

Ver. 202303



M thermal Arctic Series



W DC Inverter



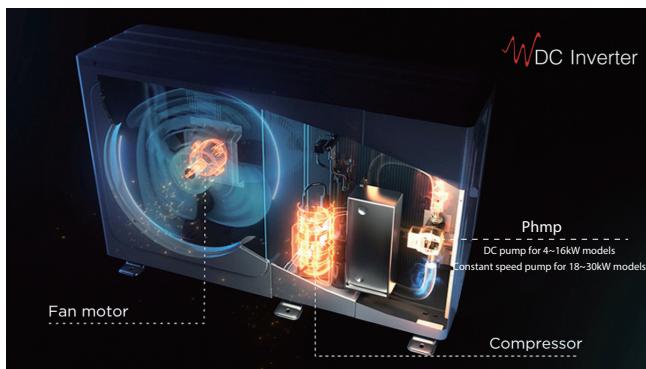
R32 environmental refrigerant

- ❖ Higher heat transfer coefficient and better performance
- ❖ Less charged volume is needed in the system
- ❖ Less costs and easier to get R32
- ❖ Lower GWP and carbon emission (GWP: Global Warming Potential)



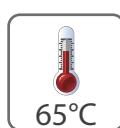
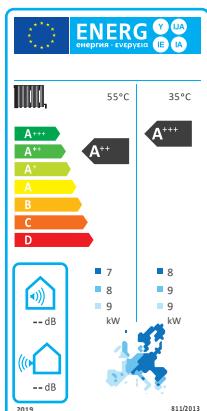
Inverter system design

DC compressor, fan motor and pump allow precise control of motor speed, ensuring that only the power necessary to perfectly match the real load is used and energy saving.



Powerful heating with high efficiency

- ❖ Operation range down to -25°C
- ❖ Maximum LWT reach 65°C for 4~16kW models
Maximum LWT reach 60°C for 18~30kW models
- ❖ Energy efficiency level: A+++



Structure innovation

- ❖ Single fan compact structure design for 4~16kW models with lower noise
- ❖ 270mm thinnest size in industry for indoor unit, which is ideal transformation plan for gas burner and convenient for replacing
- ❖ Integrated water tank design simply installation



Single fan structure
Greatly reduces noise!



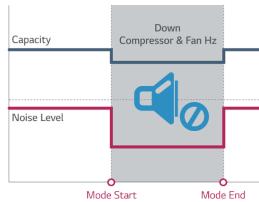
Thinnest!



190/240L
stainless tank

Silent and comfort

- ❖ Two level of silent mode provides more comfort
- ❖ Silent mode minimum sound power level 53dB

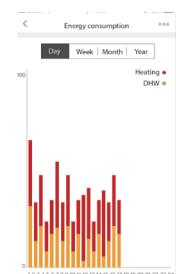


Smart controller & APP

- ❖ Multiple languages meet customer needs
- ❖ Modbus protocol and network flexibility
- ❖ Holiday away & Holiday home makes life convenient
- ❖ Built-in wifi module supports APP control



- ❖ Through APP, user can
- ❖ Check the running state of heat pump, zone switch, operation mode and temperature.
- ❖ Set switch, operation mode and temperature of each zone
- ❖ Energy consumption display



Note: APP interface changes from time to time as APP is updated and may change slightly vary from those in this document.

Flexibility

❖ Modular design

Modularity is perfect when an extension of capacity becomes required as the building cooling demand evolves. Midea recommends 6 units to be controlled by one controller for better hydraulic equilibrium, giving a bigger system heating capacity range from 4kW to 180kW.



Note: 4~16kW models can not be connected with 18~30kW models.

