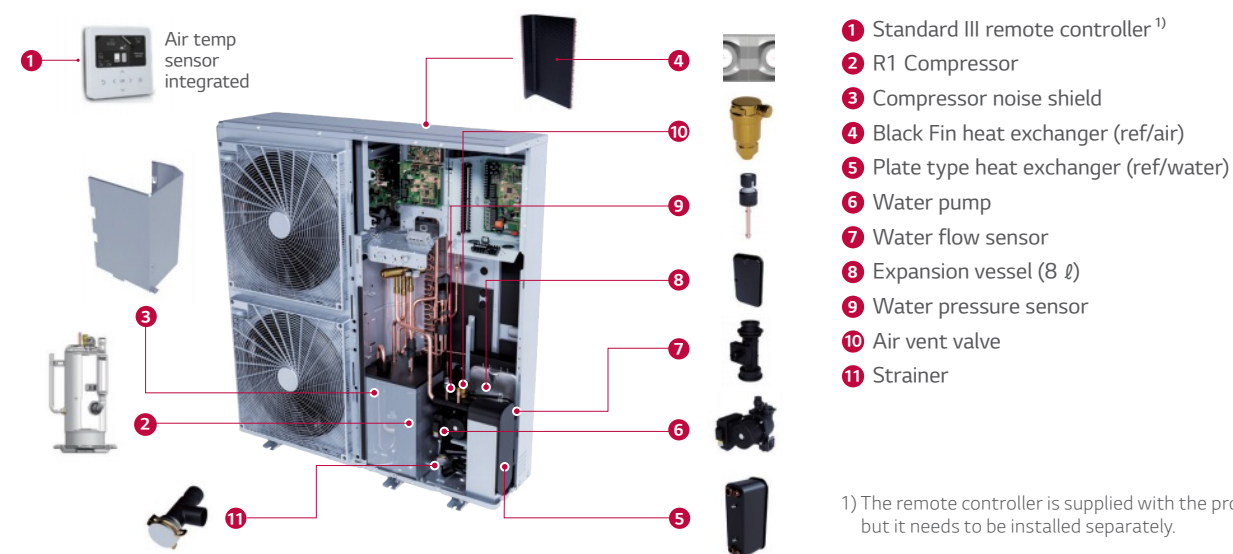


\* Detailed description for each function is presented on page 44 – 54.

## R32 Monobloc S Introduction

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

## Key Components



- 1 Standard III remote controller<sup>1)</sup>
- 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.

## Quiet Mark Certified - creating healthy soundscapes for living spaces

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

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



Certified products\*:

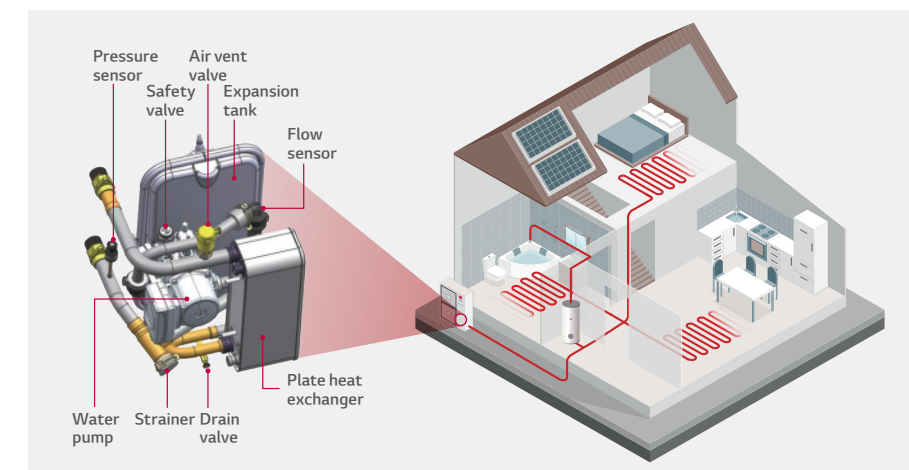
- HM051MR U44 / HM071MR U44 / HM091MR U44
- HM093MR U44 / HM121MR U34 / HM123MR U34

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

## Monobloc Concept

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

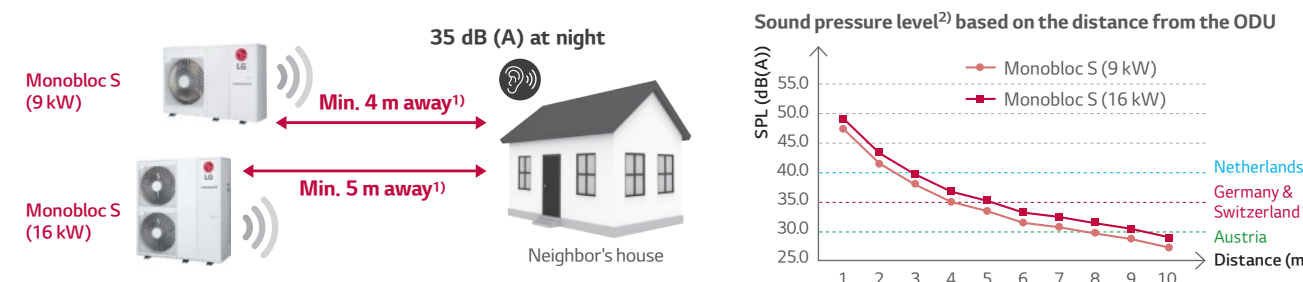
- Additional hydronic components are included in the package
- Easier and quicker installation without refrigerant piping work
- The best solution when space heating only is needed



## Reduced Noise Level

R32 Monobloc S can be installed at the minimum of 4 m away<sup>1)</sup> 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)	45 dB (A) (07:00 - 19:00)
	Evening	-	35 dB (A) (19:00 - 22:00)	-	-
	Night time	35 dB (A) (22:00 - 06:00)	30 dB (A) (22:00 - 06:00)	35 dB (A) (19:00 - 07:00)	40 dB (A) (19:00 - 07:00)

