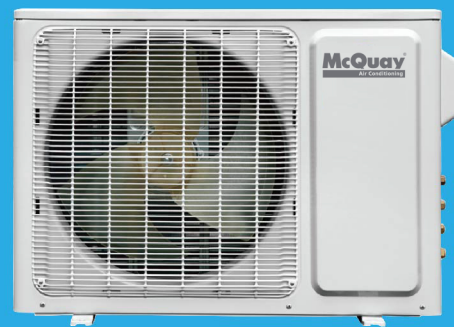


Free Match



Wall mounted type



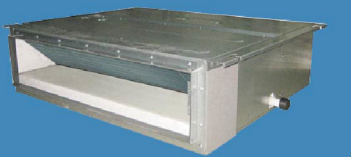
Cassette type



Floor ceiling type



Duct type





Console type



What is Free-match

It's a kind of DC inverter multi-split air conditioner that consists of 1~5 indoor units.

Free Match vs. Residential AC

Free Match	Residential AC
1 outdoor unit can connect up to 5 indoor units.	1 outdoor unit can connect 1 indoor unit only.
Cost-saving for installation.	High cost for installation.
Wide range types of indoor units can be selected by users.	Limited types of indoor units can be selected by users.
Space-saving for outdoor unit placement.	Affect the appearance of the whole building with too many outdoor units.
High efficiency for centralized control of all indoor units.	Low efficiency for the individual control of different indoor units.
	

Applicable Places

Applicable for medium and small size supermarkets, chain stores, hotels, restaurants, offices, meeting rooms, and especially for domestic uses.

Free Combinations

Various series of indoor units from wall-mounted type to duct type can satisfy different kinds of requirements.

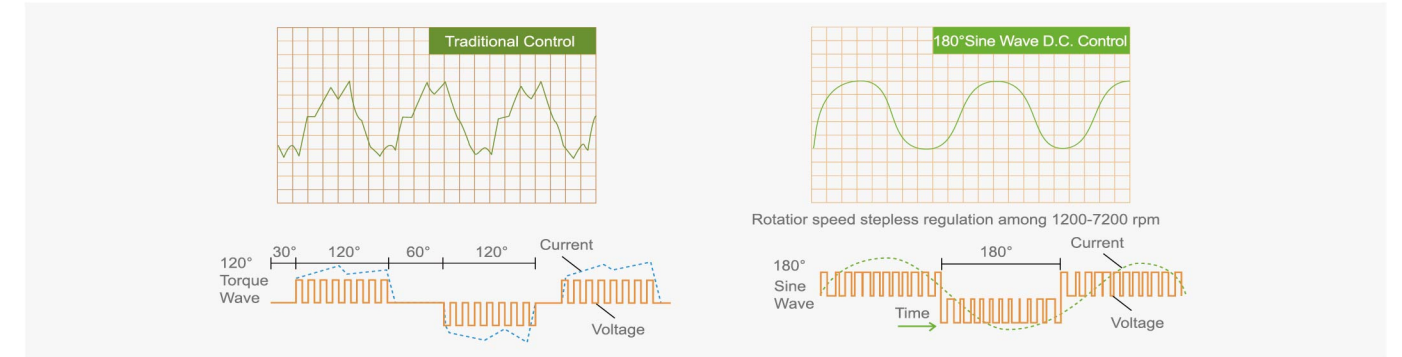


Any kinds of Combinations you want. Max. 5 indoor units for 42K Btu/h outdoor units.

High Efficiency and More Energy-saving

More Energy-saving

Adopt advanced DC inverter 180° vector control driving technology for stable operation of compressor. The harmonic wave for DC inverter compressor is smaller than that of normal inverter compressor, more energy-saving. In view of statistics, DC inverter air conditioner can save 20% energy every year compared with normal air conditioner.



Stepless Adjustment

The system output can be adjusted among 10%~100% according to the requirement of user and the operation frequency can be adjusted among 15Hz~110Hz freely, which can improve the comfort and energy-saving efficiency greatly.

