MULTI-FUNCTION Series

3in1 Home Central Air Conditioning ·Radiant Floor Heating·Domestic Hot Water 3 in 1

Hisense Multifunction VRF System is a multifunctional intelligent ecology home system with integration of home central air conditioning, radiant floor heating and domestic hot water. Utilizing high efficient DC inverter technology, air source heat pump technology and heat recovery technology, it builds a more intelligent and more comfortable modern home life.

- High Efficiency
- Comfort and Health
- Hidden Beauty
- Wide Operation Range
- Stable and Reliable



Note: The water tank could be sourced locally, Please contact with technicians for specification required.

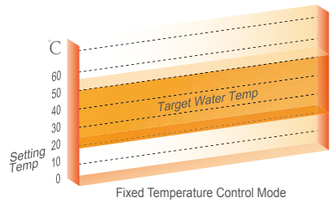
Radiant floor heating is the most comfortable, optimal heating system nowadays.

Hisense Multifunction VRF radiant floor heating system utilizes Hisense's leading multi-split technology and advanced air-source heat pump technology, which is outstanding in floor heating system with integration of high efficiency, comfort and environmental protection.

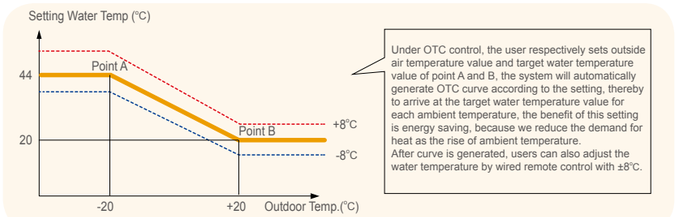
Dual Water Temperature Control Technology

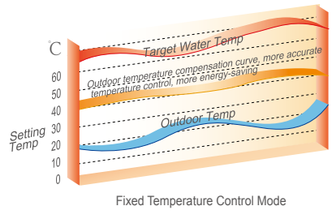
Fixed Water Temperature Control (Fix Control Mode):
The supplied water temperature maintains constant during operation, Users can set supplied water temperature value within the range of 20~55℃.

Variable Temperature Control (OTC Control Mode):
System automatically adjusts water temperature according to temperature compensation curve basing on outdoor temperature to achieve optimum indoor temperature and reduce system power consumption. The compensation curve can also be adjusted manually according to operation conditions to realize energy saving.



Fixed Temperature Control Mode





Fixed Temperature Control Mode

Safe and Reliable

Floor heating pipes are laid under the floor with advantages such as good stability, less vulnerable to external damage and corrosion, and its lifespan is almost the same with the building. Compared with other heating equipment, the cost of repair and maintenance afterwards is greatly reduced. At the same time, gas leak, explosion or other accidents caused by gas or stove can be avoided.

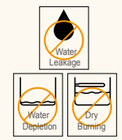
Operation protection of the water system

Starting water pump automatically to avoid water scale generation and ensure the operation of water pump, three-way valve or other waterways parts.



Water system safeguards

Besides safety valve and exhaust valve, the water flow switch and low pressure switch have been added into system, which can effectively avoid water leakage, water depletion, electric heater dry burning and other accidents.

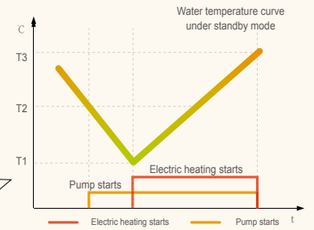


Antifreezing Protection of Water System

Automatic antifreezing function can avoid pipe cracking, leakage and other accidents when equipment is not used in winter.

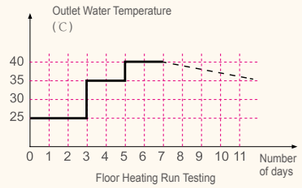
Under standby mode

Constantly test the water temperature of inlet and outlet pipes. When the temperature is below T2, the pump starts. When the temperature is below T1, the pump and electric heating start until the water temperature rises to T3.



Commissioning Protection of Floor Heating

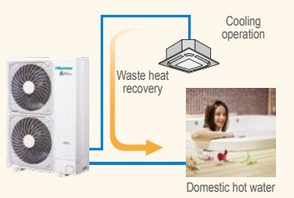
Floor heating pipes need to warm gradually at the beginning of operation, in order to prevent problems such as floor deformation or leakage caused by sudden heat. Commissioning protection can ensure safe run testing.



Floor Heating Run Testing

Hisense Multifunction VRF hot water system enables constant healthy hot water supply around the clock

Multiple Hot Water Production Mode



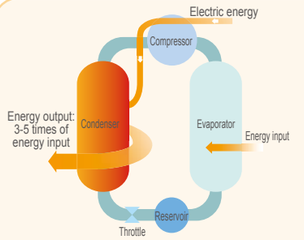
Heat Recovery Mode

Under cooling operation in summer, the heat discharged from outdoor unit can be recovered directly and used for heating domestic hot water, allowing you to enjoy free and convenient hot water supply.