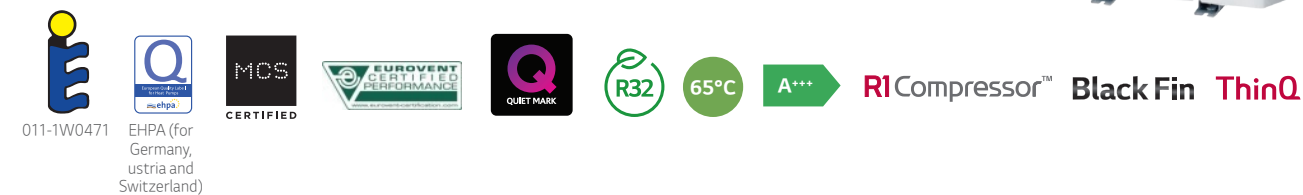


1) Minimum distance to be away from a neighboring property may vary depending on installation conditions and noise regulations in individual countries.  
2) Sound pressure level is converted from sound power level of low noise mode based on a tonality penalty of 0 dB and installation in free-field. The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

**R32 Monobloc S**



HM051MR U44  
HM071MR U44  
HM091MR U44  
HM093MR U44



**Features**

- All-in-one outdoor unit
- SCOP up to 4.55 (average climate / low temp. application): **A+++**  
SCOP up to 3.20 (average climate / mid temp. application): **A++**
- COP up to 4.70 (outdoor air 7°C / leaving water 35°C)
- 100 % heating capacity at -15°C OAT (@ LWT 35°C)
- Low sound level allowing high installation location flexibility
- Wide operation range (ambient: -25 ~ 35°C / water side: 15 ~ 65°C)
- Built-in water flow & pressure sensors to monitor real-time water circuit
- R32 refrigerant with reduced Global Warming Potential (GWP)
- R1 Compressor
- Improved heat exchanger design (new Black Fin)
- LG ThinQ
- Keymark / EHPA (for Germany, Austria and Switzerland) / MCS / Eurovent / Quiet Mark certification

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

**Model line-up**

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

**Seasonal energy**

Description		Unit	HM051MR U44	HM071MR U44	HM091MR U44 HM093MR U44	
Space heating (according to EN14825)	Average climate water outlet 35°C	SCOP	-	4.46	4.48	4.55
		Seasonal space heating efficiency (η <sub>s</sub> )	%	175	176	179
		Seasonal space heating eff. class (A+++ to D Scale)	-	A+++	A+++	A+++
	Average climate water outlet 55°C	SCOP	-	3.20	3.20	3.20
		Seasonal space heating efficiency (η <sub>s</sub> )	%	125	125	125
		Seasonal space heating eff. class (A+++ to D Scale)	-	A++	A++	A++

**Nominal capacity and nominal power input**

Description		OAT <sup>1)</sup> (DB)	LWT <sup>2)</sup> (DB)	Unit	HM051MR U44	HM071MR U44	HM091MR U44 HM093MR U44
Nominal capacity	Heating	7°C	35°C	kW	5.50	7.00	9.00
		7°C	55°C		5.50	5.50	5.50
	Cooling	2°C	35°C		4.40	5.60	6.80
		35°C	18°C		5.50	7.00	9.00
Nominal power input	Heating	7°C	35°C	kW	1.17	1.49	1.96
		7°C	55°C		2.04	2.04	2.04
	Cooling	2°C	35°C		1.22	1.58	1.94
		35°C	18°C		1.17	1.56	2.14
COP	Heating	7°C	35°C	W/W	4.70	4.70	4.60
		7°C	55°C		2.70	2.70	2.70
	Cooling	2°C	35°C		3.60	3.55	3.50
		35°C	18°C		4.70	4.50	4.20
EER	Cooling	35°C	7°C	W/W	3.30	3.20	3.10

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

**Product specification**

Technical specification		Unit	HM051MR U44	HM071MR U44	HM091MR U44 HM093MR U44	
Water side	Operation range (leaving water temperature)	Heating	15 - 65			
		Cooling	5 - 27 (16 - 27) <sup>1)</sup>			
		DHW	15 - 80 <sup>2)</sup>			
	Piping connections	Water Circuit	Inlet	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
		Outlet	Male PT 1" according to ISO 7-1 (tapered pipe threads)			
	Rated water flow rate at LWT 35°C		LPM	15.8	20.1	25.9
Refrigerant side	Operation range (outdoor temperature)	Heating	-25 - 35			
		Cooling	5 - 48			
	Compressor	Quantity	EA	1		
		Type	-	Hermetic sealed scroll		
	Refrigerant	Type	-	R32		
		GWP (Global Warming Potential)	-	675		
Precharged amount		g	1,400			
	t-CO2 eq	-	0.945			
Sound power level		Heating	Rated	57		
			Low noise mode	54	55	
Sound pressure level (at 5 m)		Heating	Rated	35		
			Low noise mode	32	33	
Dimensions		Unit	W x H x D	1,239 x 834 x 330		
Weight		Unit	kg	89.5	1 Ø: 89.5 / 3 Ø: 90.0	
Exterior		Color / RAL code		Warm gray / RAL 7044		
Power supply		Voltage, phase, frequency		220-240, 1, 50		
	Rated running current	Heating	A	5.2	6.6	1 Ø: 8.7 / 3 Ø: 2.9
		Cooling	A	5.2	6.9	1 Ø: 9.5 / 3 Ø: 3.2
	Recommended circuit breaker		A	16	20	1 Ø: 25 / 3 Ø: 16
Wiring connections		Power supply cable (included earth, H07RN-F)		4.0 x 3 C		
			mm <sup>2</sup> x cores	1 Ø: 4.0 x 3 C / 3 Ø: 2.5 x 5 C		

1) When a fan coil unit is not used.  
2) DHW 55 - 80°C Operating is available only when the booster heater is operating.

