

Midea



# M thermal Arctic R290





# Natural refrigerant R290

R290, a highly pure propane with zero ODP value, does not have ozone depletion potential. The low GWP value further demonstrates its environmental protection characteristics, which provides great support to reach EU carbon neutrality. Thanks to the excellent thermodynamic properties of R290 and the advanced heat pump technology, with only a small amount of R290, M thermal Arctic heat pumps show great performance under cold condition. So it is a modern solution that balances ecosystem requirements with economic performance.



## Wide capacity range

### Heat pump

Capacity (kW)		4	6	8	10	12	14	16
Power supply	220-240V-1N-50Hz	•	•	•	•	•	•	•
	380-415V-3N-50Hz					•	•	•
Appearance								

### Electric heater

Electric heater is an ideal option that balances thermal comfort with economy performance under extreme cold climate. The electric heater with 3-9kW heating capacity can be integrated inside heat pump, which is both a installation space-saving and installation cost-effective solution.





# Powerful heating



55°C hot water under -25°C ambient temperature



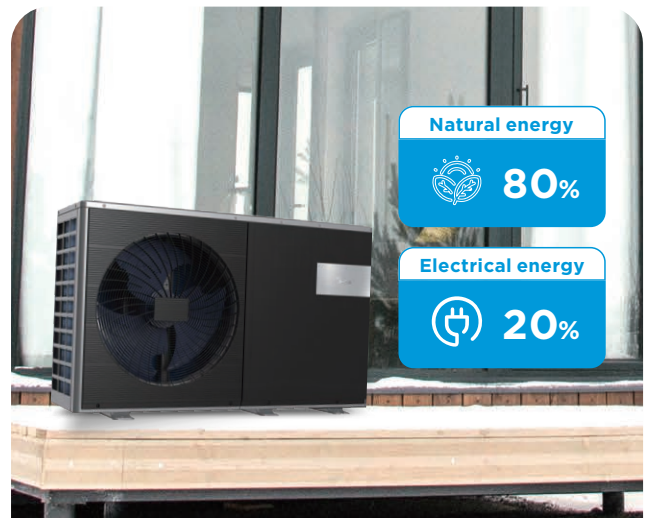
75°C hot water under -10°C ambient temperature

# Ideal for replacement

The main energy source for M thermal heat pump is free-of-charge natural energy from the air. With only a small amount of electrical energy, M thermal heat pump can provide heat for your house. Compared with boiler, M thermal heat pump is a more efficient product with environmental protection. On the other hand, the powerful heating capacity of providing 75°C hot water makes it suitable for replacing or retrofitting the current heat source.



Traditional boiler heating



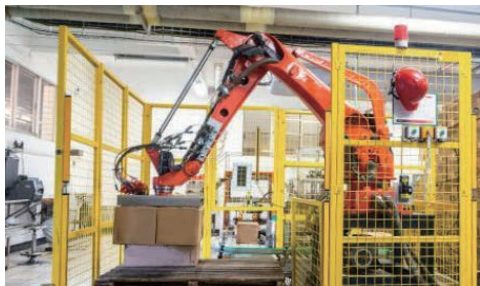
Heat pump heating

The data is only applied for some models under A7W35, which is for understanding and reference only. The result may vary depending on different products. Please refer to the specification for more details.