Power consumption analysis

When heating water by heat recovery mode, indoor unit performs cooling operation, the heat discharged from indoor unit is recovered and used for heating domestic hot water. Producing domestic hot water does not consume additional power, thereby the produced domestic hot water can be regarded as being acquired free of charge.





Heat Pump Mode

When the desired domestic hot water temp is below 55°C, hot water can be heated using air source heat pump, saving more than 60% of electricity than direct electric heating.

Power consumption analysis

When using heat pump to heat hot water, power consumption required for producing one share of hot water is only 33% of the heat required for heating hot water when COP=3.0.





Electric Heating Mode

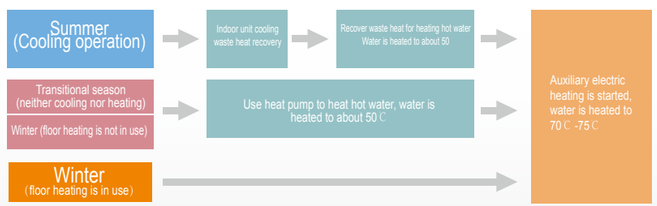
When the desired domestic hot water temp is higher than 55°C, use energy-efficient heat pump to heat water to 55°C, then use auxiliary electric heating to heat water to a high temperature up to at most 75°C.

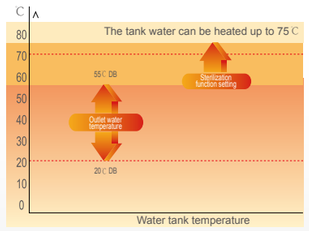
Power consumption analysis

When heating hot water by electric heating, heat required for producing one share of hot water need consume electricity equivalent to the same amount of heat in the case of 100% of efficiency conversion.



Multifunction VRF Hot Water Production Flow and Water Tank Temperature Range





Note: The actual data are closely related to using environment and conditions, the above data are for reference only.

Hisense home central air conditioning has been widely recognized by the market and users owning to its intelligence, comfort, high-efficiency and energy saving.
Requirements for high-quality decoration and more comfort in villa and luxury residence make Hisense home central air conditioning play a principal role in home daily life.
Hisense, the mark of high-quality life!

Delicate and Convenient

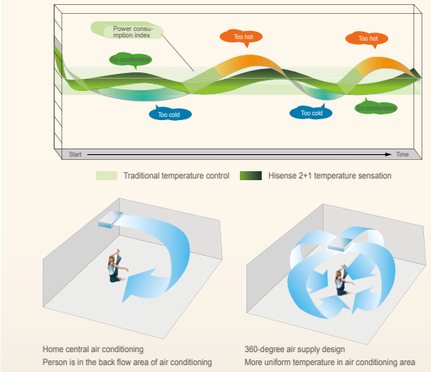
Outdoor unit can be easily installed in small space, one outdoor unit can simultaneously satisfy the need for cool and warmness of multiple rooms, extending indoor exquisiteness and beauty to outdoors at the meantime.



"Three-dimensional" Cozy and Warm Feeling

Unique 2+1 dimensional temperature sensation

Three temperature sensors including particular one on indoor unit air outlet can intelligently sense the temperature change of each sensitive point indoors and outdoors, dynamically calculate and adjust real-time output of compressor system, and balance the energy exchange variation of each room. Soft air supply keeps tiny temperature fluctuations in an optimum condition and brings gentle refreshing and intimate warmth.

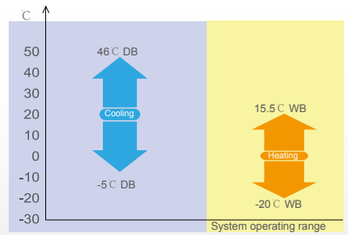


Comfortable air supply

Hisense indoor unit can adopt multiple air supply modes such as ceiling-supply and ceiling-return, side-supply and back-return, side-supply and bottom-return etc. according to room structure, making the air flow distribution more excellent. The airflow can be distributed to every corner, more uniform temperature distribution and more comfort .

Wide Operating Range

System can handle a wide range of outside air condition. The lowest temperature in winter is -20°C WB, which can meet the heating needs of cold regions.





