

THERMA V™ R32 MONOBLOC S

PRODUCT SPECIFICATION

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 16kW 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, 3Ø model only) / MCS / EUROVENT certification

* EHPA (for Austria and Switzerland) label under development

Model Line-up

Capacity	Unit	Model Name		
		Capacity (kW)		
		12,0	14,0	16,0
1 Phase Model 220 - 240V, 1Ø, 50Hz	Monobloc Unit	HM121MR U34	HM141MR U34	HM161MR U34
		HM123MR U34	HM143MR U34	HM163MR U34

Seasonal Energy

Description	Unit	HM121MR U34 (1Ø)	HM141MR U34 (1Ø)	HM161MR U34 (1Ø)		
		HM123MR U34 (3Ø)	HM143MR U34 (3Ø)	HM163MR U34 (3Ø)		
Space Heating (According to EN14825)	Average Climate Water Outlet 35°C	SCOP	-	4,67	4,62	4,53
	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 Efficiency (η _s)	%	136	135	135
	Seasonal Space Heating Eff. Class (A+++ to D Scale)	-	A++	A++	A++	

Nominal Capacity and Nominal Power Input

Description	OAT ¹⁾ (DB)	LWT ²⁾ (DB)	Unit	HM121MR U34 (1Ø)	HM141MR U34 (1Ø)	HM161MR U34 (1Ø)	
				HM123MR U34 (3Ø)	HM143MR U34 (3Ø)	HM163MR U34 (3Ø)	
Nominal Capacity	Heating	7°C	35°C	12,00	14,00	16,00	
		7°C	55°C	11,00	11,50	12,00	
	Cooling	35°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
EER	Cooling	7°C	55°C	2,90	2,85	2,80	
		2°C	35°C	3,65	3,63	3,60	
	W/W	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	15 - 65					
		Cooling	5 - 27 (16 - 27) ¹⁾					
	Piping Connections	DHW	15 - 80 ²⁾					
		Water Circuit	Inlet	Male PT 1" according to ISO 7-1 (tapered pipe threads)				
Refrigerant Side	Operation Range (outdoor temp.)	Heating	-25 - 35					
		Cooling	5 - 48					
	Compressor	Quantity	EA					
		Type	Hermetic Sealed Scroll					
Refrigerant	Type	R32						
	GWP (global warming potential)	675						
	Precharged Amount	g						
Sound Power Level	Heating	Rated	60	61	60	61	61	
		Low Noise Mode	56	57	56	57		
Sound Pressure Level (at 1m)	Heating	Rated	38	39	38	39		
		Low Noise Mode	34	35	34	35		
Dimensions	Unit	W x H x D	mm					
	Weight	Unit	kg					
Exterior	Color / RAL Code	-	Warm Gray / RAL 7044					
	Voltage, Phase, Frequency	V, Ø, Hz	220-240, 1, 50					
Power Supply	Rated Running Current	Heating	10,9	12,9	15,1	3,6	4,3	5,0
		Cooling	11,2	14,4	17,7	3,7	4,8	5,9
	Recommended Circuit Breaker	A	40					
Wiring Connections	Power Supply Cable (included earth, H07RN-F)	mm ² x cores	6,0 x 3C			4,0 x 5C		

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°C DB / 6°C CWB, LWT 35°C
 5. This product contains Fluorinated greenhouse gases.

PRODUCT SPECIFICATION

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
	TC	TC	TC	TC	TC	TC	TC	TC
-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	-	-	-
-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
	TC	TC	TC	TC	TC	TC	TC	TC
-25°C DB	10,00	10,00	10,00	10,00	-	-	-	-
-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
	TC	TC	TC	TC	TC	TC	TC	TC
-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), 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

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
	TC	TC	TC	TC	TC	TC	TC
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
	TC	TC	TC	TC	TC	TC	TC
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
	TC	TC	TC	TC	TC	TC	TC
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

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- 2, Direct interpolation is permissible, Do not extrapolate,
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- 4, The shaded areas are not guaranteed continuous operation,

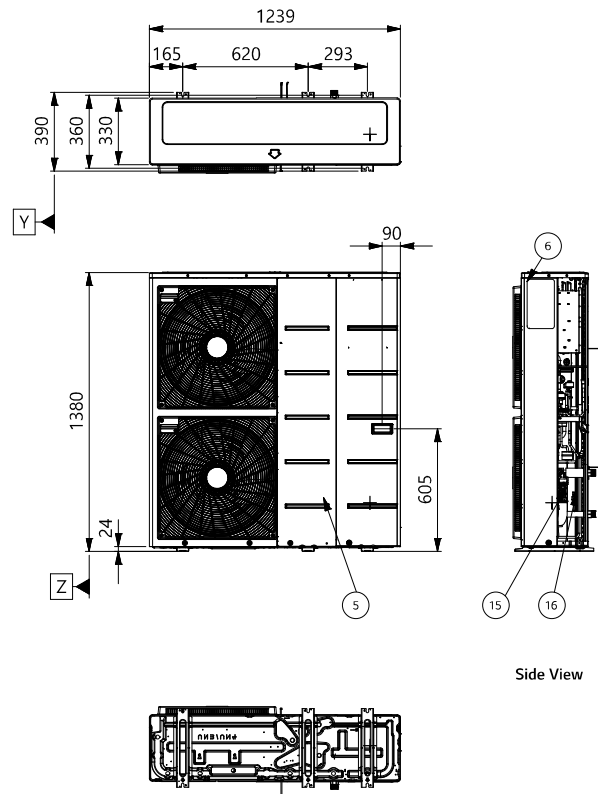
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Drawings

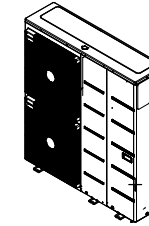
Category	Unit	Model Name		
		Capacity (kW)		
		12,0	14,0	16,0
1 Phase Model 220 - 240V, 1Ø, 50Hz	Monobloc Unit	HM121MR U34	HM141MR U34	HM161MR U34
3 Phase Model 380 - 415V, 3Ø, 50Hz		HM123MR U34	HM143MR U34	HM163MR U34

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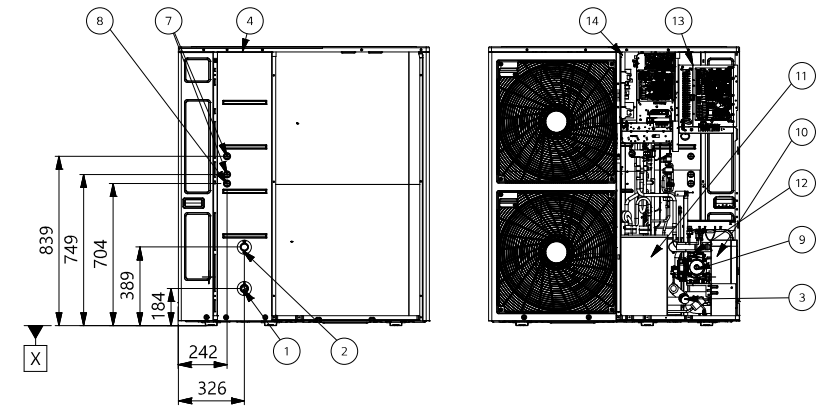
[Unit : mm]



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	GRUNDFOS UPML 20-105 CHBL
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	SIKA VVX20 5-80 LPM
16	Pressure Sensor	SENSATA 2HMP3-05W 0-2MPa