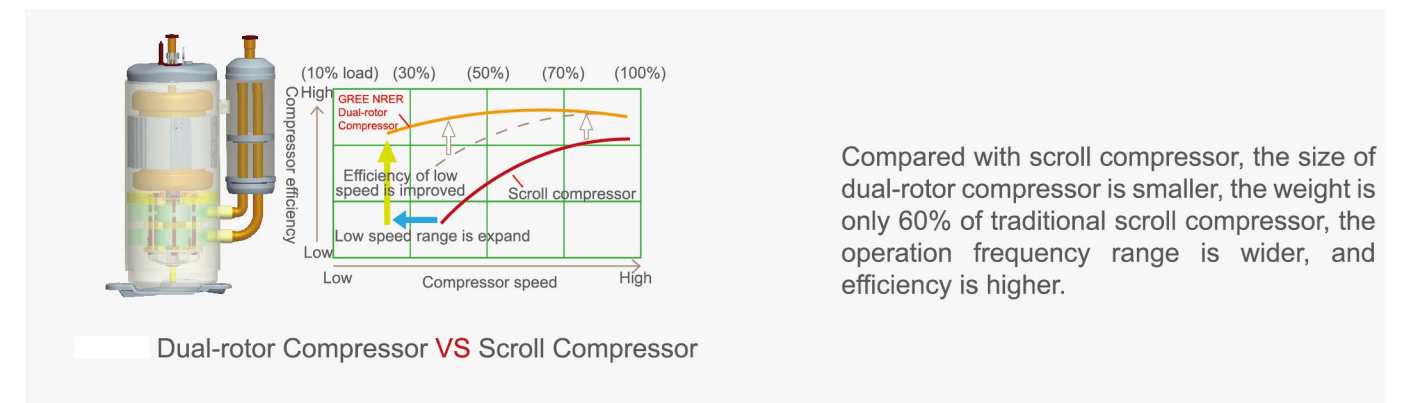
High-efficiency Compressor

The high-efficiency NRER (Non-Rare Earth Reluctance) dual-rotor Inverter Compressor can fully utilize the reluctance torque of the motor for higher torque output. The efficiency can be increase by 5% with same output capacity and the performance of anti-demagnetization is better under high temperature.



Compared with the single-rotor compressor, the dual-rotor compressor overcomes the weakness of the poor balancing performance. Noise and vibration are lower, and stability of low frequency operation is better.

Dual-rotor Compressor VS Single-rotor Compressor

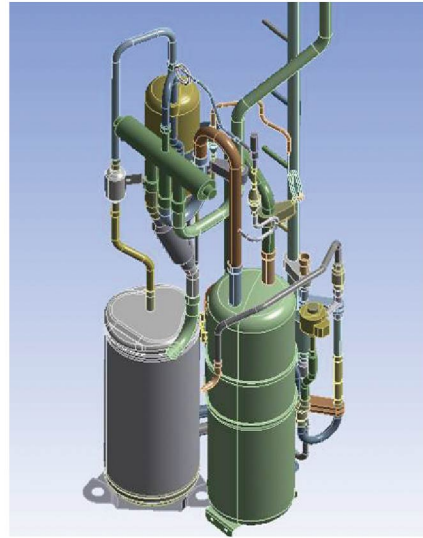


Compared with scroll compressor, the size of dual-rotor compressor is smaller, the weight is only 60% of traditional scroll compressor, the operation frequency range is wider, and efficiency is higher.

Dual-rotor Compressor VS Scroll Compressor

High-efficiency Pipeline System

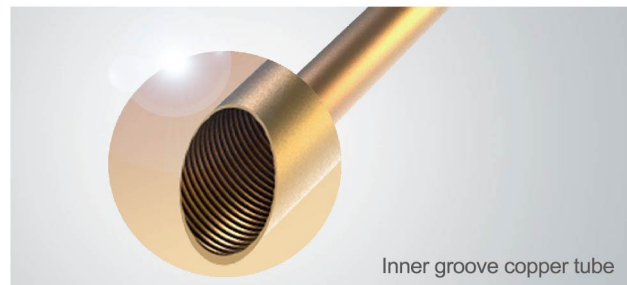
In order to reduce the noise during the operation of components, dynamic simulation of product component is introduced. The 3D simulation of damping design for the pipelines can efficiently eliminate the hydrodynamic noise of refrigerant for ensuring the quiet operation of the system.