Outdoor Unit Parameters

Model			AFW-38U4SC	AFW-48U4SC	AFW-54U4SC
Heating(A2W)	Rated Capacity (1)	kW	11.2	14	16
	Rated Power (1)	kW	2.51	3.21	3.77
	COP (1)	-	4.46	4.36	4.24
	Capacity (A 2°C/W 35°C)(2)	kW	8.96	11.2	12.8
	COP (A 2°C/W 35°C)(2)	-	3.12	3.05	2.97
	Capacity(A -7°C/W 35°C)(3)	kW	8.6	10.8	12.3
	COP (A -7°C/W 35°C)(3)	-	2.2	2.14	2.09
Energy Efficiency Grade	Heating (35°C)		A+	A+	127%,A+
	Heating (55°C)		A+	A+	118%,A+
Cooling(A2A)	Rated Capacity (4)	kW	11.2	14	15.5
	Rated Power (4)	kW	2.99	3.92	4.44
	EER (4)	-	3.75	3.57	3.49
Heating(A2A)	Rated Capacity (4)	kW	12.5	16	18
	Rated Power (4)	kW	2.98	4.03	4.74
	COP (4)	-	4.19	3.97	3.8
Outdoor Units	Outer Dimensions (Height × Width × Depth)	mm	1380×950×370		
	Weight	Kg	102	103	104
	Sound Pressure level (5)	dB(A)	50/53	51/54	53/55
	Sound Power Level (5)	dB(A)	67	68	69
	Power Supply	Φ,V,Hz	AC1Φ,1220-240~, 50Hz		
	Inverter Type	-	DC Inverter		
	Cabinet Color	-	ivory White		
	Heat Exchanger	-	Multi-Pass Cross-Finned Tube		
	Compressor Type	-	Hermetic (Scroll)		
	Compressor Output	kW	2.2	2.5	2.8
	Compressor Startup Mode	-	Directly startup		
	Fan Type	-	Axial flow fan		
	Fan Output	w	51×2	51×2	51×2
	Fan Air Volume	m^3/min	90	90	100
	Fan Startup Mode	-	Directly startup		
	Cooling Operation Range (Outdoor Air Inlet Temperature)	°C	-5 ~ 43		
	Heating Operation Range (Outdoor Air Inlet Temperature)	°C	-23 ~ 15		
	Floor Heating Operation Range (Outdoor Air Inlet Temperature)	°C	-23 ~ 15		
	Domestic Hot Water Operation Range (Outdoor Air Inlet Temperature)	°C	-23 ~ 43		
Installation Data	Liquid Line	mm	Φ9.53		
	High Pressure Gas Line	mm	Φ12.7		
	Gas Line	mm	Φ15.88		
Refrigerant	Type	-	R410A		
	Refrigerant Charge	kg	3.6		
	Flow Control	-	Micro-Computer Control Expansion Valve		

NOTES:

When the connectiong capacity rate or indoor unit and outdoor unit is 100%,the cooling capacity and heating capacity are based on the following conditions:

1. Heating(A2W) conditions: Water inlet/outlet temperature:30°C DB(86°F DB)/35°C DB(95°F DB), Outdoor air inlet temperature:7°C DB(45°F DB), 6°C WB(43°F WB)
2. Heating(A2W) conditions: Water inlet/outlet temperature:30°C DB(86°F DB)/35°C DB(95°F DB), Outdoor air inlet temperature:2°C DB(35.6°F DB)
3. Heating(A2W) conditions: Water inlet/outlet temperature:30°C DB(86°F DB)/35°C DB(95°F DB), Outdoor air inlet temperature:-7°C DB(19.4°F DB)
4. Cooling(A2A) conditions: Piping length: 7.5 meters Indoor ait inlet temperature: 27°C DB(80°F DB), 19.0°C WB(66.2°F WB) Outdoor air inlet temperature:35°C DB(95°F DB) Heating(A2A) conditions:Indoor air inlet temperature: 20°C DB(68°F DB), 15.0°C WB(59°F WB) Outdoot air inlet temperature: 7°C DB(45°F DB),6°C WB(43°F WB)
5. The sound pressure level is based on following conditions: 1Meter from the unit service cover surface, and1.5 Meters fron floor level, The above data was measure in an anechoic chamber so that reflected sound should be taken into consideration in the field
6.The final appearance of outdoor unit is subject to the actual product.

Hydronic Module



Model			AFM-54EX4SA
Power Supply			AC1Φ, 220~240V/50HZ
Rated Cooling Capacity		kW	–
Rated Heating Capacity		kW	16
Electrical Heater Capacity		kW	3
Shell	Cabinet Color		Ivory White
	Materialr		Steel
Dimensions (Height × Width×Depth)		mm	890×520×320
Weight	Net Weight	kg	58
	Gross Weight	kg	74
Water Pump	Type		Constant
	Lift	kpa	60
	Input	W	151
Water Pipe	Type		Plate heat exchanger
	Number		1
	Water Storage Capacity	L	2.91
	Minimum Flow	L/min	18
	Rated Flow	L/min	45.8
	Maximum Flow	L/min	-
	Insulation Material		Foamed plastic
Expansion Tank	Volume	L	8
	Maximum Pressure	bar	3
	The pre pressure	bar	1
Water Filter	Pore Size	mm	1
	Material		Brass
Water Circulating System	Interface Size	inch	G1-1/4”
	Pipe Size	inch	G1-1/4”
	Safety Valve Specification	bar	3
	Total Water Storage	L	-
Refrigerant circulating System	Gas Pipe Size	mm	Φ12.7
	Liquid Pipe Size	mm	Φ9.53
Sound Pressure Level		dBA	32
Operation range	Temperature of Outdoor Air	°CDB	-23~43
	Temperature of Water Supply	°C	20~55

Central Hot Water Tank



Note: The water tank could be sourced locally, Please contact with technicians for specification required.