❖ Space saving

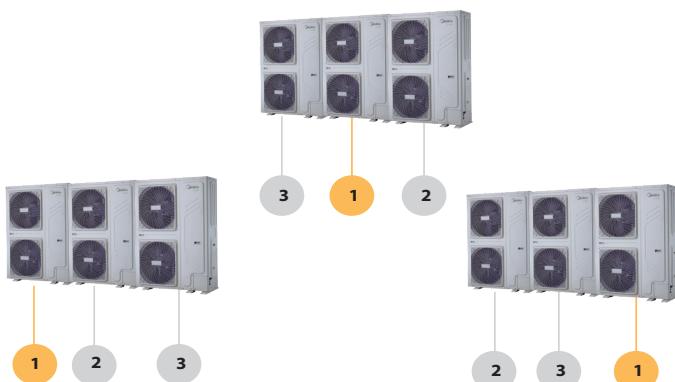
Single unit covers an area of only 0.6m², which greatly saves lots of space for group control



High reliability

❖ Alternative cycle duty operation

In one combination system, all units operate as alternative in cycle duty to keep equal running time, realize higher stability, better reliability and longer lifespan.



❖ Back-up functions

In a combination system, if one unit failed, other units can be back-up instead of the failed one for continuing operation.



Mode combination

There are 4 single operation mode (Cool, Heat, DHW, Auto) and 3 combined operation mode to meet different demands of using.

01-01-2018	23:59	13°
	ON	
25 °C		38 °C

Auto & DHW mode

01-01-2018	23:59	13°
	ON	
13 °C		38 °C

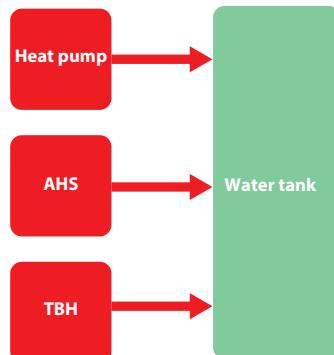
Cool & DHW mode

01-01-2018	23:59	13°
	ON	
25 °C		38 °C

Heat & DHW mode

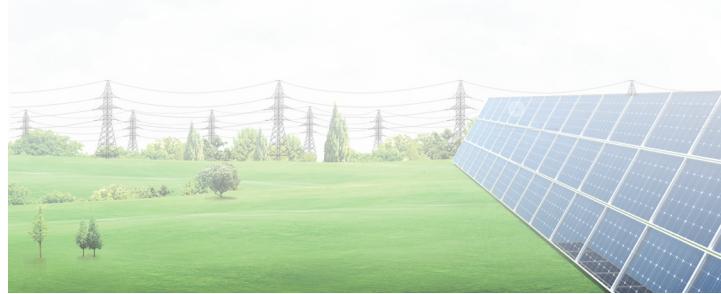
Fast DHW function

FAST DHW function is used to force the system to operate in DHW mode when hot water is needed urgently.



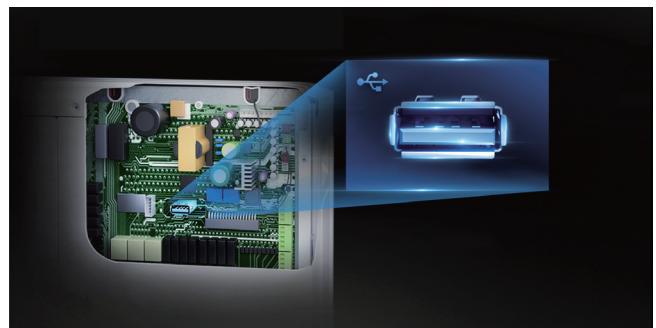
Smart Grid function

Heat pump adjusts the operation according to different electrical signals. Power consumption of the system can be automatically adjusted according to the peak and valley power to reduce the power consumption to the greatest extent.



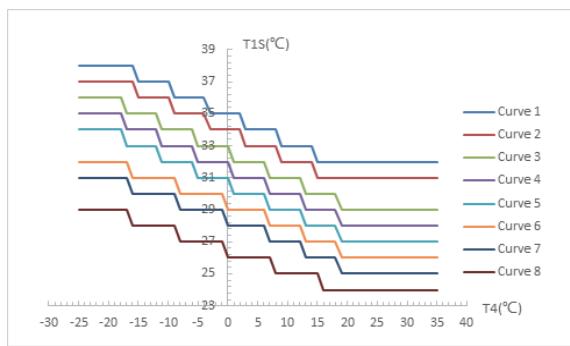
USB function

- ❖ Realize setting transmission between wired controllers
- ❖ Realize program upgrade with one key and save the time of on-site installation



Climate curve function

Totally there are 32 climate correlation curves for choice and one custom curve is optional. Once the curve is selected, the unit set the outlet water temperature automatically according to the outdoor ambient temperature, which realizes intelligent control.



