

THERMA V

R290 MONOBLOC S (5/7/9 kW)

THERMA V™ R290 Monobloc S

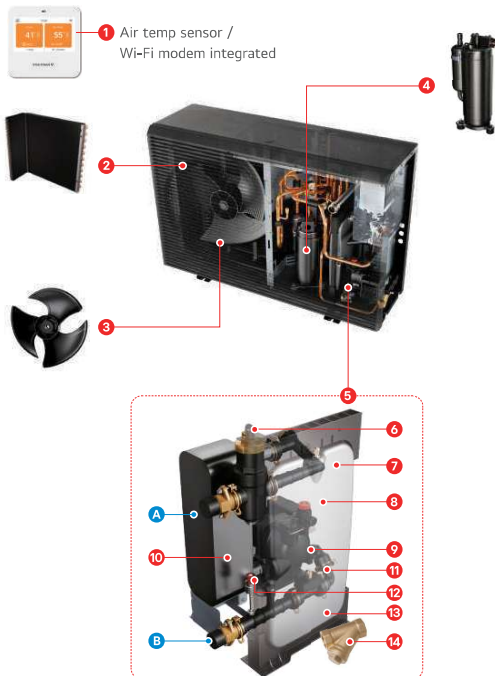
Outdoor Unit

HM051HFS UA41
HM071HFS UA41 / HM073HFS UA41
HM091HFS UA41 / HM093HFS UA41



Key Components

Outdoor Unit



Components

- 1) Deluxe remote controller^{1) 2)}
- 2) Black Fin heat exchanger (air / ref.)
- 3) Biomimetic fan
- 4) Twin rotary compressor
- 5) Hydronic components assembly
- 6) Deaerator
- 7) Expansion tank (8 l)
- 8) Safety valve
- 9) Air vent valve
- 10) Plate heat exchanger
- 11) Water pump
- 12) Pressure sensor
- 13) Flow sensor
- 14) 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
* Picture shows the 5, 7, and 9 kW models. (UN36A)

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) 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++	A+++ / A++
Seasonal space heating efficiency (η _p) (35°C / 55°C)		%	180 / 140	187 / 141	185 / 143
SCOP (35°C / 55°C)		-	4,58 / 3,58	4,75 / 3,60	4,70 / 3,66
Sound power level	Rated / low noise mode	dB(A)	53 / 52	54 / 53	56 / 55
Sound pressure level at 5 m	Rated / low noise mode	dB(A)	31	32	34
Nominal Capacity and COP / EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	5,50 / 4,90	7,00 / 4,70	9,00 / 4,60
Air +2°C / water +35°C	Heating capacity / COP	kW / -	5,50 / 3,20	6,50 / 3,15	7,00 / 3,10
Air -7°C / water +35°C	Heating capacity / COP	kW / -	5,50 / 2,85	7,00 / 2,05	9,00 / 2,00
Air +7°C / water +55°C	Heating capacity / COP	kW / -	5,50 / 2,95	7,00 / 2,85	8,00 / 2,80
Air -7°C / water +55°C	Heating capacity / COP	kW / -	5,50 / 1,90	7,00 / 1,85	8,00 / 1,80
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	5,50 / 4,90	7,00 / 4,70	8,00 / 4,50
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	5,50 / 3,00	7,00 / 2,90	8,00 / 2,85
Outdoor Units		Unit	HM051HFS UA41	HM071HFS UA41 HM073HFS UA41	HM091HFS UA41 HM093HFS UA41
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 ~ 75		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Refrigerant	Type	-	R290		
	GWP	-	0,02		
	Precharged amount	g	700		
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	1 Ø: 102 / 3 Ø: 103,5		
Exterior	Color of chassis / RAL code	-	Black STS silver solid / RAL 8019		
	Color of front grille / RAL code	-	Light graphite / RAL 8022		
Power supply	Voltage, phase, frequency	V, Ø, Hz	220 ~ 240, 1, 50	220 ~ 240, 1, 50 / 380 ~ 415, 3, 50	
	Standby power consumption	W	10		
	Recommended circuit breaker	A	20	1 Ø: 25 / 3 Ø: 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 65 ~ 80°C operating is available only when the booster heater is operating.