Note

- Due to our policy of innovation, some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national codes. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound power level is measured on the rated condition in accordance with ISO 9614 standard. Sound pressure level is converted from sound power level based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2. Therefore, these values can be increased owing to ambient conditions during operation. Rated sound power level is in accordance with EN12102-1 under condition of EN14825.
- Performances are in accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation.
  - Rated running current: outdoor temp. 7°C DB / 6°C WB, LWT 35°C
- This product contains fluorinated greenhouse gases.
- All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

## 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
	Capacity (kW)							
-25°C DB	5.50	5.50	5.50	5.50	-	-	-	-
-20°C DB	5.50	5.50	5.50	5.50	5.23	-	-	-
-15°C DB	5.50	5.50	5.50	5.50	5.23	5.23	-	-
-7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-
-4°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
-2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
15°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
18°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
20°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50

### HM071MR U44

Outdoor 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
	Capacity (kW)							
-25°C DB	5.85	5.85	5.85	5.85	-	-	-	-
-20°C DB	6.43	6.43	6.43	6.43	6.10	-	-	-
-15°C DB	7.00	7.00	7.00	7.00	6.65	6.65	-	-
-7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
-4°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
-2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
18°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

### HM091MR U44 / HM093MR U44

Outdoor 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
	Capacity (kW)							
-25°C DB	6.20	6.20	6.20	6.20	-	-	-	-
-20°C DB	7.60	7.60	7.60	7.60	7.22	-	-	-
-15°C DB	9.00	9.00	9.00	9.00	8.55	8.55	-	-
-7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-4°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
18°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00

Note

1. DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
  - Rated values are based on standard conditions and can be found on specifications.
  - Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.
  - The rating might slightly vary depending on test standards or countries.
4. The shaded areas are not guaranteed continuous operation.

## Performance Table for Cooling Operation

Maximum cooling capacity

### HM051MR U44

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

### HM071MR U44

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

### HM091MR U44 / HM093MR U44

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

Note

1. DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
  - Rated values are based on standard conditions and can be found on specifications.
  - Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.
  - The rating might slightly vary depending on test standards or countries.
4. The shaded areas are not guaranteed continuous operation.

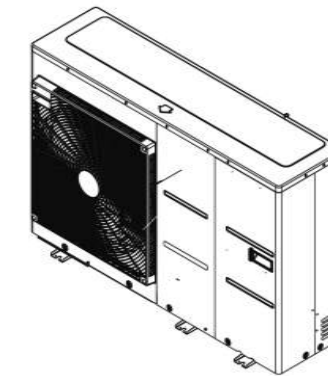
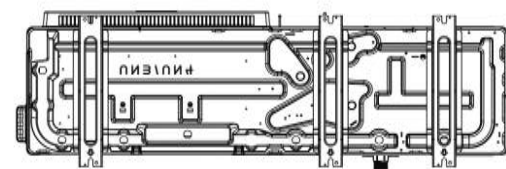
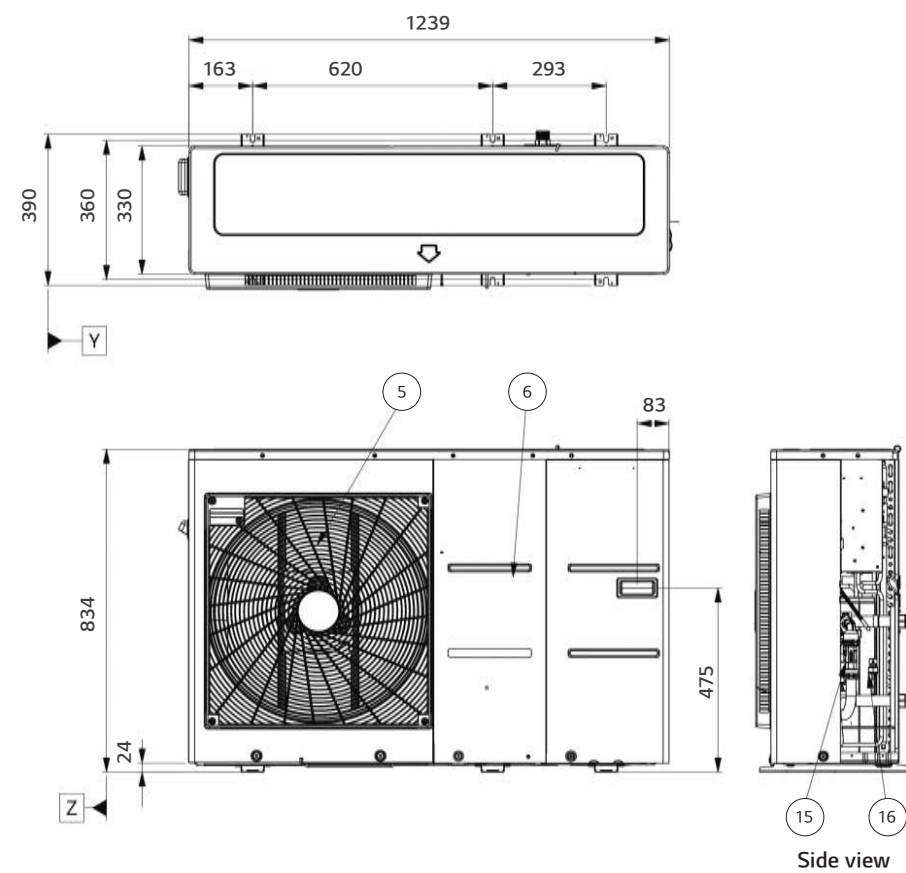


**Drawings**

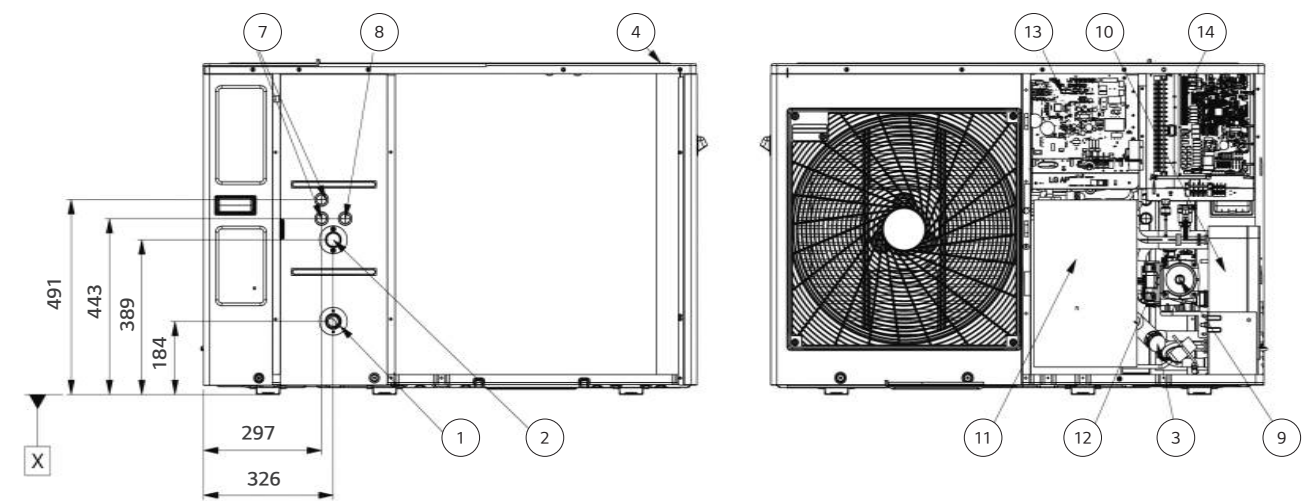
Category	Unit	Model name		
		Capacity (kW)		
		5.5	7.0	9.0
1 Phase model 220 - 240 V, 1 Ø, 50 Hz	Monobloc unit	HM051MR U44	HM071MR U44	HM091MR U44
3 Phase model 380 - 415 V, 3 Ø, 50 Hz		-	-	HM093MR U44