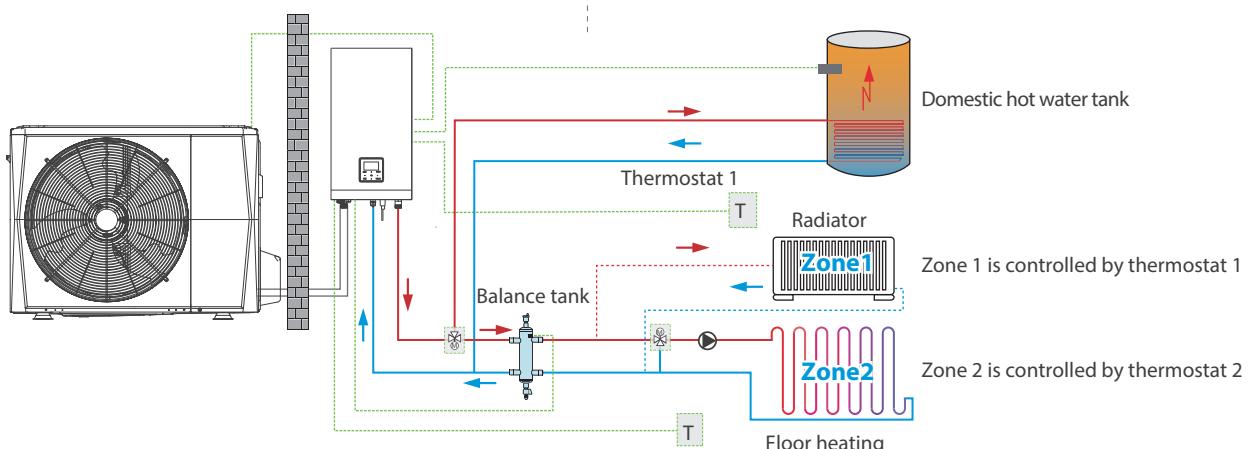
Abbreviation:

T4: Ambient temperature

T1S: Water outlet setting temperature

Zones control

- ❖ More accurate low temperature area temperature control
- ❖ Water pump accurate control of water flow and electromagnetic three-way valve cycle regulation to achieve stable low temperature heating

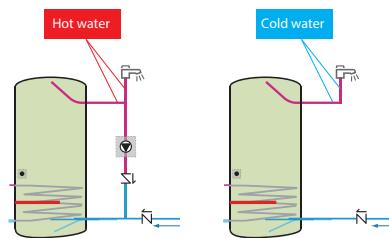


Notes:

1. With the help of hydro box adapter kit "M-kit" (optional), maximum 8 thermostats are available to control heat pump, which greatly improves the operation convenience.
2. Balance tank temperature sensor (field supplied) ensures accurate water temperature control.

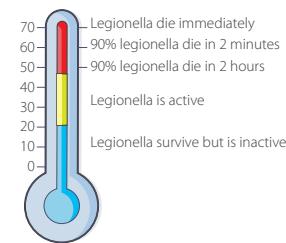
DHW pump function

The DHW pump function is used to return water in the water pipe net to the hot water tank according to set timer. With the function, when hot water is needed, hot water will flow out from tap immediately without waiting time.



Disinfect function

The disinfect function is used to kill legionella by 60-70 °C water to ensure the health and safety.



