



Compact design & easy maintenance

18 SEER



MRCOOL
Address: 1315 College Street
Clarksville TN 37040
Email: sales@mrcool.com
mrcool.com

Specifications and appearance are subject to change without notice. Copyright ©Mrcool. All rights reserved.

GC-1310-1



Distributor information



Inverter Ducted Air Conditioner



This newly designed high efficiency household air conditioner works hard saving consumers' money from the very beginning. With its competitive purchase price to cost - saving 18 SEER efficiency, this unit can be installed in many different applications: single family homes, villas, office buildings, hotels, etc.



For more details visit www.mrcool.com

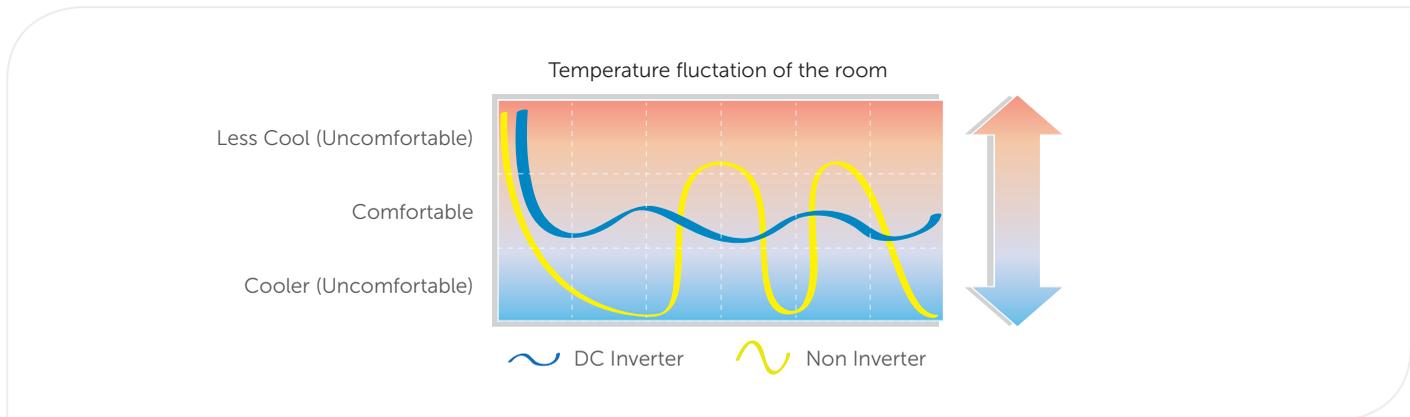
High Efficiency

High Efficiency Inverter Compressor

Large-power Startup and Low-power Operation

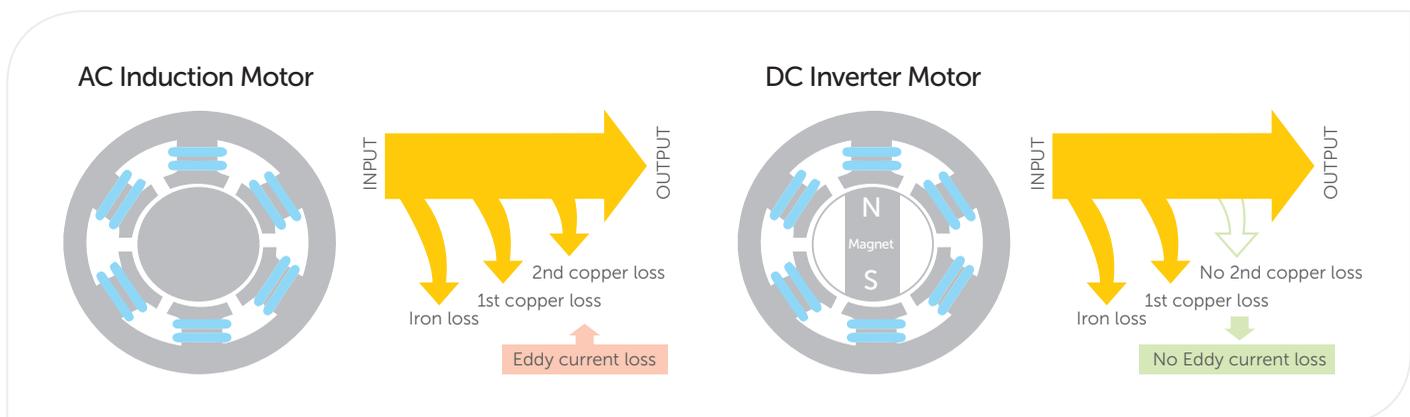
The DC inverter compressor will run cooling at the largest power input and largest airflow each time it is started until the set temperature is approached. Then, it runs at a low speed and low power input, which will not only keep the temperature from fluctuating, but will also avoid frequent starting and stopping of the compressor, in result, prolonging its service life.