HM051MR U44 / HM071MR U44 / HM091MR U44 / HM093MR U44

[Unit: mm]



3D view

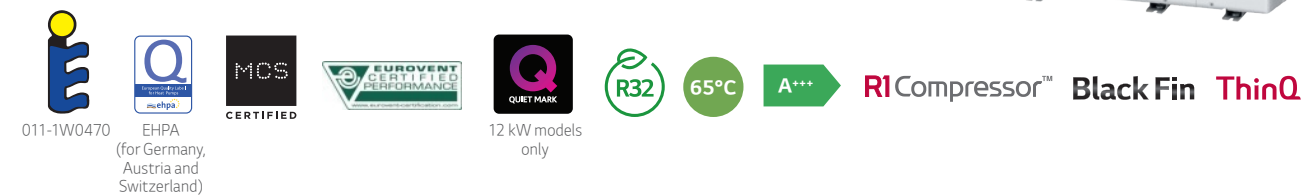


No.	Part name	Description
1	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Strainer	Filtering and stacking particles inside circulating water
4	Top cover	-
5	Front panel	-
6	Side panel	-
7	Low voltage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

**R32 Monobloc S**



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



**Features**

- All-in-one outdoor unit
- 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)
- 100 % heating capacity at -15°C OAT (@ LWT 35°C, except for 16 kW model)
- Low sound level allowing high installation location flexibility
- Wide operation range (ambient: -25 ~ 35°C / water side: 15 ~ 65°C)
- Built-in water flow & pressure sensors to monitor real-time water circuit
- R32 refrigerant with reduced Global Warming Potential (GWP)
- R1 Compressor
- Improved heat exchanger design (new Black Fin)
- LG ThinQ
- Keymark / EHPA (for Germany, Austria and Switzerland) / MCS / Eurovent / Quiet Mark (12 kW only) certification

**Model line-up**

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

**Seasonal energy**

Description	Unit	HM121MR U34 (1 Ø)	HM141MR U34 (1 Ø)	HM161MR U34 (1 Ø)		
		HM123MR U34 (3 Ø)	HM143MR U34 (3 Ø)	HM163MR U34 (3 Ø)		
Space heating (according to EN14825)	Average climate water outlet 35°C	SCOP	4.67	4.62	4.53	
		Seasonal space heating efficiency (η <sub>s</sub> )	%	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 efficiency (η <sub>s</sub> )	%	136	135	135
		Seasonal space heating eff. class (A+++ to D Scale)	-	A++	A++	A++

**Nominal capacity and nominal power input**

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

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

**Product specification**

Technical specification			Unit	HM121MR U34	HM141MR U34	HM161MR U34	HM123MR U34	HM143MR U34	HM163MR U34	
Water side	Operation range (leaving water temperature)	Heating	Min. - Max.	°C DB	15 ~ 65					
		Cooling			5 ~ 27 (16 ~ 27) <sup>1)</sup>					
		DHW			15 ~ 80 <sup>2)</sup>					
	Piping connections	Water circuit	Inlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)					
		Outlet	inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)						
	Rated water flow rate at LWT 35°C			LPM	34.5	40.3	46.0	34.5	40.3	46.0
Refrigerant side	Operation range (outdoor temp.)	Heating	Min. - Max.	°C DB	-25 ~ 35					
		Cooling			5 ~ 48					
	Compressor	Quantity	EA	1						
		Type	-	Hermetic sealed scroll						
		Type	-	R32						
		GWP (Global Warming Potential)	-	675						
Refrigerant	Precharged amount	g	2,000							
	t-CO <sub>2</sub> eq	-	1.350							
Sound power level	Heating	Rated	dB(A)	60	61	60	60	61		
		Low noise mode		56	57	56	57			
Sound pressure level (at 5m)	Heating	Rated	dB(A)	38	39	38	38	39		
		Low noise mode		34	35	34	35			
Dimensions	Unit	W x H x D	mm	1,239 x 1,380 x 330						
Weight	Unit		kg	119.1						
Exterior	Color / RAL code		-	Warm gray / RAL 7044						
	Voltage, phase, frequency		V, Ø, Hz	220-240, 1, 50			380-415, 3, 50			
Power supply	Rated running current	Heating	A	10.9	12.9	15.1	3.6	4.3	5.0	
		Cooling	A	11.2	14.4	17.7	3.7	4.8	5.9	
	Recommended circuit breaker		A	40			16			
Wiring connections	Power supply cable (included earth, H07RN-F)		mm <sup>2</sup> x cores	6.0 x 3 C			4.0 x 5 C			

1) When a fan coil unit is not used.  
2) DHW 55 ~ 80°C Operating is available only when the booster heater is operating.