Specifications

Mono



Outdoor unit model			MHC-V4W/ D2N8-B	MHC-V6W/ D2N8-B	MHC-V8W/ D2N8-B	MHC-V10W/ D2N8-B	MHC-V12W/ D2N8-B	MHC-V14W/ D2N8-B	MHC-V16W/ D2N8-B	MHC-V12W/ D2RN8-B	MHC-V14W/ D2RN8-B	MHC-V16W/ D2RN8-B								
Power supply			V/Ph/Hz	220-240/1/50							380-415/3/50									
Heating ¹	Capacity	kW	4.20	6.35	8.40	10.00	12.10	14.50	15.90	12.10	14.50	15.90								
	Rated input	kW	0.82	1.28	1.63	2.02	2.44	3.15	3.53	2.44	3.15	3.53								
	COP		5.10	4.95	5.15	4.95	4.95	4.60	4.50	4.95	4.60	4.50								
Heating ²	Capacity	kW	4.30	6.30	8.10	10.00	12.30	14.10	16.00	12.30	14.10	16.00								
	Rated input	kW	1.13	1.70	2.10	2.67	3.32	3.92	4.57	3.32	3.92	4.57								
	COP		3.80	3.70	3.85	3.75	3.70	3.60	3.50	3.70	3.60	3.50								
Heating ³	Capacity	kW	4.40	6.00	7.50	9.50	11.90	13.80	16.00	11.90	13.80	16.00								
	Rated input	kW	1.49	2.03	2.36	3.06	3.90	4.68	5.61	3.90	4.68	5.61								
	COP		2.95	2.95	3.18	3.10	3.05	2.95	2.85	3.05	2.95	2.85								
Cooling ⁴	Capacity	kW	4.50	6.50	8.30	9.90	12.00	13.50	14.20	12.00	13.50	14.20								
	Rated input	kW	0.82	1.35	1.64	2.18	3.04	3.74	3.94	3.04	3.74	3.94								
	EER		5.50	4.80	5.05	4.55	3.95	3.61	3.61	3.95	3.61	3.61								
Cooling ⁵	Capacity	kW	4.70	7.00	7.45	8.20	11.50	12.40	14.00	11.50	12.40	14.00								
	Rated input	kW	1.36	2.33	2.22	2.52	4.18	4.96	5.60	4.18	4.96	5.60								
	EER		3.45	3.00	3.35	3.25	2.75	2.50	2.50	2.75	2.50	2.50								
Seasonal space heating energy efficiency class ⁶	Water outlet at 35°C	class	A+++																	
	Water outlet at 55°C	class	A++																	
Refrigerant	Type(GWP)		R32(675)																	
	Charged volume	kg	1.40		1.40		1.75													
Sound power Level ⁷			dB	55	58	59	60	65	65	68	65	65								
Unit dimension (WxHxD)			mm	1295×718×429																
Packing dimension (WxHxD)			mm	1375×885×475																
Net/Gross weight			kg	86/107		105/132		129/155			144/172									
Outdoor air temperature range	Cooling	°C	-5~43																	
	Heating	°C	-25~35																	
	DHW	°C	-25~43																	
Water side heat exchanger				Plate type																
Water pump	Max. pump head	m		9																
Water side connection			mm	G1" BSP		G5/4" BSP														
Backup E-heater ⁸	Standard mounted	kW	/																	
	Optional	kW	3	3	3/9	3/9	3/9	3/9	3/9	3/9	3/9	3/9								
	Capacity steps		1	1	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3								
	Power supply	3kW 9kW	V/Ph/Hz	220-240/1/50 380-415/3/50																
Water temperature setting range	Cooling	°C	5~25																	
	Heating	°C	25~65																	
	DHW (tank)	°C	20~60																	

Notes:

1. Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°C
2. Evaporator air in 7°C, 85% R.H., Condenser water in/out 40/45°C
3. Evaporator air in 7°C, 85% R.H., Condenser water in/out 47/55°C
4. Condenser air in 35°C. Evaporator water in/out 23/18°C
5. Condenser air in 35°C. Evaporator water in/out 12/7°C
6. Seasonal space heating energy efficiency class testes in average climate general conditions.
7. Testing standard: EN12102-1.
8. Backup electric heater is built into all models. For three phase type backup electric heater, 3/6kW can be achieved by changing DIP switch when heat pump is equipped with 9kW.
9. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014.

