

FocusAir™ Series

25.5 ~ 70 kW

REFRIGERANT PUMP

Stable Cooling,
Higher Reliability



High Cooling
Efficiency



Stable
Operation



Energy
Saving



Flexible
Configuration

Refrigerant Pump Assisted Free Cooling Energy-saving Precision Cooling



Refrigerant Pump Assisted Free Cooling Energy-saving Precision Cooling provides you with perfect solution.

Refrigerant Pump Assisted Free Cooling products, it can fully use of natural cold source to reduce the power consumption. Based on the standard natural cooling unit, it can achieve the cooling function using the compressor system or the Refrigerant Pump system through the refrigerant cycle.

◆ Composition

Refrigerant Pump Assisted Free Cooling products is consisted of three parts, including indoor unit, outdoor unit and energy-saving module; it has the same installation and using mode as standard air cooling unit, which can also has the advantages of simple installation and maintenance.



Indoor Unit + Flat Outdoor Unit + Energy Saving Module



Indoor Unit + Centralized Outdoor Unit(With refrigerant pump kit)

Advantages/Technical Parameters

◆ Operation Features

Compressor Mode

When it has no condition of opening Refrigerant Pump Assisted Free Cooling energy-saving system at high outdoor ambient temperature, the compressor should be started for conventional cooling of compressor.

Refrigerant Pump

When it has condition of opening Refrigerant Pump Assisted Free Cooling energy-saving system at low outdoor ambient temperature, the compressor cooling system should be closed and Refrigerant Pump energy-saving system should be started for cooling.

Mixed Mode

When the outdoor ambient temperature is lower but the cooling capacity of refrigerant pump fails to meet the full load of the load, the refrigerant pump and compressor should run simultaneously to dig out the maximum efficiency of compressor and realize energy-saving operation.

◆ High-efficiency and Energy Saving

- ◆ When outdoor ambient temperature is high, high energy efficiency compressor should be adopted for cooling and realizing high efficiency and energy saving
- ◆ When outdoor ambient temperature is low, the compressor should be turned off and Refrigerant Pump energy-saving system should be adopted for cooling, which greatly reduces the power consumption of the unit
- ◆ Mixed mode ensures that the refrigerant pump and compressor work simultaneously, enabling energy-saving operation during transition season
- ◆ Single compressor cooling system is equipped with one refrigerant pump free cooling energy-saving module, and dual compressor cooling system is equipped with two Refrigerant Pump Assisted Free Cooling energy-saving modules to ensure that all the compressors can be turned off when outdoor ambient temperature is low so as to make full use of natural cooling source and reduce energy consumption
- ◆ Intelligent energy-saving controller ensures high-efficient and stable operation of the unit

◆ High Reliability

- ◆ It uses high-quality parts and components that have gone through market test for long time
- ◆ The advanced and reliable controller ensures that the unit automatically and accurately switches cooling operation mode, and it provides a variety of protection functions to ensure the safe and reliable operation of the unit
- ◆ It has intelligent control system with real-time fault diagnosis and alarm prompt

◆ Easy to Use

- ◆ Highly integrated and modular design, simple installation and easy maintenance are available
- ◆ 100% full frontal maintenance
- ◆ Standard RS485 interface is provided for remote monitoring



Technical Parameters

▼ MatrixAir™ Refrigerant Pump Assisted Free Cooling Energy-saving Precision Cooling

MT****A	Unit	025	030	035	040	045	050	060	070	080	090	100	120
Total cooling capacity ¹⁾	kW	26.9	32.7	37.2	41.8	45.9	51.7	61.7	71.7	81.8	92.1	101.3	123.0
Sensible capacity ¹⁾	kW	24.2	29.4	33.4	37.6	41.3	46.5	55.5	63.9	73.6	82.8	91.1	110.7
Air volume	m³/h	9000	10000	11000	12600	13000	13600	20000	22000	25200	26000	27200	27500
Heating capacity	kW	6	9	9	9	9	9	9	9	9	12	12	12
Compressor quantity	pcs	1	1	1	1	1	1	2	2	2	2	2	2
Humidification capacity (Wet film humidification)	kg/h	3	3	3	3	3	3	6	6	6	6	6	6
Humidification capacity (Electrode humidification)	kg/h	6	8	8	8	8	8	8	10	10	10	12	12
Number of fans	pcs	1	1	1	1	1	1	2	2	2	2	2	2
Fan type	/	EC fan											
Full load current (With heater and humidifier)	A	35.3	42.4	41.6	43.0	49.7	54.5	68.4	70.4	68.8	71.6	85.0	94.6
Unit Weight	kg	300	350	380	380	410	410	660	680	680	730	730	800
Unit Width	mm	928	928	928	928	928	928	1828	1828	1828	1828	1828	2228
Unit Depth	mm	995	995	995	995	995	995	995	995	995	995	995	995
Unit Height	mm	1975	1975	1975	1975	1975	1975	1975	1975	1975	1975	1975	1975
Condenser	kcs	036	042	048	054	064	072	042*2	048*2	054*2	064*2	072*2	084*2

Notes:

- 1.Data above is based on indoor return air temperature 24°C/50%RH, the compressor mode is based on the outdoor ambient temperature of 35°C, and the Refrigerant Pump Assisted Free Cooling Energy-saving mode is based on the outdoor temperature of -5 °C
2. The recommended outdoor unit model is suitable for working conditions where the equivalent length of the outdoor unit connecting pipe is less than or equal to 60
3. Shenzhen Kstar Science & Technology Co., Ltd. reserves the right of final interpretation of the data without prior notice if the data in the table is changed due to technical progress of the product.

▼ FocusAir™ Refrigerant Pump Assisted Free Cooling Energy-saving Precision Cooling

FS***	Unit	025	025	030	030	040	050	060	070
Total cooling capacity ¹⁾	kW	25.5	25.5	30.5	30.5	42.8	52.0	65.0	70.0
Sensible capacity ¹⁾	kW	25.5	25.5	30.5	30.5	42.8	52.0	65.0	70.0
Air volume	m³/h	5050	7000	5050	8000	9500	11000	12500	14200
Unit weight	kg	230	265	240	290	290	345	360	375
Unit width	mm	300	600	300	600	600	600	600	600
Unit depth	mm	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200
Unit height	mm	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200

Notes:

1. Data above is based on indoor return air temperature 35°C/28%RH, the compressor mode is based on the outdoor ambient temperature of 35°C, and the Refrigerant Pump Assisted Free Cooling Energy-saving mode is based on the outdoor temperature of -5 °C.
2. Shenzhen Kstar Science & Technology Co., Ltd. reserves the right of final interpretation of the data without prior notice if the data in the table is changed due to technical progress of the product.

Founded in 1988, for long time we have specialized in research, development, and manufacturing of **UPS, Precision Air Conditioner and Modular Data Center, Battery, PV Inverter, Energy Storage, and EV Charger** for over 30 years. It is a leading provider of comprehensive solutions in the smart energy sector.