# High reliability

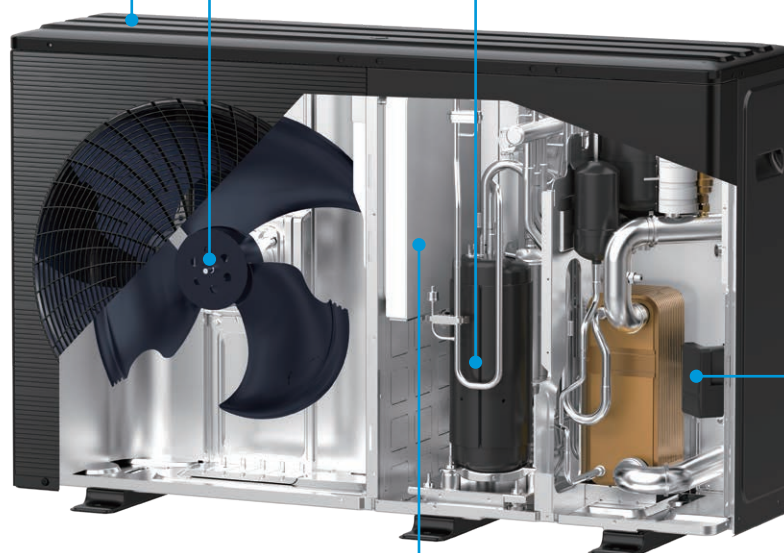
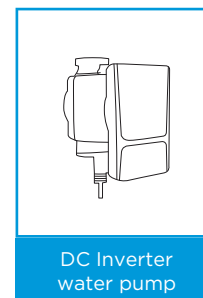
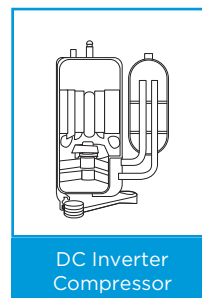
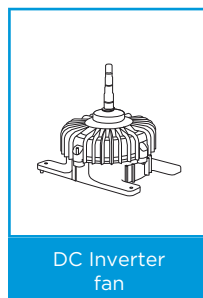
R290 M thermal heat pump adopts well-known brand components and advanced manufacturing processes to ensure product reliability. It is worth mentioning that, in order to best reassure customers about the use of R290 heat pump, the electric control system adopts a hermetic design to further improve the overall reliability.

## 1. Advanced manufacturing technology



## 2. All DC Inverter components

DC Inverter



## 3. Hermetic electric control box

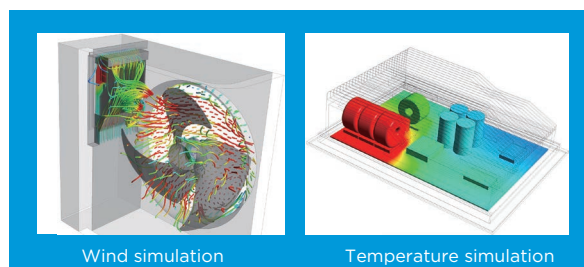


- Excellent sealability

Thanks to the special air flue design and multiple simulations, the heat dissipation rate of electric control system has been greatly improved, which provides a strong support for heat pump to run stably under  $-25^{\circ}\text{C}$ ~ $46^{\circ}\text{C}$  wide ambient temperature range