Specifications

Mono



Model name			MHC-V18W/D2RN8	MHC-V22W/D2RN8	MHC-V26W/D2RN8	MHC-V30W/D2RN8
Power supply		V/Ph/Hz	380-415/3/50			
Heating ¹	Capacity	kW	18.00	22.00	26.00	30.10
	Rated input	kW	3.83	5.00	6.37	7.70
	COP		4.70	4.40	4.08	3.91
Heating ²	Capacity	kW	18.00	22.00	26.00	30.00
	Rated input	kW	5.14	6.47	8.39	10.35
	COP		3.50	3.40	3.10	2.90
Heating ³	Capacity	kW	18.00	22.00	26.00	30.00
	Rated input	kW	6.55	8.30	10.61	13.04
	COP		2.75	2.65	2.45	2.30
Cooling ⁴	Capacity	kW	18.50	23.00	27.00	31.00
	Rated input	kW	3.90	5.00	6.28	7.75
	EER		4.75	4.60	4.30	4.00
Cooling ⁵	Capacity	kW	17.00	21.00	26.00	29.50
	Rated input	kW	5.57	7.12	9.63	11.57
	EER		3.05	2.95	2.70	2.55
Seasonal space heating energy efficiency class ⁶	Water outlet at 35°C	class	A+++	A+++	A+++	A++
	Water outlet at 55°C	class	A++	A++	A+	A+
Refrigerant	Type		R32			
	Charged volume	kg	5.0			
Sound power level ⁷		dB	71	73	75	77
Unit dimension (WxHxD)		mm	1129×1558×528			
Packing dimension (WxHxD)		mm	1220×1735×565			
Net/Gross weight		kg	177/206			
Water side heat exchanger			Plate type			
Water pump	Max. pump head	m	12			
Water side connection			G5/4" BSP			
Outdoor air temperature range	Cooling	°C	-5-46			
	Heating	°C	-25-35			
	DHW	°C	-25-43			
Water temperature setting range	Cooling	°C	5-25			
	Heating	°C	25-60			
	DHW	°C	20-60			

Notes:

1.Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°C

2.Evaporator air in 7°C, 85% R.H., Condenser water in/out 40/45°C

3.Evaporator air in 7°C, 85% R.H., Condenser water in/out 47/55°C

4.Cooling air in 35°C. Evaporator water in/out 23/18°C

5.Cooling air in 35°C. Evaporator water in/out 12/7°C

6. Seasonal space heating energy efficiency class testes in average climate general

7.Testing standard: EN12102-1.

8.The above data test reference standard EN14511; EN14825; EN50564; EN12102; (EU) No:811:2013; (EU) No:813:2013; OJ 2014/C 207/02:2014

