

FLEXIBLE

Anti-freezing operation, guaranteeing safe and stable operation

The system is featured with a unique triple anti-freezing protection control. The first level of protection: forced start of water pump; the second level: forced start of electric heater; the third level: forced start of the outdoor unit. In addition, noise is also well controlled in anti-freezing operation. The noise of a single water pump is controlled below 42 dB to reduce the impact on users.

Reliable water system, durable and safer

- Reliable operation and long-term protection**
The closed water system has an automatic anti-adhesion control function. It effectively prevents limescale resulting from fine impurities in the water and long-term operation, or impact on actions of the pump, three-way valve or other waterway parts due to long-term non-operation, thus guaranteeing long-term reliable operation.
- Safety protection of water system**
The water system is not only equipped with a safety valve and exhaust valve, but also with a water flow switch, effectively preventing water leakage, water shortage and boil-dry problems.

- Intelligent anti-freezing protection**
The system has an automatic anti-freezing function to avoid accidents such as frost crack and water leakage of water pipes when it is not used in winter.

Compact design, convenient for installation

High-efficiency heat exchanger

The advanced plate heat exchanger technology is adopted to ensure the uniform distribution of the refrigerant at full load and partial load, thereby improving the heat exchange efficiency. Besides, the diversified flow channel design can effectively reduce the refrigerant charge.



Specification

Model		HFRE-152/A1FZBp/P	HFRE-172/A1FZBp/P	HFRE-200/A1FZBp/P	HFRE-224/A1FZBp/P	HFRE-252/A1FZBp/P	HFRE-280/A1FZBp/P	HFRE-320/A1FZBp/P	
HP		5	6	7	8	9	10	12	
Power supply		AC 1Φ, 220V/50Hz			AC 3Φ, 380V/50Hz				
Dimension (H×W×D)		1380×950×370			1650×1100×390				
Cooling operation	Capacity	kW	15.2	17.2	20.0	22.4	25.2	28.0	32.0
	EER		3.10	3.05	3.17	3.10	3.00	2.92	3.00
	Power input	kW	4.9	5.64	6.3	7.2	8.4	9.6	10.67
Heating operation	Capacity	kW	15.2	17.2	21.0	24.0	26.5	30.0	34.0
	COP		3.45	3.37	3.39	3.25	3.35	3.10	3.27
	Power input	kW	4.4	5.1	6.2	7.4	7.9	9.67	10.4
Capacity adjustment range		---	15%~120%						
Noise		dB (A)	55/52/49	55/52/49	55/53/50	55/53/50	58/53/50	58/53/50	58/53/50
Evaporator type		---	Vacuum Brazed Stainless Steel Plate Heat Exchanger						
Electric auxiliary heat (optional)		Power supply	AC 1Φ, 220V/50Hz						
		Spec.	3kW, 5kW						
Compressor	Type	Inverter							
Fan motor	Type	DC inverter fan motor							
		Front flow							
Pump	Power input	kW	0.37	0.37	0.55	0.55	0.55	0.55	0.55
	Head	m	11.5	10.5	22.5	21.5	19.5	18	16.5
	Water flow	m³/h	2.6	3.0	3.4	3.9	4.3	4.8	5.5
Water pipe	Water inlet	mm	Rp1		Rp1-1/4				
	Water outlet	mm	Rc1		Rc1-1/4				
Operation range under cooling		°CDB	10~48						
Operation range under heating		°CDB	-20~26						

Note:
Rated capacity is tested in the following conditions.
Cooling: ambient temp.35°C, outlet water temp. 7°C
Heating: ambient temp. 7 DB°C/6 WB°C, outlet water temp. 45°C

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Hisense



Hi-Auqa M Series

Air To Water Heat Pump

POWERFUL

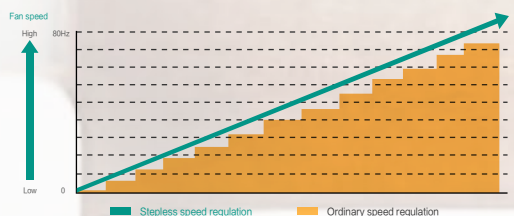
Aviation grade air outlet, and stronger heating performance

The design of the grill follows the design concept of the aircraft engine design, which conforms to the aerodynamics principle. It helps to improve the air supply distance and maximize heating performance.