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R290 MONOBLOC S (5/7/9 kW)

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HM051HFS UA41

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	4,98	4,85	4,72	4,59	4,47	4,34	4,21	-	-	-
-20	5,50	5,29	5,09	4,90	4,69	4,45	4,11	3,66	-	-
-15	5,50	5,50	5,50	5,21	4,94	4,83	4,29	3,89	3,49	3,10
-7	5,50	5,50	5,50	5,50	5,50	5,50	4,68	4,23	3,77	3,31
-4	5,50	5,50	5,50	5,50	5,50	5,50	4,85	4,36	3,88	3,39
-2	5,50	5,50	5,50	5,50	5,50	5,50	4,97	4,45	3,95	3,44
2	5,50	5,50	5,50	5,50	5,50	5,50	5,19	4,63	4,08	3,55
7	5,50	5,50	5,50	5,50	5,50	5,50	5,50	4,83	4,25	3,68
10	5,50	5,50	5,50	5,50	5,50	5,50	5,50	4,95	4,35	3,76
15	5,50	5,50	5,50	5,50	5,50	5,50	5,50	5,15	4,52	3,89
18	5,50	5,50	5,50	5,50	5,50	5,50	5,50	5,27	4,62	3,92
20	5,50	5,50	5,50	5,50	5,50	5,50	5,50	5,35	4,69	3,96
35	5,50	5,50	5,50	5,50	5,50	5,50	5,50	5,50	5,20	4,00

HM071HFS UA41 / HM073HFS UA41

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	6,34	6,17	6,01	5,85	5,68	5,42	5,36	-	-	-
-20	7,00	6,73	6,48	6,23	5,97	5,86	5,23	4,65	-	-
-15	7,00	7,00	7,00	6,63	6,29	6,12	5,36	4,85	4,44	3,95
-7	7,00	7,00	7,00	7,00	7,00	7,00	5,95	5,38	4,80	4,21
-4	7,00	7,00	7,00	7,00	7,00	7,00	6,17	5,55	4,93	4,31
-2	7,00	7,00	7,00	7,00	7,00	7,00	6,32	5,67	5,02	4,38
2	7,00	7,00	7,00	7,00	7,00	7,00	6,61	5,89	5,20	4,51
7	7,00	7,00	7,00	7,00	7,00	7,00	7,00	6,15	5,41	4,68
10	7,00	7,00	7,00	7,00	7,00	7,00	7,00	6,30	5,54	4,78
15	7,00	7,00	7,00	7,00	7,00	7,00	7,00	6,55	5,75	4,95
18	7,00	7,00	7,00	7,00	7,00	7,00	7,00	6,71	5,88	5,05
20	7,00	7,00	7,00	7,00	7,00	7,00	7,00	6,81	4,96	5,11
35	7,00	7,00	7,00	7,00	7,00	7,00	7,00	7,00	6,62	5,20

HM091HFS UA41 / HM093HFS UA41

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	6,65	6,92	6,89	6,86	6,82	6,79	6,47	-	-	-
-20	8,09	7,74	7,51	7,32	7,16	6,98	6,72	6,35	-	-
-15	9,00	8,45	8,08	7,77	7,50	7,35	6,93	6,60	6,26	5,69
-7	9,00	9,00	8,80	8,38	8,05	8,00	7,34	6,95	6,54	5,72
-4	9,00	9,00	8,87	8,56	8,25	8,00	7,52	7,09	6,65	5,75
-2	8,20	8,30	8,30	8,20	8,10	8,00	7,64	7,19	6,72	5,80
2	8,00	8,00	8,10	8,10	8,10	8,00	7,90	7,38	6,86	5,83
7	9,00	9,00	9,00	9,00	9,00	9,00	8,24	7,63	7,04	5,85
10	9,00	9,00	9,00	9,00	9,00	9,00	8,39	7,77	7,15	5,90
15	9,00	9,00	9,00	9,00	9,00	9,00	8,64	7,99	7,33	6,06
18	9,00	9,00	9,00	9,00	9,00	9,00	8,81	8,13	7,43	6,22
20	9,00	9,00	9,00	9,00	9,00	9,00	8,93	8,23	7,50	6,30
35	9,00	9,00	9,00	9,00	9,00	9,00	9,00	9,00	8,07	6,35

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

HM051HFS UA41

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	5,50	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	4,91	5,50	5,50	5,50	5,50	5,50	5,50
45	4,67	5,05	5,50	5,50	5,50	5,50	5,50

HM071HFS UA41 / HM073HFS UA41

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	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	6,25	7,00	7,00	7,00	7,00	7,00	7,00
45	5,94	6,42	7,00	7,00	7,00	7,00	7,00