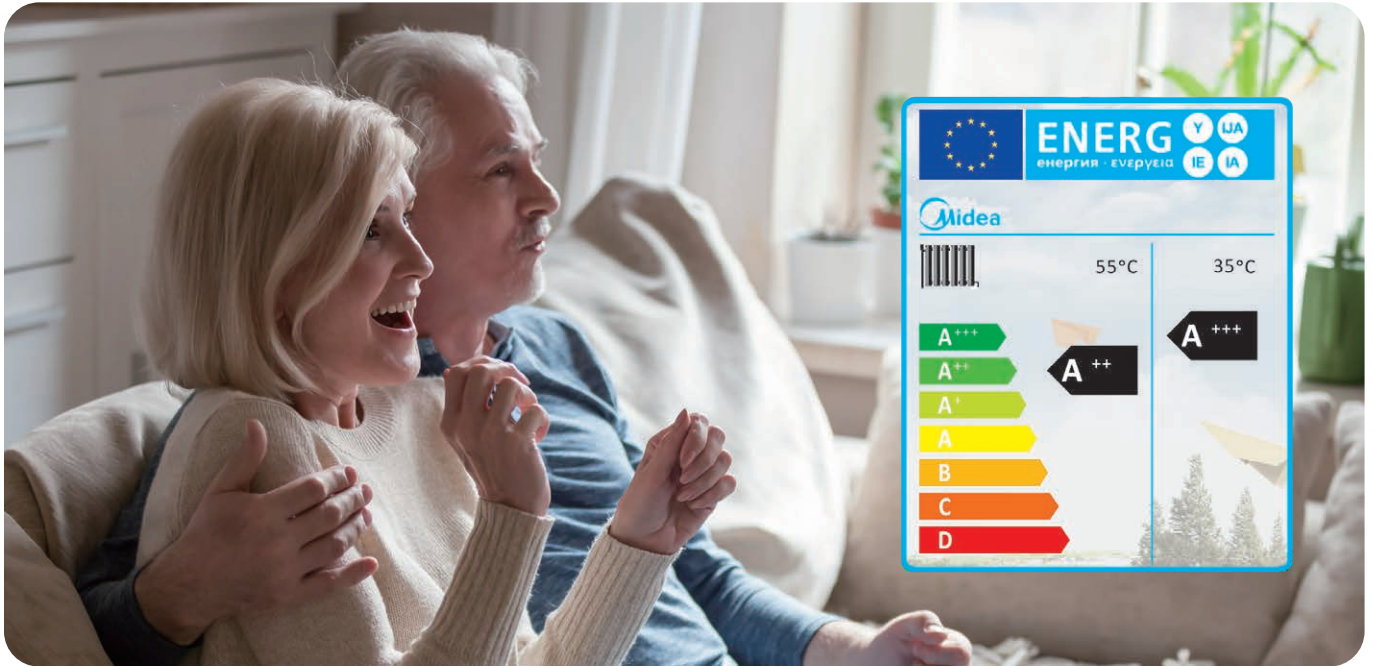


- Explosion-proof design



# High efficiency

Energy efficiency label indicates the energy efficiency level and performance data of heat pump. The purpose of energy efficiency label is to provide necessary information for users to make purchase decisions, so as to help users to choose highly energy-efficient and energy-saving products. With the help of all DC inverter technology, R290 M thermal Arctic Series reaches the EU Energy Efficiency A+++ at 35°C water temperature, A++ at 55°C water temperature, which ensures users get a better experience with a more economical and reasonable cost .



# User friendly controller



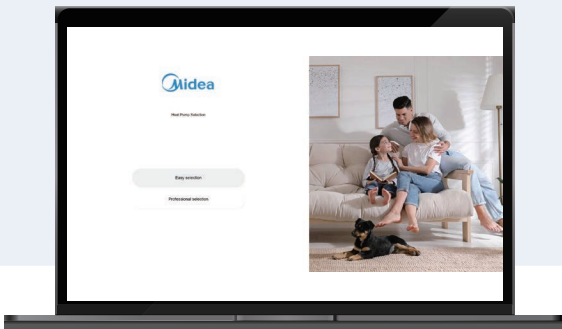
- Color screen
- Intuitive interface
- Touch-key design
- Liquid crystal display
- Built-in Wifi module
- Modbus protocol
- APP control
- Non-polarized wiring connection



# IOT tools

## Heat pump selection

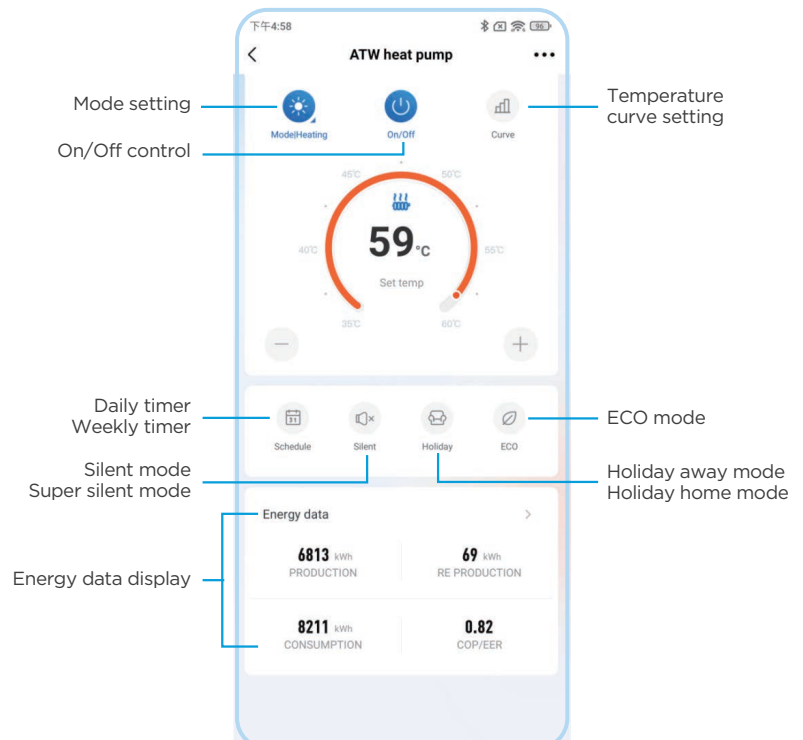
- Website design
- Professional selection version for distributor (Eurovent certification)
- Easy selection version for end-user
- Quick selection
- System configuration
- Energy consumption comparison

