

reddot winner 2025

DESIGN AWARD 2025

Technology Innovation Awards

GERMAN DESIGN AWARD WINNER 2026



Heating A+++ A B | 5.1 SCOP (Average) | A++ | 4.6 SCOP(Colder)

Robust Twin Rotary Compressor: Stable Operation at -40°C, 20% Energy Saved

The robust twin rotary compressor delivers industry-leading performance through an optimized pump design and advanced electromagnetic structure, ensuring stable operation even at –40°C and providing 100% full heating at –25°C with a maximum heating output of 8kW. Its aerospace grade refrigerant oil enhances reliability in low temperature environments by reducing wear and improving efficiency, resulting in up to 20% energy savings. Additionally, the M-shaped bracket and rigid pump body significantly reduce vibration, lowering operational noise by 3–7 dB(A) and creating a quieter overall experience.

Threefold Anti Freeze Technology: Ensuring Constant Warmth 24/7

Threefold Anti Freeze Technology ensures reliable performance in extreme cold by integrating a compressor heating belt that operates reliably at –40°C, a polar climate chassis that delivers 1.9×*1 heating power with optimized drainage, and Flash Defrost Technology that accelerates the defrosting process. By extending the deep defrost interval and reducing heating interruption by 4×*2, the system minimizes thermal fluctuations and improves temperature consistency by more than 50%*3, as Raynor alternates between minor defrost cycles and deep defrost based on outside temperature.

Prime Guard HYPER GRAPFINS™: >20 years Corrosion Resistant

Prime Guard's Hyper Graphene coating greatly increases the density of the anti-corrosion layer, protecting fins from salt contamination for over 20 years*4 with only 0.02%*5 corrosion area, 12.5×*6stronger resistance, and durability proven by 1500h neutral salt-spray testing. Built to last, the enhanced sealing layer and motor prevent corrosion, while the electronic expansion valve with a waterproof cap performs reliably in low-temperature and high-humidity environments. Ceramic ball bearings further improve 24/7 performance with higher corrosion resistance and lower noise.

- Robust twin rotary compressor
- Threefold anti freeze technology
- Flash defrost
- High-density piped heat exchanger
- Anti-corrosion
- Prime guard

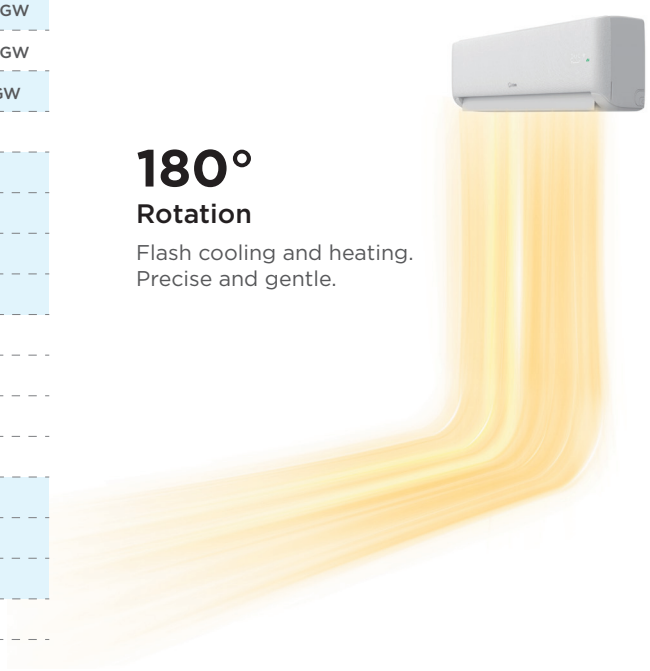
*1 According to Midea's internal laboratory tests, Raynor's chassis heater drains 1.9 times faster than a traditional chassis.
*2 According to Midea's internal laboratory tests, compared with traditional defrosting technology, Raynor can realize 4 times longer uninterrupted heating experience during defrosting.
*3 Minor defrosting is only feasible for temperature above -6°C.
*4 Tested by Intertek (ISO 21207:2015, Annex A, Method B). Fins' corrosion resistance lasts 20–50 years, depending on industrial environment and salt exposure.
*5 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.
*6 The actual timing of corrosion initiation on fins is di cult to determine precisely. Therefore, the standard practice involves observing surface conditions at regular intervals, typically every 24 or 100 hours.

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	0.74 (0.07-1.60)
	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	0.95 (0.12-2.10)
	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)		m^3/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		m^3/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

Waterfall Flow

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



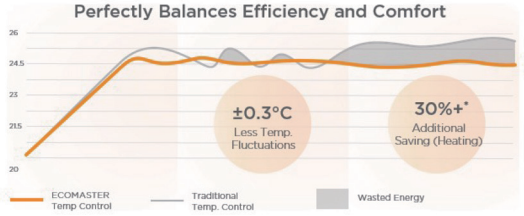
180°

Rotation

Flash cooling and heating.
Precise and gentle.

AI ECOMASTER

A Midea's inverter control algorithms predict future temperature changes and room heat loads using historical and real-time data, adjusting settings up to every 5 seconds. This proactive approach ensures accurate temperature control while reducing energy waste.



* 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

SGS

Performance Tested

- AI Temperature Control Accurate to ±0.3℃
- Cooling: 50% Extra Energy Saving with AI Algorithm
- Heating: 30% Extra Energy Saving with AI Algorithm