HM091HFS UA41 / HM093HFS UA41

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	9,00	9,00	9,00	9,00	9,00	9,00	9,00
30	9,00	8,00	9,00	9,00	9,00	9,00	9,00
35	8,00	8,89	9,00	9,00	9,00	9,00	9,00
40	8,00	8,26	8,52	8,69	9,00	9,00	9,00
45	7,54	7,63	7,73	7,80	7,90	7,96	8,03

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.
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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

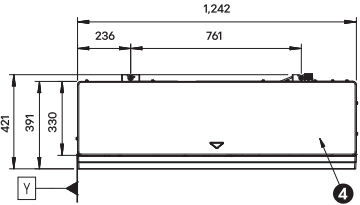
R290 MONOBLOC S (5/7/9 kW)

Drawings

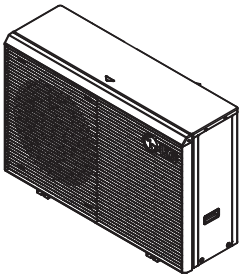
[Unit: mm]

[Unit: mm]

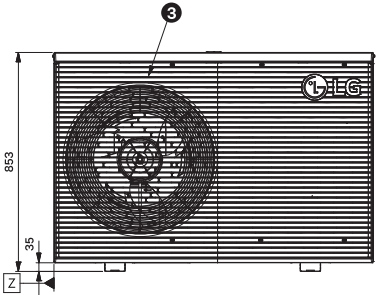
HM051HFS UA41
HM071HFS UA41 / HM073HFS UA41
HM091HFS UA41 / HM093HFS UA41



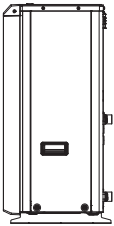
Top view



3D view

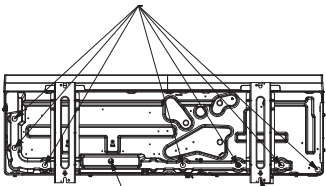


Front view

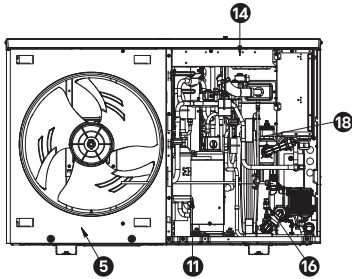


Side view

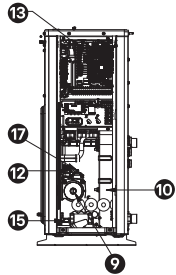
Drain holes for drain cap (7 EA)
Note:
If you need more drains, remove them



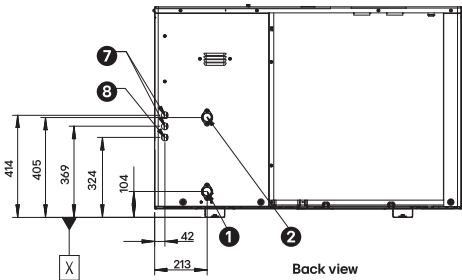
Bottom view



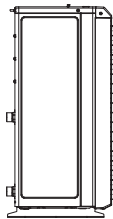
Internal front view



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	Conduit for communication hole
8	Unit power	Conduit for power cable
9	Water pump	To circulate water inside the system
10	Plate heat exchanger	Heat exchanger between refrigerant and water
11	Compressor	R290 rotary compressor
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	To measure the Water Flow Rate (5 ~ 80 LPM)
16	Water pressure sensor	To measure the Water Pressure (0 ~ 2 MPa)
17	Automatic air vents	-
18	Deaerator	Automatic gas separator

THERMA V

R290 MONOBLOC S (12/14/16 kW)