New DC fan motor, greatly improve the overall performance

DC variable speed motor is used for the outdoor unit fan, improving the motor efficiency by 40% and greatly reducing the input power. Furthermore, stepless speed regulation can be realized according to the changes of ambient temperature, which brings higher regulation accuracy.



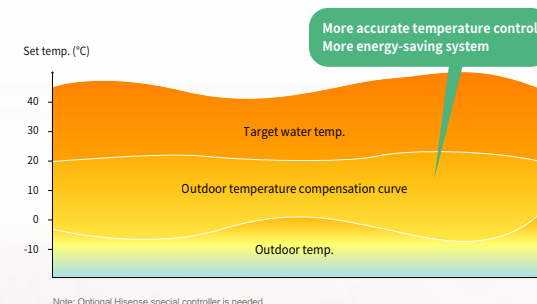
Efficient inverter compressor, provide reliable operation even at low temperature

The inverter compressor can achieve capacity adjustment ranging from 15% to 120%. Also the unit can be started normally even when the ambient temp. as low as -20°C . The max. outlet water temp. is 55°C . And while ambient temp. is -10°C , the outlet water temp. is 50°C ; while ambient temp. is -15°C , the outlet water temp. is 45°C .

EFFICIENT

Adaptive water temperature control, provide stable and uniform temperature

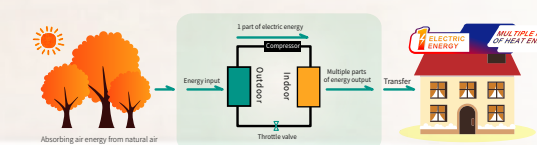
The change of outdoor temperature can be monitored automatically to adjust the water supply temperature accordingly, thereby avoiding large temperature fluctuations in the room and meanwhile saves energy.



Note: Optional Hisense special controller is needed.

High efficiency and eco-friendliness

Using advanced air source heat pump technology, it consumes a small amount of electricity to drive the system. A large amount of free heat energy can be easily absorbed from outdoor air, and transported to the room, bringing you a comfortable environment. This means that 3 parts of free air energy can be obtained from outdoor air only by 1 part of electric energy, to realize multiple parts of heat energy benefits, which saves energy and improves efficiency.



Energy-saving operation, achieving the best energy-saving state

According to the comfort and power saving needs, the water temperature is automatically adjusted to achieve the best energy-saving state based on the ambient temperature change and load requirements.

INTELLIGENT

Intelligent and remote control

Remote control (centralized control) can be realized. The units are equipped with RS485 port, accessible to a third-party smart home system.

Intelligent control, simple and convenient

When a single fan coil unit is started, the outdoor can be started; When all fan coil units are turned off, the outdoor unit will be automatically shut down.

- 2.5D tempered glass panel with golden frame, beautiful and elegant
- Large-screen LCD, easy to read
- Support outlet water temperature adjustment, with an accuracy of 0.5°C
- Support multiple modes, such as energy-saving, quiet, and floor drying
- Support backlight six-level adjustment
- Support standard time setting and schedule setting
- Support one button to start the water pump for trial operation
- Support automatic water temperature adjustment
- With 485 interface, support Modbus RTU protocol, can be connected to third-party smart home system