Taking a room of 160ft² as an example, the air conditioning time of the DC inverter unit is 6-10 minutes shorter than that of the non-inverter one. After the set temperature is reached, the DC inverter compressor will run using 90% less energy than the non-inverter compressor, therefore resulting in temperature loss being controlled and keeping temperatures at steady settings. Which cuts down on the electrical consumption and greatly improves the energy efficiency.



High Efficiency PMSM

As for the DC inverter compressor with the permanent magnetic synchronous motor (PMSM), there is no current through the motor rotor, no eddy current loss, and little heat produced, which means less ineffective power loss so that the motor's efficiency is improved and the power input is reduced greatly.



High Efficiency

High Efficiency Fan Motor

High-efficiency motors are used and will save power significantly.

Stepless Regulation

According to customer's needs, system output and operating frequency can realize stepless regulation within 10%~120% and 22Hz~80Hz respectively. Thus, energy efficiency is improved.

180° Vector Control technology

With DC Inverter 180° Vector Control technology, the compressor can run more smoothly. According to spectral analysis, the harmonic wave of the DC inverter compressor is smaller than that of a common inverter compressor. With lesser heat output and higher energy efficiency, the motor can save up to 20% energy consumption per year.

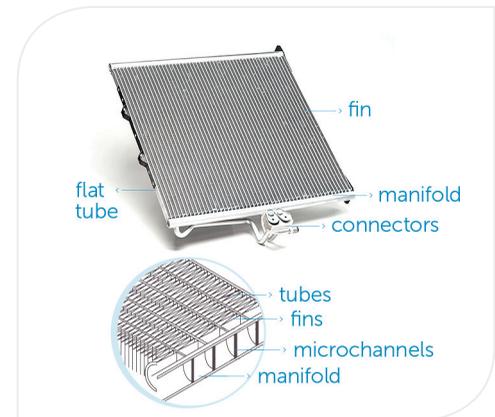
High Efficiency Heat Exchanger

High Efficiency Fan Motor

Micro Channel Heat Exchanger*

Micro Channel Heat Exchanger (MCHX) transfers heat through multiple flat fluid-filled tubes containing small channels, which can enhance the heat transfer coefficient so that the heat exchange efficiency is increased by 30% compared to the normal finned tube heat exchanger.

Note * for cooling only condensing unit.



Evaporator

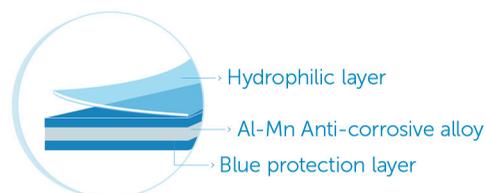
Inner Groove Copper Pipe

Special thickened inner groove copper tube enhances heat exchanging performance.



Hydrophilic Blue Fin

Highly anti-corrosion blue hydrophilic coated aluminum fin has longer lifespan than common fin. Heat exchange circuit is optimized in design to best utilize the heat exchanging capacity of evaporator.