THERMA V™ R290 Monobloc S

Outdoor Unit

HM121HFS UB41 / HM123HFS UB41
HM141HFS UB41 / HM143HFS UB41
HM161HFS UB41 / HM163HFS UB41



R290
Natural refrigerant
with GWP 0,02

A+++
35°C

A++
55°C

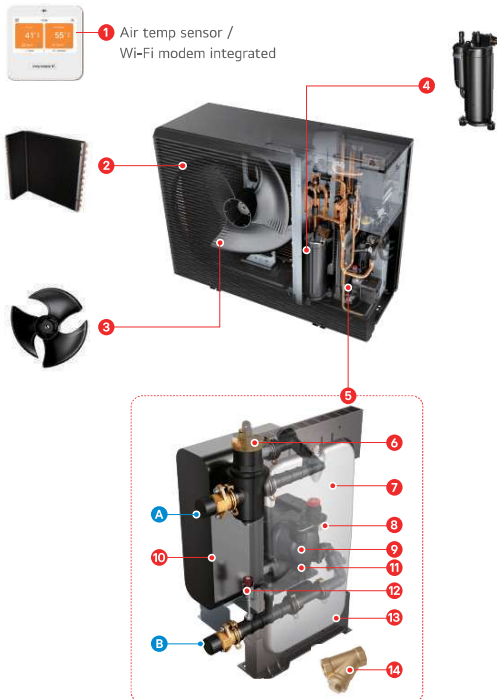
75°C

-25°C

ThinQ

Key Components

Outdoor Unit



Components

- 1) Deluxe remote controller^{1) 2)}
- 2) Black Fin heat exchanger (air / ref.)
- 3) Biomimetic fan
- 4) Twin rotary compressor
- 5) Hydronic components assembly
- 6) Deaerator
- 7) Expansion tank (8 l)
- 8) Safety valve
- 9) Air vent valve
- 10) Plate heat exchanger
- 11) Water pump
- 12) Pressure sensor
- 13) Flow sensor
- 14) 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
* Picture shows the 12, 14, and 16 kW models, (UN36B)

Connections

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

Product Specification (Preliminary)

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_p) (35°C / 55°C)		%	187 / 143	191 / 143	189 / 141
SCOP (35°C / 55°C)		-	4,75 / 3,65	4,85 / 3,65	4,80 / 3,60
Sound power level	Rated / low noise mode	dB(A)	56 / 55	57 / 56	59 / 57
Sound pressure level at 5 m	Rated / low noise mode	dB(A)	34	35	37
Nominal Capacity and COP/EER					
Air +7°C / water +35°C	Heating capacity / COP	kW / -	12,00 / 4,60	14,00 / 4,50	16,00 / 4,40
Air +2°C / water +35°C	Heating capacity / COP	kW / -	12,00 / 3,10	12,50 / 3,05	13,00 / 3,00
Air -7°C / water +35°C	Heating capacity / COP	kW / -	12,00 / 2,50	12,50 / 2,50	13,50 / 2,50
Air +7°C / water +55°C	Heating capacity / COP	kW / -	12,00 / 2,95	13,00 / 2,90	14,00 / 2,80
Air -7°C / water +55°C	Heating capacity / COP	kW / -	10,00 / 1,90	11,00 / 1,85	12,00 / 1,80
Air +35°C / water +18°C	Cooling capacity / EER	kW / -	12,00 / 4,70	12,50 / 4,60	13,00 / 4,50
Air +35°C / water +7°C	Cooling capacity / EER	kW / -	10,05 / 3,20	11,00 / 3,15	11,50 / 3,10
Outdoor Units		Unit	HM121HFS UB41 HM123HFS UB41	HM141HFS UB41 HM143HFS UB41	HM161HFS UB41 HM163HFS UB41
Operation range (outdoor air temperature)	Heating & DHW (Min. ~ Max.)	°C	-25 ~ 35		
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Operation range (leaving water temperature)	Heating (Min. ~ Max.)	°C	15 ~ 75		
	Cooling (Min. ~ Max.)	°C	5 ~ 27		
	DHW (Min. ~ Max.)	°C	15 ~ 80		
Refrigerant	Type	-	R290		
	GWP	-	0,02		
	Precharged amount	g	1,000		
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	131,0		
Exterior	Color of chassis / RAL code	-	Black STS silver solid / RAL 8019		
	Color of front grille / RAL code	-	Light graphite / RAL 8022		
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: 32 / 3 Ø: 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 65 ~ 80°C operating is available only when the booster heater is operating.

THERMA V

R290 MONOBLOC S (12/14/16 kW)

Performance Table for Heating Operation

Maximum heating capacity (including defrost effect)

HM121HFS UB41 / HM123HFS UB41

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	8,97	8,70	8,43	8,16	7,90	7,63	7,36	-	-	-
-20	9,85	9,53	9,18	8,82	8,45	8,07	7,68	7,29	-	-
-15	10,75	10,37	9,95	9,49	9,01	8,52	8,01	7,50	6,98	6,48
-7	12,00	12,00	11,26	10,62	10,13	10,00	8,56	7,87	7,17	6,46
-4	12,00	12,00	11,81	11,07	10,50	10,30	8,77	8,01	7,24	6,45
-2	12,00	12,00	12,00	11,37	10,74	10,51	8,91	8,11	7,29	6,45
2	12,00	12,00	12,00	11,97	11,00	10,90	9,19	8,31	7,42	6,44
7	12,00	12,00	12,00	12,00	11,52	11,35	9,53	8,58	7,63	-
10	12,00	12,00	12,00	12,00	11,80	10,73	9,72	8,73	7,76	-
15	12,00	12,00	12,00	12,00	12,00	11,09	10,02	8,98	7,99	-
18	12,00	12,00	12,00	12,00	12,00	11,28	10,18	9,12	8,15	-
20	12,00	12,00	12,00	12,00	12,00	11,41	10,29	9,20	7,93	-
35	12,00	12,00	12,00	12,00	12,00	10,81	9,43	-	-	-