**Note**

1. Due to our policy of innovation, some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound power level is measured on the rated condition in accordance with ISO 9614 standard. Sound pressure level is converted from sound power level based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2. Therefore, these values can be increased owing to ambient conditions during operation. Rated sound power level is in accordance with EN12102-1 under condition of EN14825.
4. Performances are in accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation.
  - Rated running current: Outdoor Temp. 7°C DB / 6°C WB, LWT 35°C
5. This product contains fluorinated greenhouse gases.
6. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

**Performance Table for Heating Operation**

Maximum heating capacity (including defrost effect)

**HM121MR U34 / HM123MR U34**

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
	Capacity (kW)							
-25°C DB	9.50	9.50	9.50	9.50	-	-	-	-
-20°C DB	10.75	10.75	10.75	10.75	10.21	-	-	-
-15°C DB	12.00	12.00	12.00	12.00	11.50	11.50	-	-
-7°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	-
-4°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
-2°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
2°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
7°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
10°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
15°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
18°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
20°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
35°C DB	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

**HM141MR U34 / HM143MR U34**

Outdoor 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
	Capacity (kW)							
-20°C DB	12.00	12.00	12.00	12.00	11.40	-	-	-
-15°C DB	14.00	14.00	14.00	14.00	13.30	13.30	-	-
-7°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	-
-4°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
-2°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
2°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
7°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
10°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
15°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
18°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
20°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
35°C DB	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00

**HM161MR U34 / HM163MR U34**

Outdoor 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
	Capacity (kW)							
-25°C DB	10.50	10.50	10.50	10.50	-	-	-	-
-20°C DB	13.25	13.25	13.25	13.25	12.59	-	-	-
-15°C DB	16.00	14.40	14.40	14.40	13.68	13.68	-	-
-7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	-
-4°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
15°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Note  
 1. DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C)  
 2. Direct interpolation is permissible. Do not extrapolate.  
 3. Measuring procedure follows EN-14511.  
 • Rated values are based on standard conditions and can be found on specifications.  
 • Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.  
 • The rating might slightly vary depending on test standards or countries.  
 4. The shaded areas are not guaranteed continuous operation.

**Performance Table for Cooling Operation**

Maximum cooling capacity

**HM121MR U34 / HM123MR U34**

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

**HM141MR U34 / HM143MR U34**

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

**HM161MR U34 / HM163MR U34**

Outdoor temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	Capacity (kW)						
10°C DB	13.00	13.60	14.20	14.60	15.20	15.60	16.00
20°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
30°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00
40°C DB	13.60	13.96	14.32	14.56	14.92	15.16	15.40
45°C DB	11.20	11.76	12.32	12.69	13.25	13.62	14.00

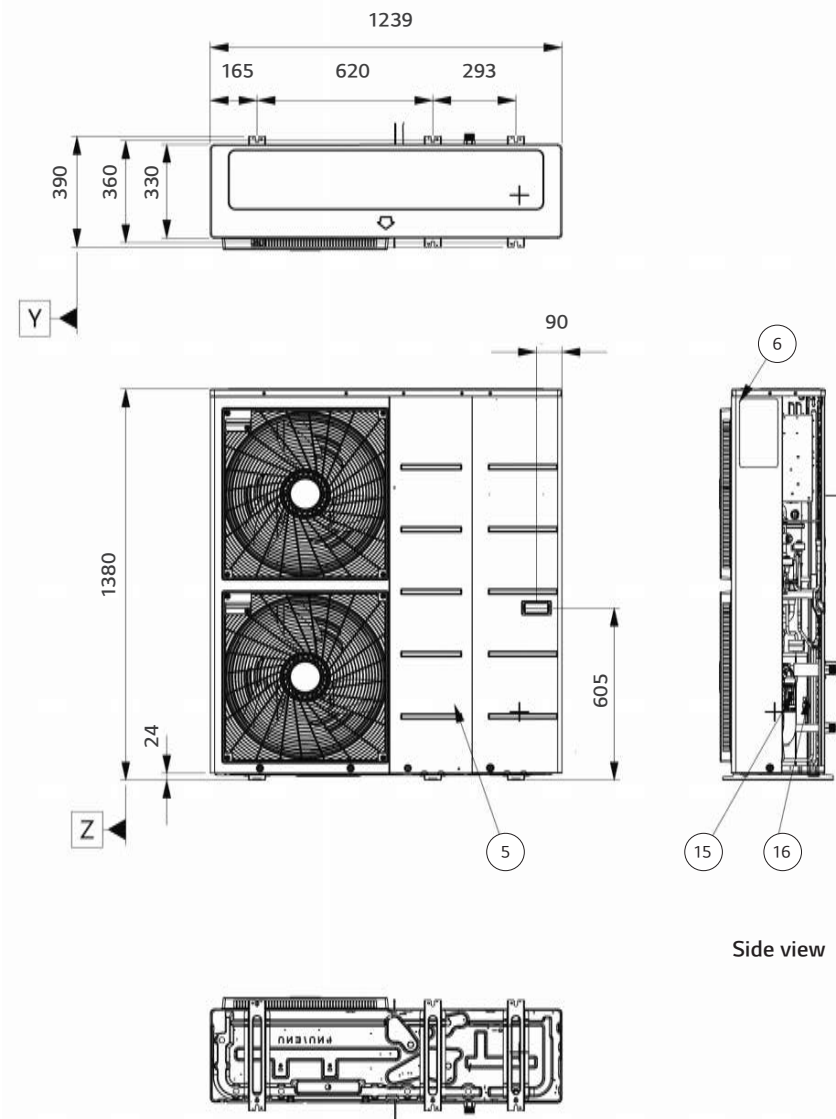
Note  
 1. DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C)  
 2. Direct interpolation is permissible. Do not extrapolate.  
 3. Measuring procedure follows EN-14511.  
 • Rated values are based on standard conditions and can be found on specifications.  
 • Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.  
 • The rating might slightly vary depending on test standards or countries.  
 4. The shaded areas are not guaranteed continuous operation.



