



Raynor

Built for the North



Simply ideal

Nordic Performance

- Operational even at -40°C
- 4.6 kW maximum heating output at -25°C
- Reduces temperature fluctuation during defrost cycle by up to 50%
- Maximum heating output of 8kW



Energy Efficiency Rating

Heating

A+++

5.1
SCOP (Average)

A++

4.6
SCOP (Colder)

4.0kW
Pdesignh (Average)

Cooling

A+++

9.0
SEER



Robust Twin Rotary Compressor

Industry Leading Performance

Optimized pump design and electromagnetic structure significantly boosts motor efficiency, exceeding industry standards.

Operational even at -40°C

Designed to Save Energy in Low Temperatures

Aerospace grade refrigerant oil, delivers exceptional performance leading to a 20% improvement in energy saving while reducing operational wear.

20% Energy Saving



M-Shaped Bracket

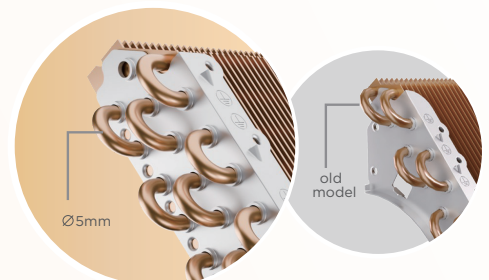
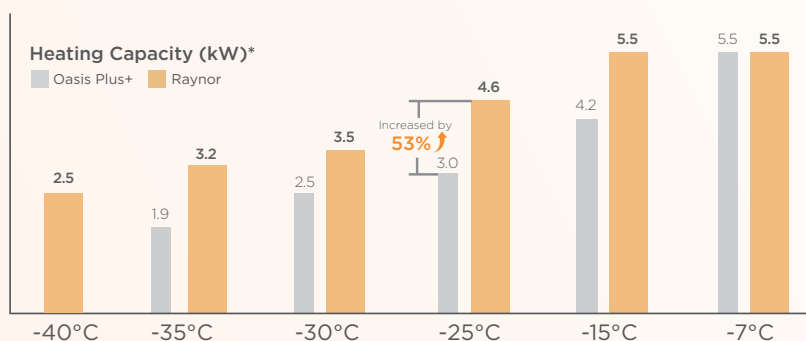
Less Noise

The M-shaped bracket and rigid pump body design significantly reduces vibration, lowering noise by 3-7 dB(A).

Reduces noise by up to **7dB(A)**

High-Density Piped Heat Exchanger

Optimized high-density pipe heat exchanger boosts heat transfer efficiency and thermal output, delivering 53% more heating capacity even under extreme outdoor conditions (-25°C) while maintaining superior low temperature performance.



* Midea's internal laboratory tests compared heating output of the Raynor and that of Oasis Plus+ at outdoor temperatures between -7°C to -35°C (dry-bulb) and indoor temperatures of $20/15^{\circ}\text{C}$ (dry-bulb/wet-bulb)

Threefold Anti Freeze Technology

Operational even at **-40°C**

Compressor Heating Belt

Powerful compressor with heating belt and large displacement volume.



* According to Midea's internal laboratory tests, compared with traditional defrosting technology, Raynor can realize 4 times longer uninterrupted heating experience during defrosting.

** According to Midea's internal laboratory tests, Raynor's chassis heater drains 1.9 times faster than a traditional chassis.

4x Less Interruption*

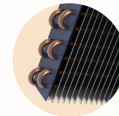
Flash Defrost

In order to provide heating that is as consistent as possible, Raynor alternates between minor defrost cycles and a deep defrost depending on outside temperature.

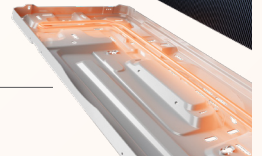
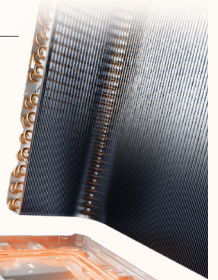
1.9x Chassis Heating Power**

Polar Climate Chassis

Stainless steel chassis heater delivers 1.9x heating power. Additionally, drainage holes have been optimized.