HM141HFS UB41 / HM143HFS UB41

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	9,40	9,15	8,90	8,65	8,40	8,15	7,90	-	-	-
-20	10,27	9,94	9,60	9,26	8,92	8,57	8,23	7,90	-	-
-15	11,14	10,74	10,32	9,88	9,44	8,99	8,54	8,09	7,66	7,29
-7	12,56	12,50	11,92	11,31	11,15	11,00	9,02	8,39	7,74	7,09
-4	13,11	13,04	12,40	11,70	11,42	11,13	9,21	8,50	7,77	7,02
-2	13,49	13,40	12,72	11,97	11,62	11,26	9,33	8,58	7,79	6,97
2	14,00	13,68	12,89	12,04	11,70	11,35	9,58	8,75	7,87	6,87
7	14,00	14,00	13,66	12,66	12,07	11,48	9,91	9,00	8,06	-
10	14,00	14,00	14,00	13,00	12,26	11,52	10,12	9,17	8,21	-
15	14,00	14,00	14,00	13,53	12,60	11,66	10,45	9,45	8,47	-
18	14,00	14,00	14,00	13,84	12,76	11,70	10,65	9,62	8,66	-
20	14,00	14,00	14,00	14,00	12,94	11,85	10,78	9,72	8,48	-
35	14,00	14,00	14,00	14,00	14,00	12,89	11,53	10,17	-	-

HM161HFS UB41 / HM163HFS UB41

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	9,82	9,59	9,36	9,13	8,90	8,67	8,44	-	-	-
-20	10,83	10,52	10,20	9,86	9,51	9,17	8,84	8,55	-	-
-15	11,84	11,45	11,03	10,58	10,12	9,65	9,20	8,76	8,37	8,10
-7	14,02	13,50	12,90	12,22	12,11	12,00	9,71	9,04	8,38	7,72
-4	14,67	14,12	13,44	12,68	12,37	12,07	9,90	9,14	8,37	7,58
-2	15,10	14,56	13,82	12,97	12,54	12,12	10,01	9,20	8,36	7,48
2	15,39	14,94	14,03	13,56	12,87	12,19	10,25	9,33	8,37	7,29
7	16,00	16,00	14,89	13,66	12,99	12,31	10,53	9,52	8,49	-
10	16,00	16,00	15,20	13,97	13,20	12,43	10,69	9,64	8,58	-
15	16,00	16,00	15,57	14,00	13,23	12,78	10,95	9,84	8,76	-
18	16,00	16,00	15,81	14,64	13,44	12,97	11,10	9,95	8,90	-
20	16,00	16,00	16,00	14,79	13,58	13,09	11,18	10,02	8,65	-
35	16,00	16,00	16,00	16,00	14,51	13,81	11,60	10,21	-	-

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

HM121HFS UB41 / HM123HFS UB41

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	10,06	10,79	11,53	12,00	12,00	12,00	12,00
35	9,01	9,65	10,36	10,96	12,00	12,00	12,00
40	7,95	8,37	8,79	9,07	9,37	9,43	9,42
45	6,89	7,04	7,19	7,29	7,43	7,53	7,63

HM141HFS UB41 / HM143HFS UB41

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	12,84	14,00	14,00	14,00	14,00	14,00	14,00
30	10,61	11,50	12,39	12,98	13,76	14,00	14,00
35	9,50	10,28	11,10	11,75	13,75	12,78	12,60
40	8,39	8,95	9,51	9,88	10,35	10,55	10,70
45	7,28	7,58	7,89	8,09	8,39	8,60	8,80

HM161HFS UB41 / HM163HFS UB41

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	13,50	14,82	16,00	16,00	16,00	16,00	16,00
30	11,16	12,20	13,24	13,93	14,91	15,49	16,00
35	9,99	10,89	11,83	12,53	14,30	13,88	14,01
40	8,83	9,52	10,21	10,68	11,32	11,68	11,99
45	7,66	8,12	8,58	8,89	9,36	9,67	9,98

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.