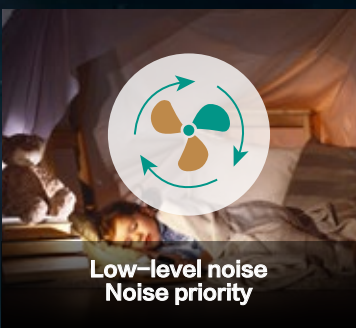
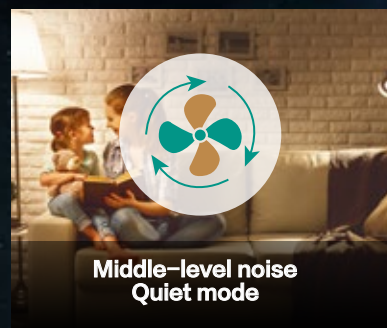
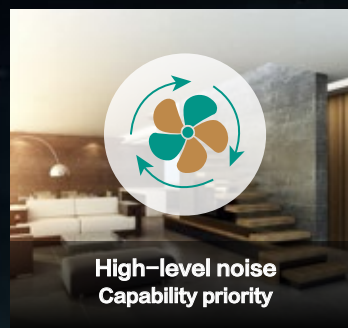
Fan coil linkage control

When a single fan coil unit is started, the outdoor can be started; When all fan coil units are turned off, the outdoor unit will be automatically shut down.

COMFORTABLE

Various quiet modes, to create high-quality quiet environment

The unit can work in three-level noise mode, normal mode, quiet mode and low-noise mode.

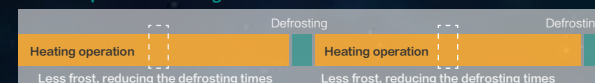


Intelligent defrosting mode

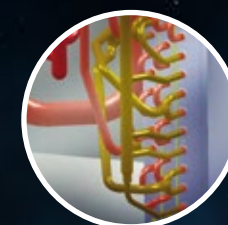
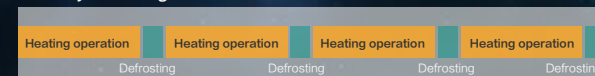
The outdoor unit is equipped with an outdoor temperature sensor and heat exchanger temperature sensor for variable parameter defrosting. This ensures accurate defrosting timing, which effectively solves the problem of "no defrosting when there is frost; defrosting performed when there is no frost". The frosting volume per unit time is significantly reduced, only 1/3 of that in the ordinary defrosting mode.

Besides, a unique bottom anti-frosting design structure and "two-in and one-out" heat exchanger are provided to make sure that the bottom of outdoor heat exchanger is free from frosting in winter, and during defrosting, the ice-water mixtures left along the fins are fully heated to liquid state and then discharged by the bottom hole, thus avoiding the poor heating effect resulting from frost accumulation at the bottom.

Hisense optimal defrosting mode



Ordinary defrosting mode



Bottom anti-frosting function during heating

For the ordinary defrosting mode, only two parameters, i.e., time and temperature (outdoor temperature sensor and heat exchanger sensor), are considered. For the pressure defrosting mode adopted by Hisense, in addition to the above two parameters, pressure signals are introduced. The pressure, temperature and time parameters are used for variable parameter defrosting, which ensures accurate defrosting timing.

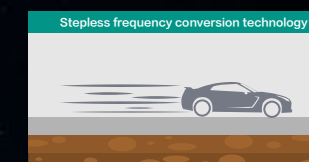
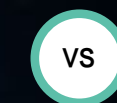
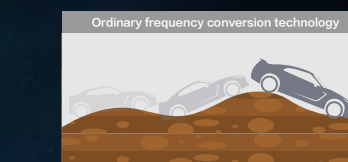
Stepless inverter technology, realize constant temperature and provide comfortable experience

Accurate temperature control

When the system starts, the stepless frequency conversion technology makes the indoor temperature reach the set value quickly by accelerating the rotation frequency of the compressor. After reaching the set value, the indoor temperature is maintained accurately by control of the compressor speed, to reduce temperature fluctuations, keep the indoor temperature constant and provide a more comfortable experience.

Free adjustment, better comfort

The stepless frequency conversion technology realizes the high power and energy efficiency of the unit, providing economical operation and bringing natural and comfortable experience. Continuous and accurate adjustment can be achieved based on the system capacity to improve comfort with a smoother change curve.



Note: The noise in the quiet mode is 3-8 dB lower than that in the normal mode; noise in the night shift mode is 6-11 dB lower than that in the normal mode.