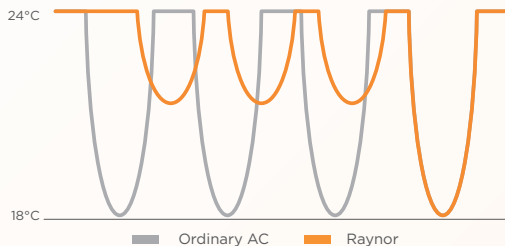


The specially designed smooth fin structure accelerates the defrosting process.



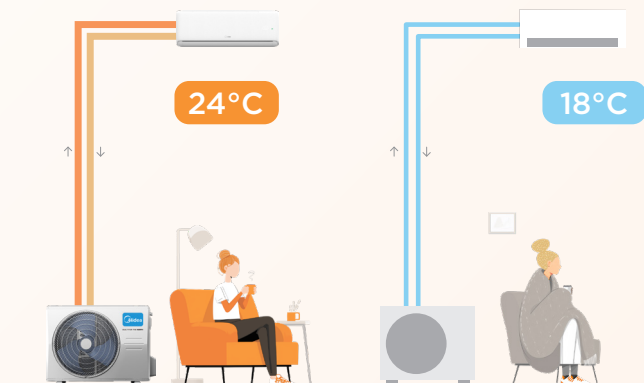
Flash Defrost

To deliver as much consistent heating as possible, Raynor alternates between minor defrost cycles and deep defrost based on outside temperature. Its Flash Defrost Technology extends the deep defrost interval, minimizing thermal fluctuations and sustaining comfort.



Raynor
Continues heating

Ordinary AC
Heat pump stops



AI ECOMASTER

Delivers over 30% additional heating energy savings via the **AI ECOMASTER** algorithm. The algorithm predicts temperature fluctuations and heating loads with historical and real-time data, executes micro-adjustments to reduce energy waste, and maintains $\pm 0.3^\circ\text{C}$ precise control by balancing efficiency and comfort.



Large Database



Multiple Inputs



Precise Temperature Control

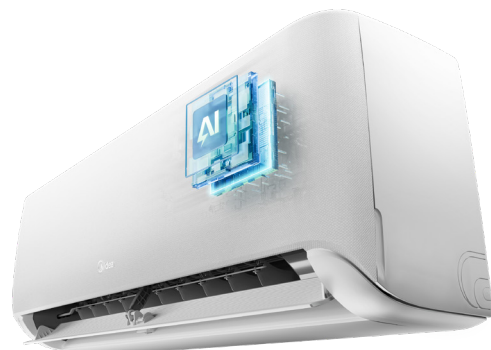
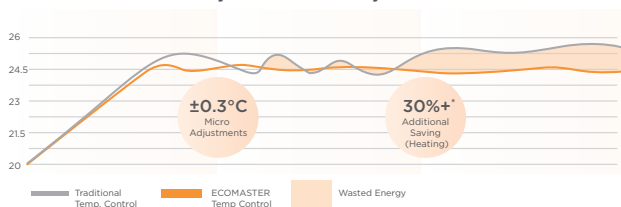


Predict Environment Changes



Comfort and Savings

Perfectly balance efficiency and comfort



*Tested by SGS under split AC type criteria. The data is compared to the same unit in standard operation. Test report reference: PT-23-000-301710_1

Waterfall Flow

Warm air is directed to the ground. It rises evenly, warming the entire space.

180°

Rotation

Flash cooling and heating. Precise and gentle.

Fireplace Mode

Once the set temperature is reached, the fan then continues to circulate the air, distributing warmth from the fireplace evenly.

Reliable Heating, Built To Last



Verified by three test standards

Graphene is a single layer of carbon atoms tightly bound in a hexagonal lattice. It increases the density of the anti-corrosion layer.

>20 years*

Corrosion resistant fins

0.02%**

Corrosion area

12.5x**

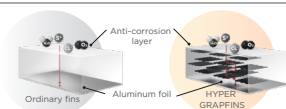
More corrosion resistant than blue coated fins

After 240 hours UV test and 72 hours neutral salt spray (fog) test

Note: 120 hours of UVB exposure is equivalent to the radiation received by non-roof standalone installed equipment over 6 years in a typical scenario.

1500h***

Withstood neutral spray test for



Anti-Corrosion

Resisted 1500h neutral salt spray test.

More Durable

Conformal coating up to 100 μ m anti-sulfurization resistors.