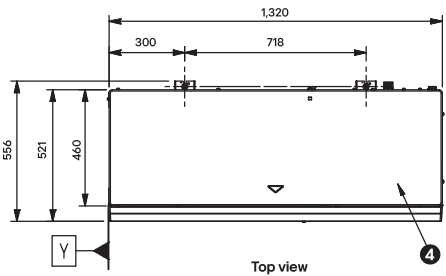
THERMA V

R290 MONOBLOC S (12/14/16 kW)

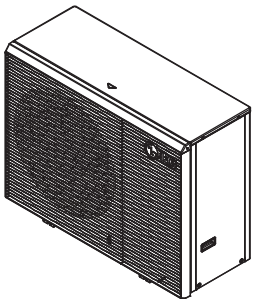
Drawings

[Unit: mm]

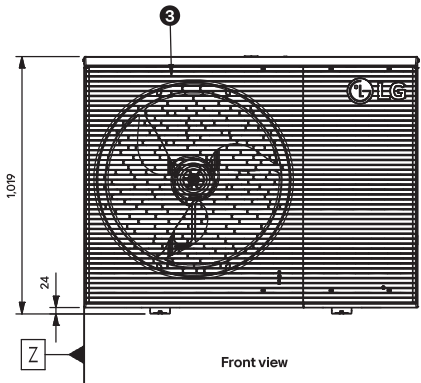
HM121HFS UB41 / HM123HFS UB41
HM141HFS UB41 / HM143HFS UB41
HM161HFS UB41 / HM163HFS UB41



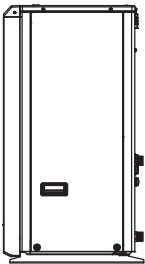
Top view



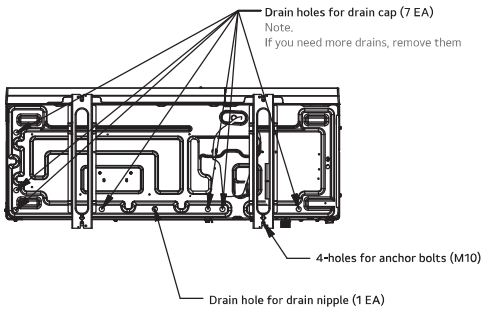
3D view



Front view

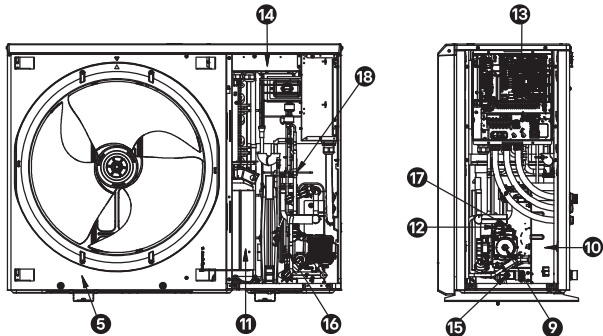


Side view



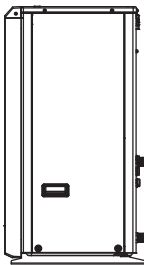
Bottom view

[Unit: mm]

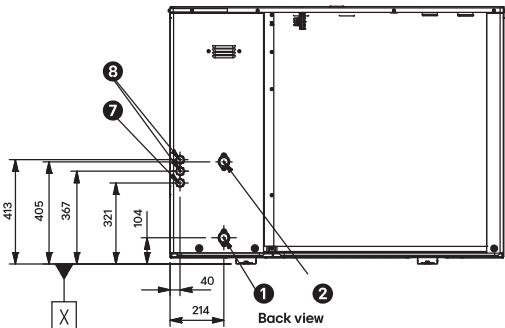


Internal front view

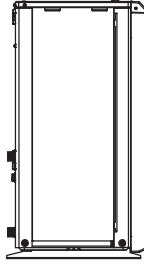
Internal side view



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	Conduit for communication hole
8	Unit power	Conduit for power cable
9	Water pump	To circulate water inside the system
10	Plate heat exchanger	Heat exchanger between refrigerant and water
11	Compressor	R290 rotary compressor
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
15	Flow sensor	To measure the Water Flow Rate (5 - 80 LPM)
16	Water pressure sensor	To measure the Water Pressure (0 - 2 MPa)
17	Automatic air vents	-
18	Deaerator	Automatic gas separator