**Drawings**

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

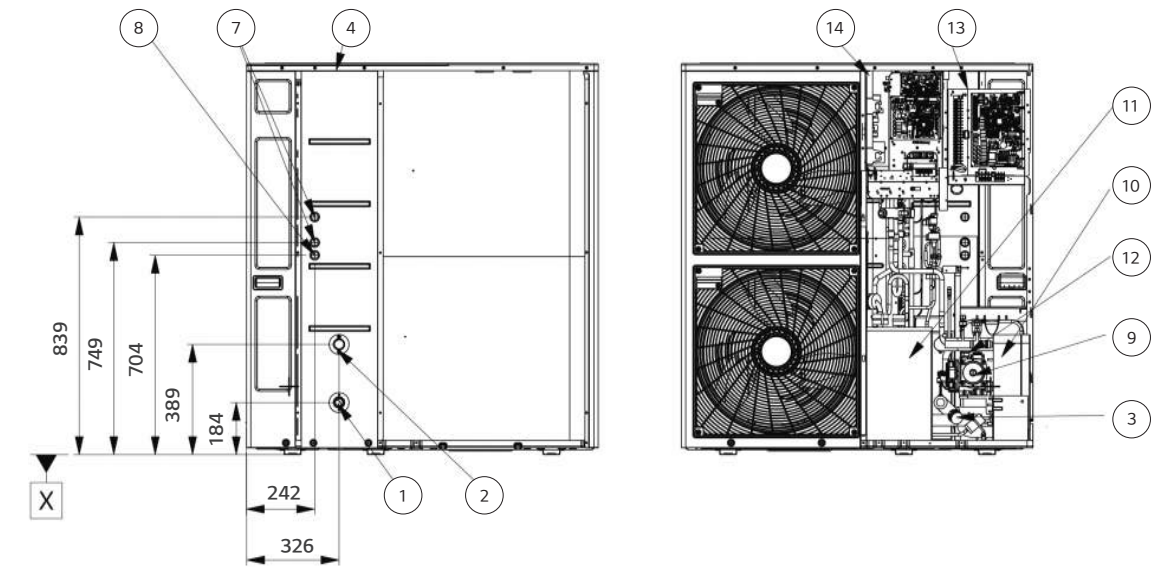
HM121MR U34 / HM141MR U34 / HM161MR U34 [Unit: mm]  
 HM123MR U34 / HM143MR U34 / HM163MR U34



Side view



3D view

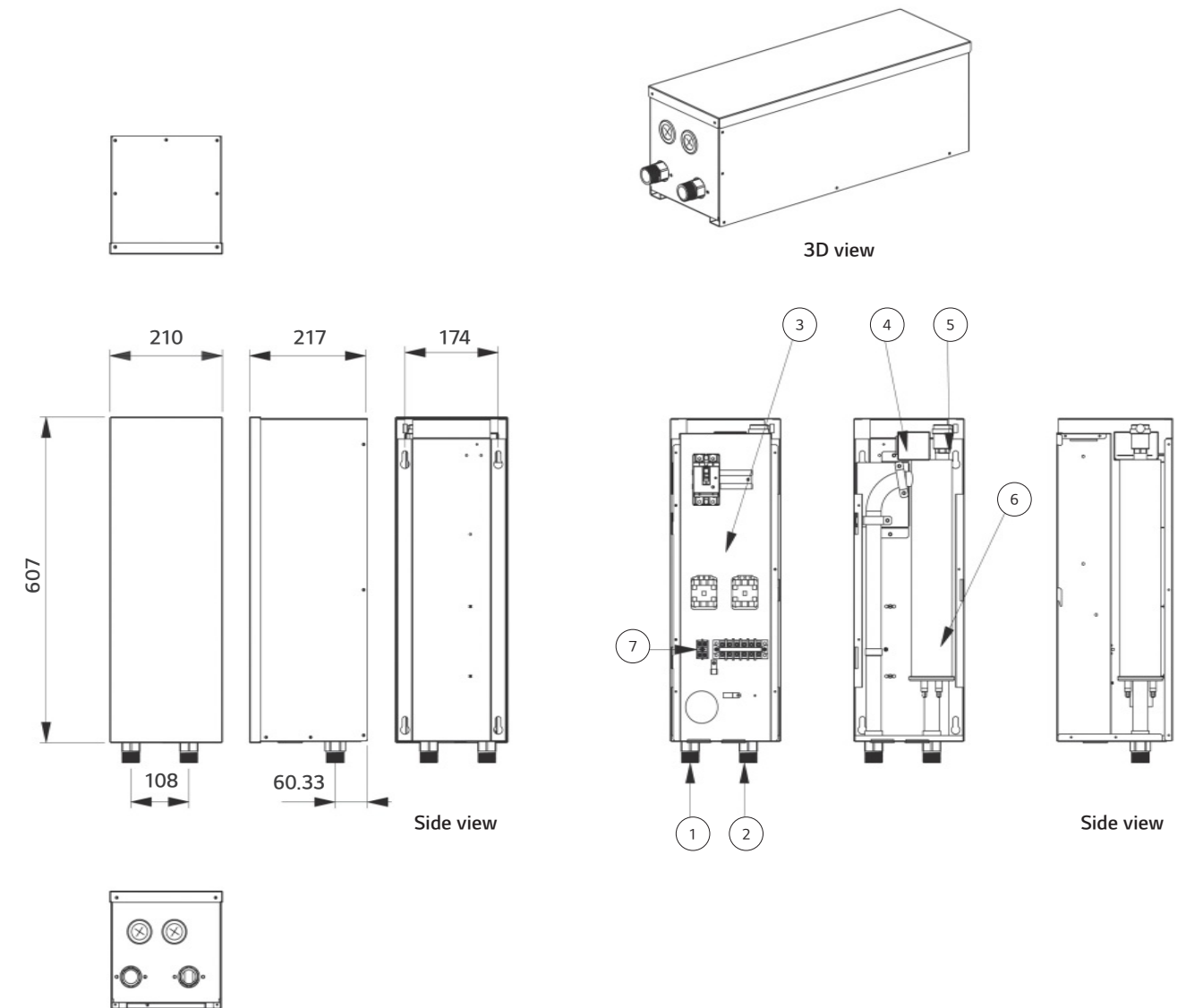


No.	Part name	Description
1	Entering water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
2	Leaving water pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
3	Strainer	Filtering and stacking particles inside circulating water
4	Top cover	-
5	Front panel	-
6	Side panel	-
7	Low voltage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



**Electric Backup Heater**

HA031M E1  
HA061M E1  
HA063M E1



**Backup heater specification**

Electrical specification		Unit	HA031M E1	HA061M E1	HA063M E1
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 (W x H x D)	mm	210 x 607 x 217		
	Net weight (unit)	kg	12.8	13.4	13.1
Wiring connections	Power supply cable (included earth, H07RN-F)	mm <sup>2</sup> x cores	1.5 x 3 C	4.0 x 3 C	2.5 x 4 C
	Communication cable (H07RN-F)	mm <sup>2</sup> 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.