More Stable

Smooth operation with wider voltage fluctuation protection.

Anti-Aging

Endured 240h of UVB light.

Double Protection

Double graphene layer for durability.

More Reliable

Patented double outlet, heat dissipation area increased by 15%.

* Tested by Intertek (ISO 21207:2015, Annex A, Method B). Fins' corrosion resistance lasts 20-50 years, depending on industrial environment and salt exposure.

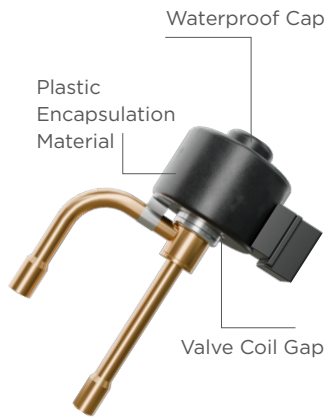
** Conducted in Midea's lab (ASTM B117 standard). Evaluated 72-hour salt spray resistance after UVB exposure. Compared Midea Blue Coated Fins (HD2202-2/HW3308) and Midea HYPER GRAPFINS (HMD011/HW3308) using JIS Z 2371-2015 corrosion area criteria.

*** The actual timing of corrosion initiation on fins is difficult to determine precisely. Therefore, the standard practice involves observing surface conditions at regular intervals, typically every 24 or 100 hours.



Reliable Heating, Built To Last

The sealing layer and motor have been strengthened to adapt to the Nordic climate, preventing corrosion and improving reliability.



Electronic Expansion Valve

The coil is sealed with a waterproof cap, preventing moisture from entering, at the point where it meets the valve body.

The waterproof material was selected based on superior performance in low temperature, high humidity environments.



Ceramic Ball Bearings

Ceramic ball bearings are used, rather than steel. Better performance under 24/7 operation, higher corrosion resistance, and reduced noise.



* Ceramic bearings are used in the indoor unit fan motor

air magic+

Generates negative ions to eliminate **99.9%** of viruses and bacteria, for cleaner air.*



E. coli



S. aureus

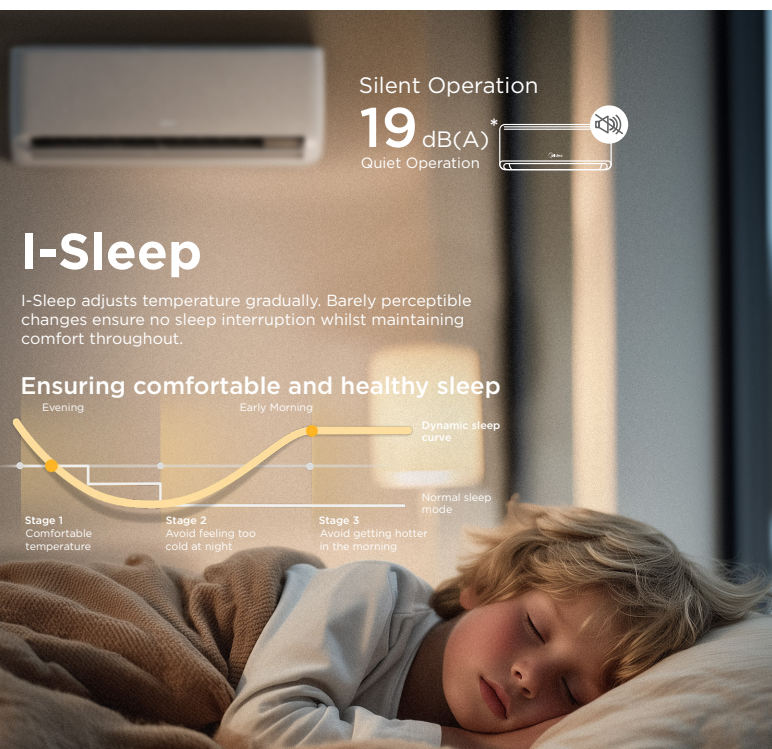


H1N1



Enterovirus 71

* Testing conducted by Intertek according to negative ion generator standards. Sterilization effectiveness may differ during operation of split air conditioners. For detailed test results, refer to report CB02-TICK-C02-EE-0000095.