High-efficiency Heat Exchanging Technology

High-efficiency Inner-grooved Copper Tube

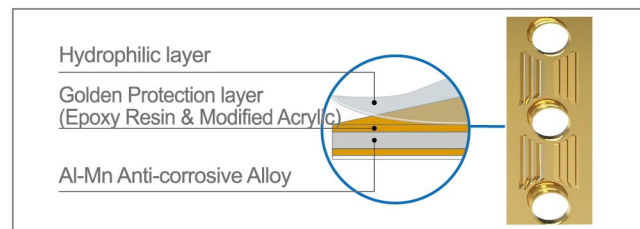
Heat exchanging performance is increased with high efficiency inner-grooved design.



Inner groove copper tube

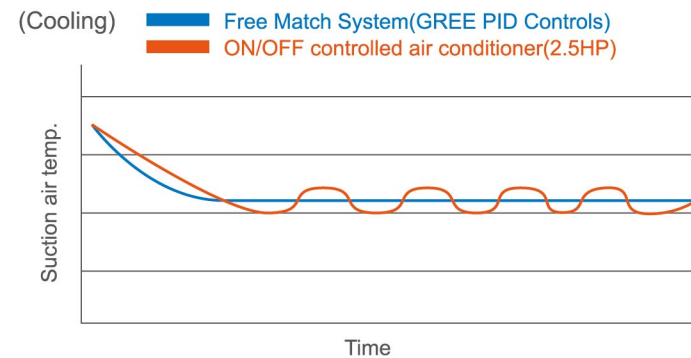
Slit Type Fin with Anti-corrosion Coating

The slit type fin enlarges heat exchange area by 5%. Meanwhile, the anti-corrosive performance in salty-spray testing is 200%~300%, higher than normal blue fin.



Intelligent Control

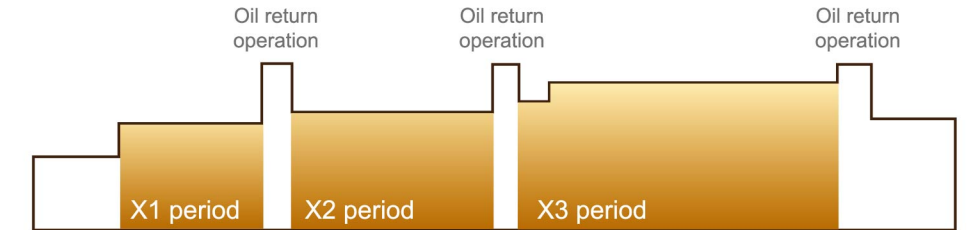
Free Match intelligent control and modulating valves could deliver the required capacity, according to the load variation from 10% to 100%. The intelligent control and modulating valves limit or increase the cooling modulating valves limit or increase the cooling capacity, so humidity and temperature are kept in the comfortable range. Electronic expansion valves respond to the changes in load of indoor units and continually control the flow rate of the refrigerant. In this way, we can get a nearly constant room temperature with the Free Match system without the typical temperature changes that occurs with a conventional ON/OFF control system. The extremely refined PID controls to maintains the room temperature within 0.5°C of the set temperature.



Safety and Reliability

Intelligent Oil Return

Adopting high efficient oil separator, maximum efficiency of the unit reaches to 99%. With intelligent oil return operation, the system will automatically recover the chilled oil efficiently to ensure lubrication of the compressor.



Error Self-diagnosis

Comprehensive troubleshooting codes can identify the errors occurred.

Self diagnostics examples

Error code	Malfunction
E1	High pressure protection of compressor
E2	Indoor anti-frozen protection
E3	Low pressure protection of compressor
E4	Discharge temp. protection of compressor
E5	Compressor overload protection
E6	Communication error
E7	Modes conflict

Adjustable Heating Capacity

Under the low ambient heating (below 0 °C), the heating capacity of the system can be increased automatically to guarantee a reliable and sufficient heating effect.