Better Comfort

Quiet Design

Low Running Noise with Quality Insulation

The inverter compressor is insulated with a high quality noise absorption sponge, which is capable of reducing the running noise remarkably, e.g. by 3-4dB at the highest frequency.



Lower Running Noise at Lower Running Frequency

The inverter compressor and fuzzy control technology, adopted by inverter air conditioner, are able to control the cooling speed according to the indoor temperature change. It features the low noise and it is proved by the test that the noise of the inverter air conditioner is lower and service life is 5-8 years longer, compared with the non-inverter air conditioner.

Low Noise Fan Motor

System adopts low noise motor and optimized 3-dimensional stream blades so that there is lower noise while efficiency is ensured.

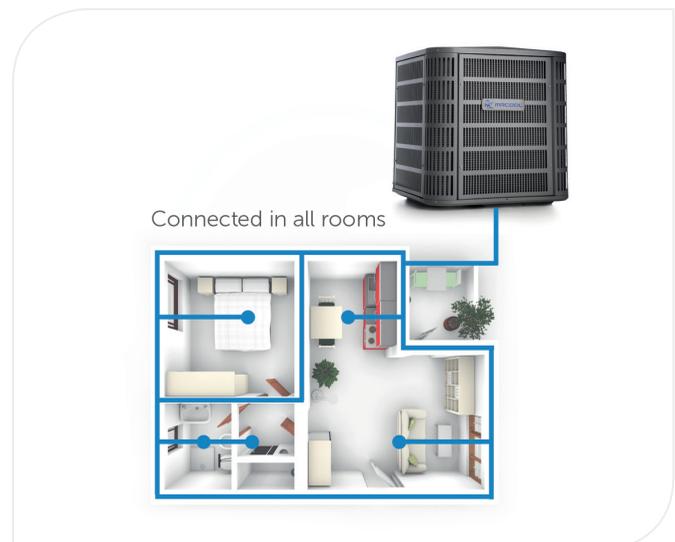
Comfortable Airflow

High ESP Design

The high static pressure design of indoor unit can ensure enough air volume for every room that is connected to the system. Comfort level of every room is guaranteed.

High ESP Design

The duct connects with multiple diffusers to ensure even distribution of airflow and optimizes the air quality.



High Reliability

Strong Anti-corrosion

Moisture Resistance and Damp-proof

This system can still operate reliably even under damp or wet conditions, thanks to both the damp-proof design of the electric box and the damp-proof oil that coats the control board.

Humidity-status tests (working condition: 30/29) and rainfall tests (full-range and severe rainfall on the entire unit) have been taken to the system. Moisture resistance grade is IP24.

Anti-corrosive

The outer case of outdoor unit is made of painted steel and galvanized to prevent corrosion and rust effectively.

It passed a **1000-hour** test in salt mist and proved to be corrosion-proof.

Wide Operation Voltage Range



The unit can safely operate within 187~254V.

Comprehensive Protection

High/low pressure protection

When suction pressure is too low or discharge pressure is too high, compressor will stop, and unit displays a malfunction code.

Over current protection

Once the current of the compressor is higher than the normal level, compressor will stop and the unit will display a malfunction code.

Reverse (open) phase protection

Once the phase sequence of power supply is incongruent or the phase is absent, unit will shut off to protect itself from damage.

Overload protection

Compressor has its own overheat protection. Once the temperature of compressor is higher than allowable level, compressor will stop and only when temperature recovers, compressor will restart.

Discharge high temperature protection

Once the discharge temperature of the compressor is higher than allowable value, compressor will stop and the unit will display a malfunction code.