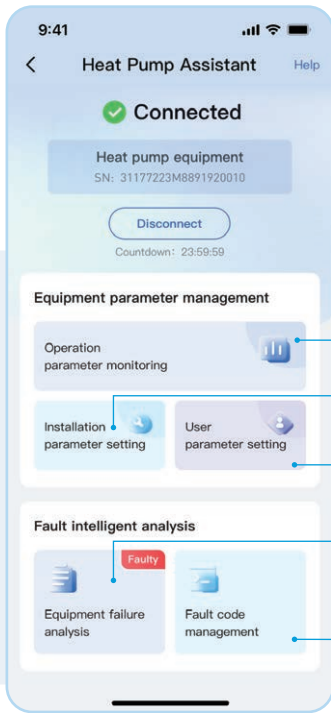


## SmartHome APP



- Designed for end-user
- Easy setting
- Monitor unit status and energy consumption
- Convenient remote control



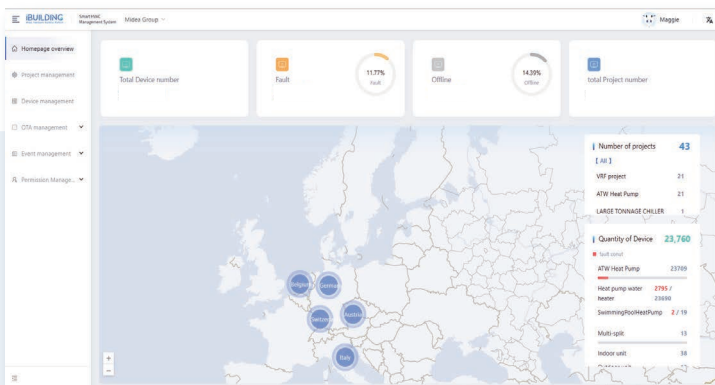


- Designed for professional user
- For installation or after-service
- Offering a range of functions for commissioning, monitoring and diagnosis

- Easily access the status and data of unit remotely
- Parameter trend curve display
- Parameters adjustment while installing or after-serving
- Manage customer's setting
- Monitor unit status and history error codes
- Prepare for service visits by investigating specific error codes
- Providing all error codes meaning and solutions

## IBUILDING

Intelligent HVAC Management System  
(Expected launch date is October 31, 2023.)



- Designed for distributor and partner
- Access information about installation, maintenance record and repair record
- Remotely monitor systems status and data from a single, customized dashboard

Note: Midea has always been developing and updating all the IOT tools for the best customers' experience, thus, interfaces may vary due to enhancement or change.