Specifications

Split



Outdoor unit model name			MHA-V4W/ D2N8-B	MHA-V6W/ D2N8-B	MHA-V8W/ D2N8-B	MHA-V10W/ D2N8-B	MHA-V12W/ D2N8-B	MHA-V14W/ D2N8-B	MHA-V16W/ D2N8-B	MHA-V12W/ D2RN8-B	MHA-V14W/ D2RN8-B	MHA-V16W/ D2RN8-B														
Indoor unit model name			HB-A60/CGN8-B	HB-A100/CGN8-B	HB-A160/CGN8-B			HB-A160/240CD30GN8-B																		
			HBT-A100/190CD30GN8-B HBT-A100/240CD30GN8-B			HBT-A160/240CD30GN8-B																				
Heating ¹	Capacity	kW	4.25	6.20	8.30	10.00	12.10	14.50	16.00	12.10	14.50	16.00														
	Rated input	kW	0.82	1.24	1.60	2.00	2.44	3.09	3.56	2.44	3.09	3.56														
	COP		5.20	5.00	5.20	5.00	4.95	4.70	4.50	4.95	4.70	4.50														
Heating ²	Capacity	kW	4.35	6.35	8.20	10.00	12.30	14.20	16.00	12.30	14.20	16.00														
	Rated input	kW	1.14	1.69	2.08	2.63	3.24	3.89	4.44	3.24	3.89	4.44														
	COP		3.80	3.75	3.95	3.80	3.80	3.65	3.60	3.80	3.65	3.60														
Heating ³	Capacity	kW	4.40	6.00	7.50	9.50	12.00	13.80	16.00	12.00	13.80	16.00														
	Rated input	kW	1.49	2.00	2.36	3.06	3.87	4.60	5.52	3.87	4.60	5.52														
	COP		2.95	3.00	3.18	3.10	3.10	3.00	2.90	3.10	3.00	2.90														
Cooling ⁴	Capacity	kW	4.50	6.55	8.40	10.00	12.00	13.50	14.20	12.00	13.50	14.20														
	Rated input	kW	0.81	1.34	1.66	2.08	3.00	3.74	3.94	3.00	3.74	3.94														
	EER		5.55	4.90	5.05	4.80	4.00	3.61	3.61	4.00	3.61	3.61														
Cooling ⁵	Capacity	kW	4.70	7.00	7.40	8.20	11.60	12.70	14.00	11.60	12.70	14.00														
	Rated input	kW	1.36	2.33	2.19	2.48	4.22	4.98	5.71	4.22	4.98	5.71														
	EER		3.45	3.00	3.38	3.30	2.75	2.55	2.45	2.75	2.55	2.45														
Seasonal space heating energy efficiency class ⁶	Water outlet at 35°C	class	A+++																							
	Water outlet at 55°C	class	A++																							
OUTDOOR UNIT			MHA-V4W/ D2N8-B	MHA-V6W/ D2N8-B	MHA-V8W/ D2N8-B	MHA-V10W/ D2N8-B	MHA-V12W/ D2N8-B	MHA-V14W/ D2N8-B	MHA-V16W/ D2N8-B	MHA-V12W/ D2RN8-B	MHA-V14W/ D2RN8-B	MHA-V16W/ D2RN8-B														
Power supply		V/Ph/Hz	220-240/1/50						380-415/3/50																	
Refrigerant	Type(GWP)	R32(675)																								
	Charged volume	kg	1.50		1.65		1.84																			
Sound power Level ⁸			dB	56	58	59	60	64	65	68	64	65	68													
Unit dimension (WxHxD)			mm	1008x712x426			1118x865x523																			
Packing dimension (WxHxD)			mm	1065x810x485			1190x970x560																			
Net/Gross weight			kg	58/63.5		75/89		97/110.5		112/125.5																
Refrigerant side connection	Liquid/Gas	mm	6.35/15.9		9.52/15.9																					
	Cooling	°C	-5~43																							
Outdoor air temperature range	Heating	°C	-25~35																							
	DHW	°C	-25~43																							
INDOOR UNIT			HB-A60/CGN8-B		HB-A100/CGN8-B		HB-A160/CGN8-B																			
Power supply			V/Ph/Hz	220-240/1/50																						
Unit dimension (WxHxD)			mm	420x790x270																						
Packing dimension (WxHxD)			mm	525x1050x360																						
Net/Gross weight			kg	37/43		39/45		9.52/15.9																		
Refrigerant side connection	Liquid/Gas	mm	6.35/15.9		9.52/15.9																					
Water side connection			mm	G1" BSP																						
Water pump	Max. pump head	m	9																							
Backup E-heater ⁹	Standard mounted	kW	/																							
	Optional	kW	3/9																							
	Power supply	3kW 9kW	V/Ph/Hz	220-240/1/50		380-415/3/50																				
Water temperature setting range	Cooling	°C	5~25																							
	Heating	°C	25~65																							
	DHW(tank)	°C	20~60																							
Sound power level ⁸			dB	38	38	42	42	43	43	43	43	43														

Notes:

1. Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°C
2. Evaporator air in 7°C, 85% R.H., Condenser water in/out 40/45°C
3. Evaporator air in 7°C, 85% R.H., Condenser water in/out 47/55°C
4. Condenser air in 35°C. Evaporator water in/out 23/18°C
5. Condenser air in 35°C. Evaporator water in/out 12/7°C
6. Seasonal space heating energy efficiency class tested in average climate general conditions.
7. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014
8. Testing standard: EN12102-1
9. For three phase type backup electric heater, 6kW can be achieved by changing DIP switch when hydronic box is equipped with 9kW.