Silent Operation

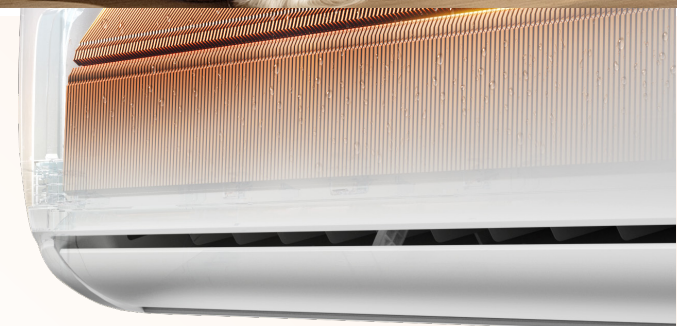
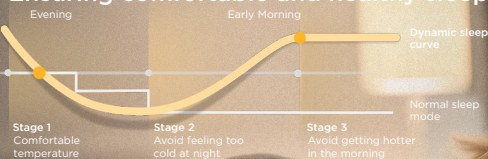
19 dB(A) *
Quiet Operation



I-Sleep

I-Sleep adjusts temperature gradually. Barely perceptible changes ensure no sleep interruption whilst maintaining comfort throughout.

Ensuring comfortable and healthy sleep



I-Clean

Automated high temperature (56°C) cleaning function

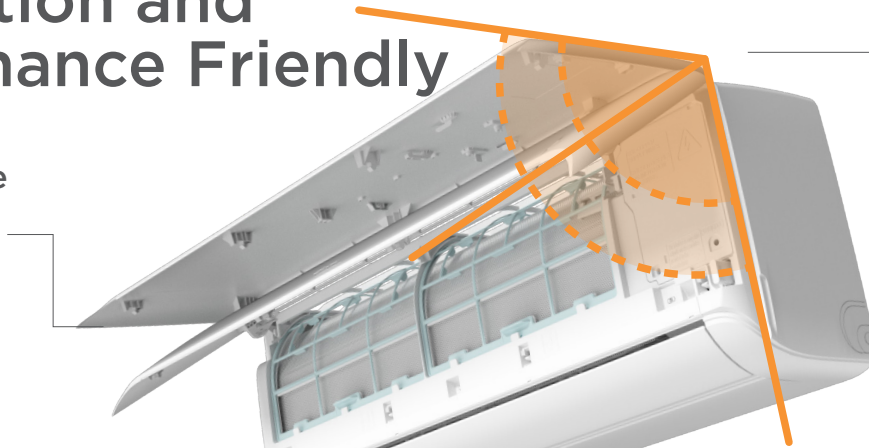
- 1 Moisture on the fins is frozen, capturing impurities.
- 2 Defrosting carries the impurities away with the runoff water.
- 3 Fins are heated to 56°C killing bacteria.
- 4 Air is blown over the fins, drying them thoroughly to prevent mold and odors.

* Test results were obtained in Midea's anechoic chamber

Installation and Maintenance Friendly

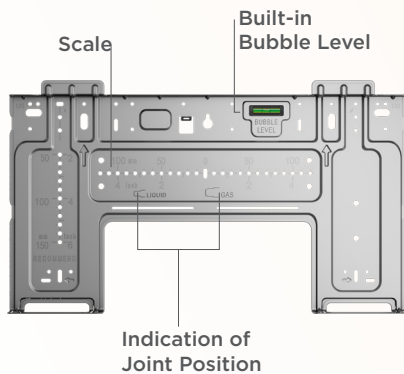
Mounting Plate Improvement

Easy alignment



Two Possible Opening Angles

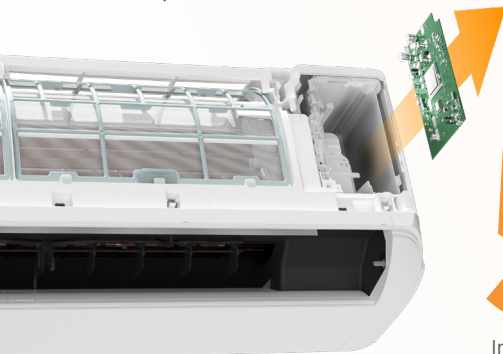
Open to 85° or 60° for more installation scenarios



Wire Tunnel
No cutting

Pull-Out PCB Design

Replace the PCB without removing the panel frame



5 Steps

Improved process

* Images are for illustrative purposes only. The steps are identical across models.