Convenient and Comfortable

Energy-saving

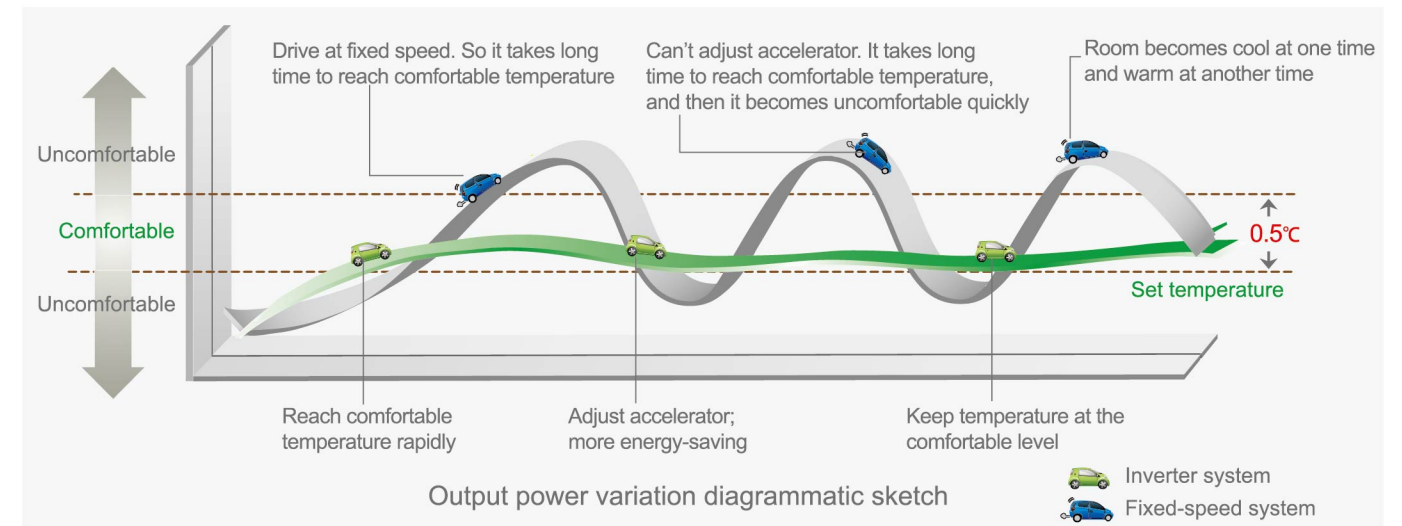
Advanced DC inverter 180° vector control ensures the stable operation for compressor, energy-saving up to 20% per year (compared with the normal air conditioner).

Low Noise

The technology also optimizes the sine wave of the compressor and results in smoother motor rotation. Therefore, it can weaken the compressor vibration and peak of pipe stress changes, and lower the noise.

More Comfortable

Intelligent inverter control delivers the required capacity according to the load variation from 10% to 100% and maintain the room temperature fluctuation within 0.5°C of set temperature.



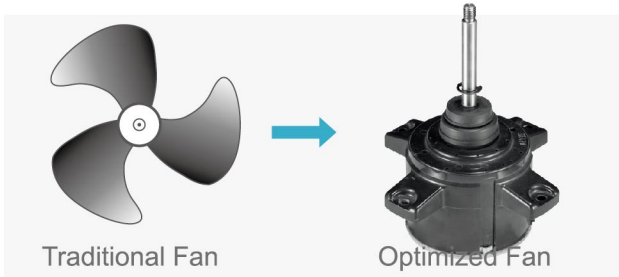
Ultra-low Noise Operation

- The unit can automatically adjust the control of outdoor fan motor according to system's parameters so as to make sure the silent mode operation to the maximum.
- New fan blade and fan motor with optimized design are adopted.

Fan and Motor

Optimized Fan

Optimized fan reduces the operation noise of the unit, providing comfortable indoor environment.