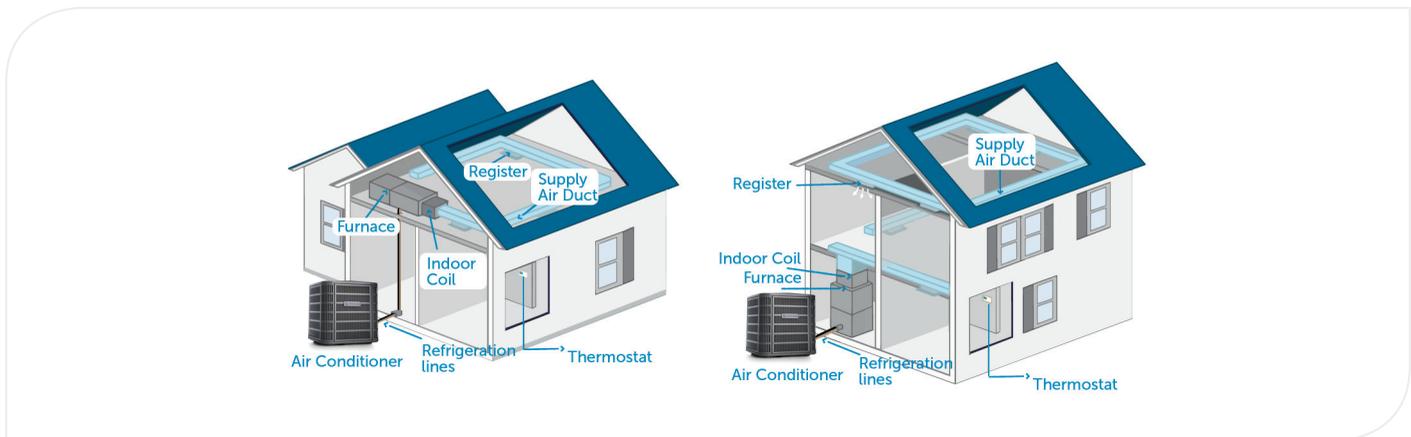
Temperature sensor alarm

Once temperature sensor is off or short-circuited, system will indicate the error code and give an alarm.

Good Versatility

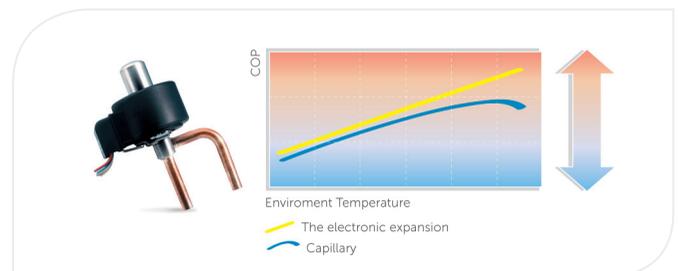
Easy Installation

The indoor unit can be installed with either horizontal or vertical furnace so as to meet various installation requirements.



Flexible Electronic Expansion Valve

The electronic expansion valve guarantees that the system makes adjustments automatically according to the changes of the circumstances and water temperature. It is more energy saving and stable than capillary.



Compact Design & Easy Maintenance

The newly designed 4-sided detachable case is capable of not only accommodating the large-sized electric box, but also keeping a compact structure. The compact design of the indoor and outdoor unit helps to reduce the installation space and transportation cost. The fan system is dismountable to simplify the maintenance.



Intelligent Control

Precise Temperature Control

Both wired thermostats and outdoor units are furnished with a temperature sensor, which can precisely detect the outdoor and indoor temperature. The compressor can then adjust the power input based on the change of the indoor and outdoor temperature, as to supply more even airflow, which provides the occupants a more comfortable setting.

Indoor Unit Separate Control

Indoor units are separately controlled through the wired thermostat. Even though the unit is turned off, FAN mode can still be realized through the Fan button on the wired controller.

Memory Function (optional)

Two statuses of "Memory On" and "Memory Off" can be configured for the thermostat. This function can save the repeated setting owing to any power failure.

When the controller is set to "Memory On", the controller can memorize the running status before the power failure and resume the previous running status after the power restoration.

When the controller is set to "Memory Off", the running air conditioner will go to the standby status in the event of power failure.