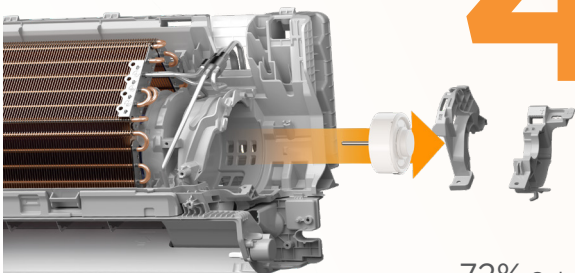
Raynor

The Easier Solution for PCB Replacement.



Fan Motor Repair Upgrade

Replace the motor without removing the evaporator

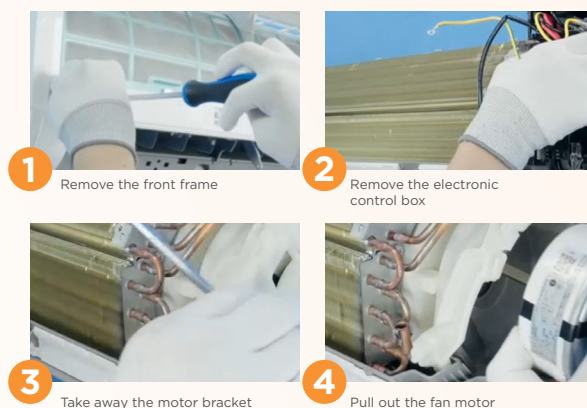


72% Quicker

* Images are for illustrative purposes only. The steps are identical across models.

Raynor

The Easier Solution for Fan Motor Replacement.



SPECIFICATIONS

Model			MSEX1BU-12HRFN8-QRE1GW
Indoor			MSEX1BU-12HRFN8-QRE1GW
Outdoor			MOX430-12HFN8-QRE1GW
Power Supply		V-Ph-Hz	220-240V,1Ph , 50Hz
Cooling (Standard conditions)	Capacity	kW	3.50 (1.10-5.10)
	Input	kW	
	Current	A	5.40 (1.00~7.00)
	EER	W/W	4.70
Heating (Standard conditions)	Capacity	kW	4.20 (1.00~8.00)
	Input	kW	
	Current	A	4.50 (1.25~9.20)
	COP	W/W	4.42
Seasonal Cooling	Pdesignc	kW	3.5
	SEER	W/W	9.0
	Energy Efficiency Class		A+++
Heating (Average)	Pdesignh	kW	4.0
	SCOP	W/W	5.1
	Energy Efficiency Class		A+++
Heating (Colder)	Pdesignh	kW	4.2
	SCOP	W/W	4.6
	Energy Efficiency Class		A++
Moisture Removal		L/h	2.1
Rated Power Input		W	3210
Rated Current		A	14
Indoor Air Flow (SP/Hi/Mi/Lo/Si)		m3/h	680/570/370/290/110
Indoor Noise Level (SP/Hi/Mi/Lo/Si)		dB(A)	45/40/32/22/19
Indoor Sound Power Level		dB(A)	59.0
Indoor Unit	Dimension(WxDxH)	mm	822×194×309
	Packing (WxDxH)	mm	876×290×363
	Net/Gross Weight	kg	9.8/12.5
Outdoor Air Flow		m3/h	3.500
Outdoor Sound Pressure Level		dB(A)	56
Outdoor Sound Power Level		dB(A)	62
Outdoor Sound Pressure Level (JISC 9612)		dB(A)	49.0
Outdoor Unit	Dimension (WxDxH)	mm	890×342×673
	Packing (WxDxH)	mm	995×398×740
	Net/Gross Weight	kg	43.5/47
Refrigerant	Type		R32
	GWP		675
	Charged Quantity	kg	1.0
Design Pressure		MPa	4.3/1.7
Refrigerant Piping	Liquid Side/Gas Side	mm(inch)	6.35mm(1/4in) / 9.52mm(3/8in)
	Max. Refrigerant Pipe Length	m	25
	Max. Difference in Level	m	10
Room Temperature	Indoor (Cooling/Heating)	℃	16~32/0~30
	Outdoor (Cooling/Heating)	℃	-15~50/-40~24
Qty'per 20' /40' /40'HQ			72/154/165