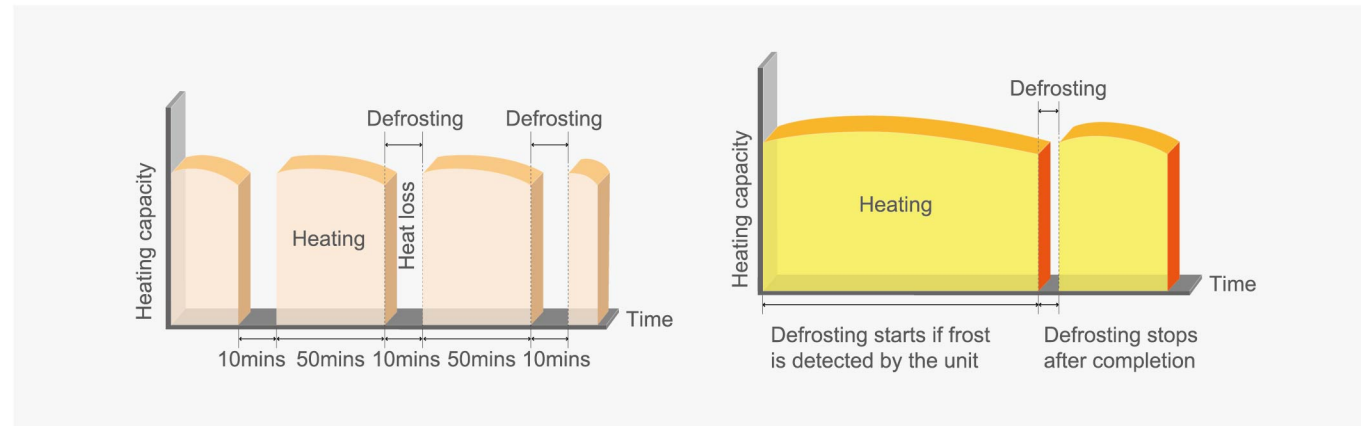


DC motor



Intelligent Defrosting

Did you ever feel annoying when the air conditioner stopped heating because of defrosting? This problem is already resolved by Free-match unit. It only starts defrosting when it's necessary, more energy-saving and comfortable for you.



Low-temperature Cooling

Free Match can satisfy the requirement of low-temperature cooling at special areas. The system controls compressor and fan, and the high/low pressure value can be controlled strictly, which can ensure the cooling effect as well as reliability of system. The unit can operate under cooling mode even the outdoor ambient temperature is as low as -15°C (14K/18K/24K/28K).

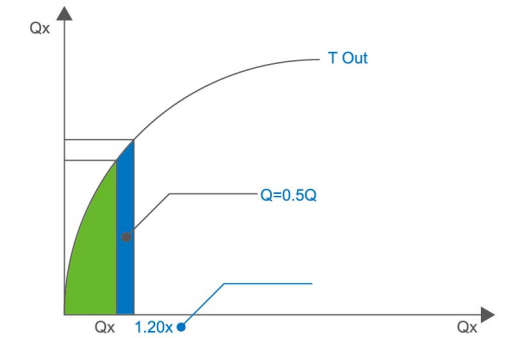
- System targeted control parameter
- Compressor output capacity
- Fan capacity output
- Outdoor ambient temperature
- Stable operation in cool mode



Low-temperature Heating

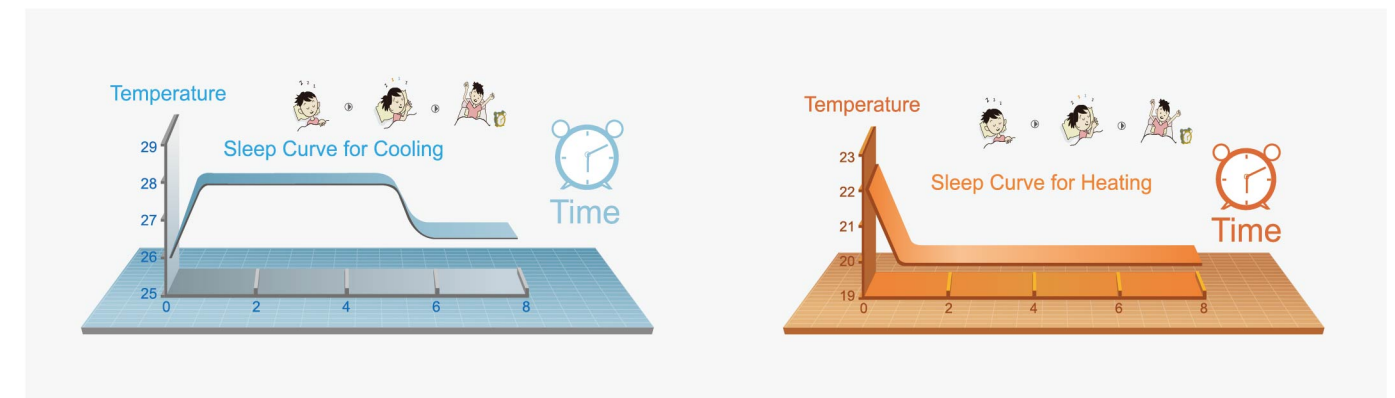
When outdoor ambient temperature is low, system can increase its capacity automatically. Heating capacity can be increased by 1.5 times in maximum, which satisfies user's requirement for comfort to the largest extent.