Other Functions

ON/OFF timer function | Switch between °C and °F | Filter-wash awake | Thermostat button lock

Intelligent Control

Outdoor Unit

MODEL	COOLING ONLY		MAC18024	MAC18036	MAC18042	MAC18048
Capacity	Cooling	BTU/h	24000/20000	35000/31000	41000/35000	48000/46000
Power supply		V/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
Refrigerent charge volume		kg	1.8	2.55	2.9	3.5
Power input	Cooling	kW	1.96	2.98	3.57	3.85
Rated current	Cooling	A	13	18	21	25
Air flow volume		CFM	1764	3530	3530	3530
		m ³ /h	3000	4500	5400	5567.5
Sound pressure level		db(A)	57	62	63	63
Dimension (WxDxH)	Outline	inch	24x24x24.4	27.9x27.9x28.9	27.9x27.9x33.4	29.5x29.5x33.4
	Package	inch	25.6x25.6x25.7	30.4x30.4x29.7	30.4x30.4x34.8	30.4x30.4x39.5
Net weight / Gross weight		lbs	114.6/123.4	156.5/165.3	169.7/182.9	211.6/242.5
Connection pipe diameter	Liquid	inch(mm)	φ3/8(9.52)	φ3/8(9.52)	φ3/8(9.52)	φ1/2(12.7)
	Gas	inch(mm)	φ5/8(15.9)	φ3/4(19.05)	φ7/8(22.2)	φ7/8(22.2)
Loading quantity	40'GP/40'HQ	set	162/216	135/135	90/135	90/90

Air Handler

MODEL			MAH18024	MAH18036	MAH18042	MAH18048
Capacity		BTU/h	24000	35000	41000	48000
Power supply		V/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
Motor type		-	AC	DC	DC	DC
Power input		kW	0.13	0.32	0.238	0.238
Rated current		A	0.52	3.6	4.6	4.6
Air flow volume		CFM	825	1140	1300	1400
		m ³ /h	1200	1954	2209	2400
External statics pressure		Pa	25	37	37	50
Sound pressure level		db(A)	44	52	52	52
Dimension (WxDxH)	Outline	inch	20.9x21.2x43.5	20.9x21.2x48.1	24.4x21.2x48.1	24.4x21.2x48.1
	Package	inch	22.5x23.2x45.6	22.5x23.8x50.3	25.8x24.4x50.3	25.8x24.4x50.3
Net weight / Gross weight		lbs	125.6/134.4	138.8/152.1	163.1/178.5	163.1/178.5
Connection pipe diameter	Liquid	inch(mm)	φ3/8(9.52)	φ3/8(9.52)	φ3/8(9.52)	φ1/2(12.7)
	Gas	inch(mm)	φ5/8(15.9)	φ3/4(19.05)	φ7/8(22.2)	φ7/8(22.2)
Loading quantity	40'GP/40'HQ	set	154/160	112/152	81/108	81/108

Electric Heat Kits Available

NO.	KIT	DESCRIPTION	REF. AIR HANDLER USE
1	HNRd5 / A-D	5kw Heat Strip	18, 24, 30, 36, 42
2	HNRd8 / A-D	8kw Heat Strip	18, 24, 30, 36, 42
3	HNRd10 / A-D	10kw Heat Strip	18, 24, 30, 36, 42
4	HNRd5 -D	Circuit Breaker, 5kw Heat Strip	18, 24, 30, 36, 42, 48
5	HNRd8 -D	Circuit Breaker, 8kw Heat Strip	18, 24, 30, 36, 42, 48
6	HNRd10 -D	Circuit Breaker, 10kw Heat Strip	18, 24, 30, 36, 42, 48
7	HNRd15 -D	Circuit Breaker, 15kw Heat Strip	30, 36, 42, 48
8	HNRd20 -D	Circuit Breaker, 20kw Heat Strip	36, 42, 48