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











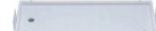

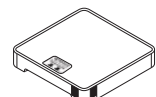
# THEIRMA V™ ACCESSORIES









## Accessories Provided by LG

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Sensors	Room temperature sensor	PQRSTA0		All Therma V products	Room temperature based control	To detect room air temperature for room temperature based control	• Max. wire length: 15 m
	Thermistor for 2 <sup>nd</sup> circuit or e/heater	PRSTAT5K10		All except for High Temperature	2 <sup>nd</sup> circuit (mixing circuit)	To detect 2 <sup>nd</sup> circuit temperature when using 2 <sup>nd</sup> circuit function	• 5 kΩ thermistor, 10 m
	Domestic hot water sensor	PHRSTA0		All except for R32 Split IWT and R32 Hydrosplit IWT	Domestic hot water heating	To detect DHW tank temperature	• Included in DHW tank kit
Valves	3 way valve	OSHA-3 V		All except for R32 Split IWT and R32 Hydrosplit IWT	Domestic hot water heating	To divert water flow between space heating and DHW heating	• Size: DN 20 G 1" connection, male threaded
	Thermostatic mixing valve	OSHA-MV OSHA-MV1		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 • Size: 1" DN25 male threaded
DHW tanks	Domestic hot water tank (single coil)	OSHW-200 F OSHW-300 F OSHW-500 F		All except for R32 Split IWT and R32 Hydrosplit IWT	Domestic 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
	Domestic hot water tank (double coil)	OSHW-300 FD		All except for R32 Split IWT, R32 Hydrosplit IWT and High Temperature			• 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 Box for Split & Hydrosplit	Domestic hot water heating	To operate with DHW tank including the booster heater	• Parts included: DHW tank sensor (thermistor), circuit breaker, relay
		PHLTC		Old Hydro Box for R410A Split - 3 Ø (HN1639 NK3 only)			• Parts included: DHW tank sensor (thermistor), circuit breaker, relay, multi harness
		PHLTB	R32 Monobloc, R32 Monobloc S				
	Solar thermal kit	PHLLA		R32 Split 4/6 kW Hydro Box (HN0613M NK5), R32 Monobloc, R410A Split Hydro Box (HN1616 NK3 / HN1639 NK3)	Solar thermal heat utilization	To operate with solar thermal system	• Length of thermistor: 12 m • Size of tube connector (W x H x D): 110 x 55 x 22








Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Installation kits	Electric back-up heater	HA031M E1		R32 Monobloc, R32 Monobloc S	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 E1					• 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 E1					• 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
	R32 Hydrosplit Hydro Box (HN1600MC NK1)	HA061C E1		Capacity back Up & emergency operation	To supplement insufficient capacity	• Heater capacity: 6 kW • Number of heating coil: 2 ea (3.0 + 3.0 kW) • 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 IWT	-	To provide the buffer volume of water to the heating circuit	• Volume: 40 ℓ • Size (W x H x D): 518 x 560 x 175
	Expansion vessel for DHW	OSHE-12KT		R32 Hydrosplit IWT	-	To absorb the volume changes by temperature of water for the DHW circuit	• 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 Therma V products	2 remote control	To connect two remote controllers on one indoor unit	• Length: 0.25 m
	Drain pan	PHDPB		R32 Split Hydro Box (NK4 suffix), R410A Split Hydro Box (NK3 suffix)	Cooling operation	To collect condensed water in the indoor unit during the cooling operation	-
PHDPC			R32 Hydrosplit, R32 Split Hydro Box (NK5 suffix), R410A Split Hydro Box (NK5 suffix)				
Cover plate	PDC-HK10		R32 Hydrosplit Hydro Box, R32 Hydrosplit IWT, R32 Split Hydro Box, R32 Split IWT, R410A Split Hydro Box	-	To fill the blank space of the indoor unit front panel when the remote controller is relocated indoors.	-	



## Accessories Provided by LG

Category	Model name	Model number	Figure	Applicable product	Relevant function	Purpose	Feature
Remote controller	Wired remote controller	PREMTW101		All Therma V products	2 remote control	To control the AWHP using two remote controllers (an additional remote controller)	<ul style="list-style-type: none"> <li>New modern design 4.3 inch color LCD display</li> <li>Information displayed with simple graphic, icon &amp; text</li> <li>Built-in temperature sensor</li> <li>Size (W x H x D): 120 x 120 x 16</li> <li>Extension cable (PZCWRC1, 10 m) and 2 remote cable (PZCWRC2, 0.25 m) are included</li> </ul>
Central controller	AC Ez Touch <sup>1)</sup>	PACEZA000		All Therma V products	Centralized control	To control the AWHP using LG central controller	<ul style="list-style-type: none"> <li>5 inch color display</li> <li>User-friendly control with iconographic interface (touch screen)</li> <li>Max. 32 unit control</li> <li>Total 200 schedule events (weekly / monthly / yearly / exception day)</li> <li>Operation history</li> <li>Remote controller lock (all, temp, mode)</li> <li>PC access supported (IPv6 supported)</li> <li>DI 1 ea (emergency stop only)</li> <li>Size (W x H x D): 137 x 121 x 25</li> </ul>
	AC Smart 5 <sup>1)</sup>	PACSSA000 (Smart 5)					<ul style="list-style-type: none"> <li>10.2 inch color display</li> <li>User-friendly control with iconographic interface (touch screen)</li> <li>Max. IDU 64</li> <li>Total 100 schedule events (weekly / monthly / yearly / exception day)</li> <li>History / operation trend</li> <li>Interlock with 3<sup>rd</sup> party equipment (ACS IO, ACU IO module is needed)</li> <li>Error alarm by e-mail</li> <li>Remote controller lock (all, temp, mode)</li> <li>Map view (visual navigation)</li> <li>Web access supported with HTML5 (PC, smartphone, tablet)</li> <li>DI 2 ea, DO 2 ea</li> <li>BACnet IP/modbus TCP protocol support</li> <li>Size (W x H x D): 253.2 x 167.7 x 28.9</li> </ul>
	ACP 5 <sup>1)</sup>	PACPSA000 (ACPS)					<ul style="list-style-type: none"> <li>Web access controller</li> <li>Max. 128 unit control</li> <li>Total 100 schedule events (weekly / monthly / yearly / exception day)</li> <li>History / operation trend</li> <li>Interlock with 3<sup>rd</sup> party equipment (ACS IO, ACU IO module is needed)</li> <li>Error alarm by e-mail</li> <li>Remote controller lock (all, temp, mode)</li> <li>Map view (visual navigation)</li> <li>DI 10 ea, DO 4 ea</li> <li>BACnet IP/modbus TCP protocol support</li> <li>Lonworks protocol support* (max. 64 unit control)</li> <li>Size (W x H x D): 270 x 155 x 65</li> </ul>