# Specifications

Model		MHC-V4WD2N7	MHC-V6WD2N7	MHC-V8WD2N7	MHC-V10WD2N7	MHC-V12WD2N7	MHC-V14WD2N7	MHC-V16WD2N7	MHC-V12WD2N7	MHC-V14WD2N7	MHC-V16WD2N7	
Power supply		220-240V -50Hz	220-240V -50Hz	220-240V -50Hz	220-240V -50Hz	220-240V -50Hz	220-240V -50Hz	220-240V -50Hz	380-415V- 3N-50Hz	380-415V- 3N-50Hz	380-415V- 3N-50Hz	
Cooling (A35W18)	Capacity	W	4500	6500	8300	10000	12000	14000	16000	12000	14000	16000
	EER	/	5.5	5.1	5.15	4.75	4.5	4.2	3.9	4.5	4.2	3.9
Cooling (A35W7)	Capacity	W	4700	6800	7500	8900	11500	12700	14000	11500	12700	14000
	EER	/	3.65	3.1	3.45	3.25	3.05	2.9	2.75	3.05	2.9	2.75
Heating(A7W35)	Capacity	W	4500	6200	8400	10000	12000	14000	15000	12000	14000	15000
	COP	/	5.15	4.9	5	4.7	4.8	4.5	4.4	4.8	4.5	4.4
Heating(A7W45)	Capacity	W	4500	6400	8200	10000	12000	14000	15000	12000	14000	15000
	COP	/	4.05	3.8	3.85	3.65	3.7	3.5	3.35	3.7	3.5	3.35
Heating(A7W55)	Capacity	W	4600	6200	7800	9500	12000	14000	15000	12000	14000	15000
	COP	/	3.2	3.1	3.2	3.05	3.1	3	2.85	3.1	3	2.85
Heating(A2W35)	Capacity	W	4400	5600	7100	8200	10700	11700	12800	10700	11700	12800
	COP	/	4.1	3.9	3.85	3.65	3.5	3.35	3.2	3.5	3.35	3.2
Heating(A-7W35)	Capacity	W	4500	5900	7000	8000	10000	11500	12700	10000	11500	12700
	COP	/	3.1	2.95	3	2.85	2.8	2.7	2.5	2.8	2.7	2.5
SCOP	Average climate, W35	/	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
	Average climate, W55	/	A++	A++	A++	A++	A++	A++	A++	A++	A++	A++
Net weight		kg	95	95	122	122	140	140	140	142	142	142
Gross weight		kg	115	115	144	144	162	162	162	164	164	164
Net dimension(W*H*D)		mm	1299*717*426	1299*717*426	1385*865*523	1385*865*523	1385*865*523	1385*865*523	1385*865*523	1385*865*523	1385*865*523	1385*865*523
Packing dimension(W*H*D)		mm	1375*885*475	1375*885*475	1465*1035*560	1465*1035*560	1465*1035*560	1465*1035*560	1465*1035*560	1465*1035*560	1465*1035*560	1465*1035*560
Erp sound power level		dB	55	58	59	60	65	65	68	65	65	68
Refrigerant	Type/GWP	/	R290/3	R290/3	R290/3	R290/3	R290/3	R290/3	R290/3	R290/3	R290/3	R290/3
	Charge	kg	0.7	0.7	1.1	1.1	1.25	1.25	1.25	1.25	1.25	1.25
Operating ambient temperature	Cooling	C	-5 - 46	-5 - 46	-5 - 46	-5 - 46	-5 - 46	-5 - 46	-5 - 46	-5 - 46	-5 - 46	-5 - 46
	Heating	C	-25 - 35	-25 - 35	-25 - 35	-25 - 35	-25 - 35	-25 - 35	-25 - 35	-25 - 35	-25 - 35	-25 - 35
	DHW	C	-25 - 46	-25 - 46	-25 - 46	-25 - 46	-25 - 46	-25 - 46	-25 - 46	-25 - 46	-25 - 46	-25 - 46
Water setting temperature	Cooling	C	5 - 25	5 - 25	5 - 25	5 - 25	5 - 25	5 - 25	5 - 25	5 - 25	5 - 25	5 - 25
	Heating	C	25 - 75	25 - 75	25 - 75	25 - 75	25 - 75	25 - 75	25 - 75	25 - 75	25 - 75	25 - 75
	DHW	C	20 - 70	20 - 70	20 - 70	20 - 70	20 - 70	20 - 70	20 - 70	20 - 70	20 - 70	20 - 70

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