Specifications

Split



Outdoor unit model name			MHA-V4W/ D2N8-B	MHA-V6W/ D2N8-B	MHA-V8W/ D2N8-B	MHA-V10W/ D2N8-B	MHA-V4W/ D2N8-B	MHA-V6W/ D2N8-B	MHA-V8W/ D2N8-B	MHA-V10W/ D2N8-B				
Indoor unit model name			HBT-A100/190CD30GN8-B							HBT-A100/240CD30GN8-B				
Domestic hot water heating			L							XL				
Water heating energy efficiency class	Average climate	class	A+	A+	A+	A+	A+	A+	A+	A+				
	Warm climate	class	A+	A+	A+	A+	A+	A+	A+	A+				
	Cold climate	class	A	A	A	A	A	A	A	A				
INDOOR UNIT			HBT-A100/190CD30GN8-B							HBT-A100/240CD30GN8-B				
Power supply			V/Ph/Hz							220-240/1/50				
DHW Tank	Type	-	Stainless steel											
	Material	-	SUS 316L											
	Water Volume	L	190							240				
	Maximum water pressure limit	bar	10											
	Insulation	Material	-	Polyurethane (Cyclopentane)										
	Thickness	mm	45											
Unit dimension (WxDxH)			mm	600×600×1683										
Packing dimension (WxDxH)			mm	730×730×1920										
Net/Gross weight			kg	140/161										
Refrigerant side connection			Liquid/Gas	mm	6.35/15.9	9.52/15.9	6.35/15.9			9.52/15.9				
Water side connection			Water Circuit	mm	G1" BSP									
Water pump			DHW Tank Water Circuit	mm	G3/4" BSP									
Backup E-heater			Max. pump head	m	9									
Water temperature setting range	Standard mounted	kW	Optional	kW	3									
	Power supply	6kW	V/Ph/Hz	9kW	6/9									
	Cooling	°C	Heating	°C	220-240/1/50									
	DHW(tank)	°C	380-415/3/50											
Sound power Level ¹			dB	38										

Outdoor unit model name			MHA-V12W/ D2N8-B	MHA-V14W/ D2N8-B	MHA-V16W/ D2N8-B	MHA-V12W/ D2RN8-B	MHA-V14W/ D2RN8-B	MHA-V16W/ D2RN8-B			
Indoor unit model name			HBT-A160/240CD30GN8-B								
Domestic hot water heating			XL								
Water heating energy efficiency class	Average climate	class	A+	A+	A+	A+	A+	A+	A+		
	Warm climate	class	A+	A+	A+	A+	A+	A+	A+		
	Cold climate	class	A	A	A	A	A	A	A		
INDOOR UNIT			HBT-A160/240CD30GN8-B								
Power supply			V/Ph/Hz	220-240/1/50							
DHW Tank	Type	-	Stainless steel								
	Material	-	SUS 316L								
	Water Volume	L	240								
	Maximum water pressure limit	bar	10								
	Insulation	Material	-	Polyurethane (Cyclopentane)							
	Thickness	mm	45								
Unit dimension (WxDxH)			mm	600×600×1943							
Packing dimension (WxDxH)			mm	730×730×2180							
Net/Gross weight			kg	159/180							
Refrigerant side connection			Liquid/Gas	mm	9.52/15.9						
Water side connection			Water Circuit	mm	G1" BSP						
Water pump			DHW Tank Water Circuit	mm	G3/4" BSP						
Backup E-heater			Max. pump head	m	9						
Water temperature setting range	Standard mounted	kW	Optional	kW	3						
	Power supply	6kW	V/Ph/Hz	9kW	6/9						
	Cooling	°C	Heating	°C	220-240/1/50						
	DHW(tank)	°C	380-415/3/50								
Sound power Level ¹			dB	42	44	44	42	44	44	44	

Notes:

1. For single phase type backup electric heater, 4kW can be achieved by changing DIP switch when hydronic box is equipped with 6kW.

For three phase type backup electric heater, 6kW can be achieved by changing DIP switch when hydronic box is equipped with 9kW.

2. Testing standard: EN12102-1

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