\* 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 Therma V products	Centralized control	To communicate and control through the central controller (providing modbus RTU connection between the AWHP and BMS)	<ul style="list-style-type: none"> <li>Modbus RTU slave (RS485) / 9,600 bps</li> <li>Size (W x H x D): 53.6 x 89.7 x 60.7</li> <li>Max. 16 IDUs with single module / Max. 64 IDUs with 4 modules</li> <li>Power: DC 12 V</li> </ul>
	PI485 gateway for Therma V	PP485A00T					<ul style="list-style-type: none"> <li>1 for each outdoor unit</li> <li>Power: supplied by outdoor unit</li> </ul>
Dry contact	Simple dry contact	PDRYCB000		All Therma V products		To connect between the AWHP and external devices to control various functions	<ul style="list-style-type: none"> <li>1 Set per 1 unit</li> <li>1 Input contact for turning on/off</li> <li>Input power: 220 ~ 240 V</li> <li>2 output contacts                             <ul style="list-style-type: none"> <li>Operation status</li> <li>Error status</li> </ul> </li> </ul>
	Dry contact for thermostat	PDRYCB320					<ul style="list-style-type: none"> <li>1 Set per 1 unit</li> <li>Non voltage or 12 ~ 24 V</li> <li>8 digital input contacts for thermostat                             <ul style="list-style-type: none"> <li>On/off, operation mode, DHW heating</li> <li>Emergency mode, silent mode</li> </ul> </li> <li>2 Output contacts                             <ul style="list-style-type: none"> <li>Operation status</li> <li>Error status</li> </ul> </li> </ul>
ETC	LG Wi-Fi modem	PWFMD200		All Therma V products	Wi-Fi control via LG ThinQ	To control the AWHP via a smartphone	<ul style="list-style-type: none"> <li>Basic control function                             <ul style="list-style-type: none"> <li>On/off, operation mode, set temp</li> <li>DHW heating and set temp</li> </ul> </li> <li>Weekly on/off schedule</li> <li>Error status check</li> <li>Frequency: 2.4 GHz</li> <li>IEEE 802.11b/g/n supported</li> </ul>
	Cloud gateway <sup>1)</sup>	PWFMDB200		R32 Monobloc S, R32 Split IWT, New Hydro Box for Split & Hydrosplit	LG BECON cloud service	For remote control, monitoring and diagnosis	<ul style="list-style-type: none"> <li>Max 16 indoor units</li> <li>RS485: 1 channel (LGAP)</li> <li>Wired/wireless IAN</li> <li>Power: 12 V DC</li> <li>Size (W x H x D): 120 x 120 x 29</li> </ul>
	Meter interface	PENKTH000		All Therma V products	Energy monitoring	To measure production / consumption power	<ul style="list-style-type: none"> <li>Energy meter interface to monitor Electricity and Heat energy                             <ul style="list-style-type: none"> <li>Max. 3 watt</li> <li>Hour meter</li> <li>Max. 1 heat meter</li> <li>Pulse width: 40 ms ~ 100 ms</li> </ul> </li> <li>Modbus RTU comm. with Therma V                             <ul style="list-style-type: none"> <li>2 wire RS485 / 9600 bps</li> </ul> </li> <li>Power: DC 12 V</li> <li>Size (W x H x D): 54 x 90 x 61</li> </ul>

Note

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

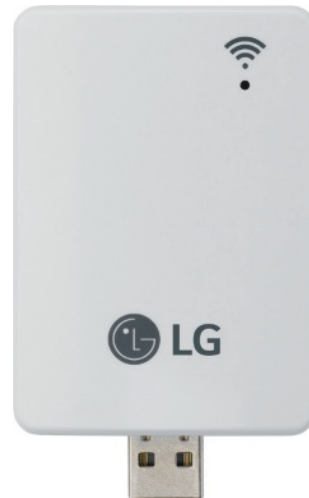


## LG Wi-Fi Modem

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



<b>Model name</b>	PWFMDD200
<b>Size (mm)</b>	46 x 68 x 14
<b>Interfaceable products</b>	All Therma V line-ups
<b>Connection type</b>	Indoor unit 1 : 1
<b>Communication frequency</b>	2.4 GHz
<b>Wireless standards</b>	IEEE 802.11b/g/n
<b>Mobile application</b>	LG ThinQ (Android v4.1 (Jellybean) or higher, iPhone iOS 9.0 or higher)
<b>Optional extension cable</b>	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
	Empty weight	kg	61	100	146	106
	Tank materials	-	STS : F18	STS : F18	STS : F18	STS : F18
	Color	-	Grey (RAL 7035)	Grey (RAL 7035)	Grey (RAL 7035)	Grey (RAL 7035)
Specification of electric back up	Additional electric heater	W	2,400	2,400	2,400	2,400
	Power supply	V, ∅, 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 <sup>2</sup>	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	

Mandatory optional accessories	
Domestic hot water tank installation kit	PHLTA (Hydro Box for Split & Hydrosplit), PHLTB (Monobloc), PHLTC (old Hydro Box for R410A Split 3 ∅ - HN1639 NK3)
Optional accessories	
Thermostatic mixing valve (3/4" DN20)	OSHA-MV
Thermostatic mixing valve (1" DN25)	OSHA-MV1
3 way valve	OSHA-3V

# THERMA V™ ACCESSORIES

## Combined Test with DHW Tank

LG has conducted a combination test of Therma V with DHW tanks in accordance with EN16147 and obtained an ErP label for packages in accordance with the European nZEB regulations.

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

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



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