- Capacity
- Actual output
- Temp
- Output Capacity of Compressor



Sleep Mode

Comfortable Sleep Mode

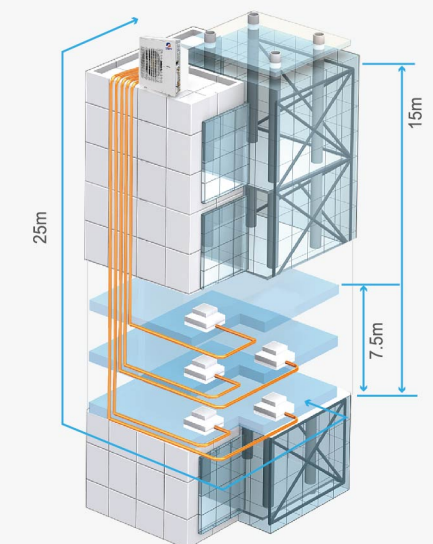


Long Piping for Flexible Installation

Free match provide long piping range for easy and cost-saving application

- Max. actual piping length -- 75 meters (42K):75 meters (36 K)
- Max. height difference between indoor units -- 7.5m
- Max. height difference between outdoor and indoor units --15m
- Max. piping length from outdoor to the farthest indoor unit -- 25 meters (42K):20 meters (36K)

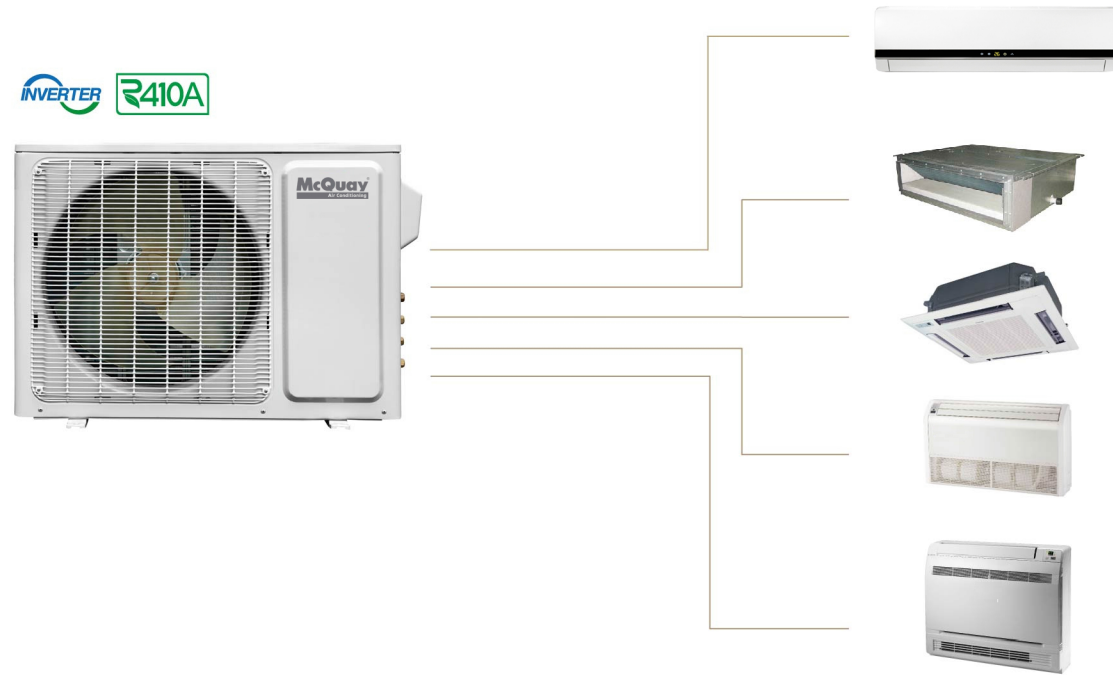
* This value can be used whether outdoor unit is located under or above indoor unit.



Product Lineup

Free-match 2 16SEER

Capacity range from 18K to 24K Btu/h can be widely used in residential house, hotel, business office and especially applicable in variable loading situation.



Various Combinations

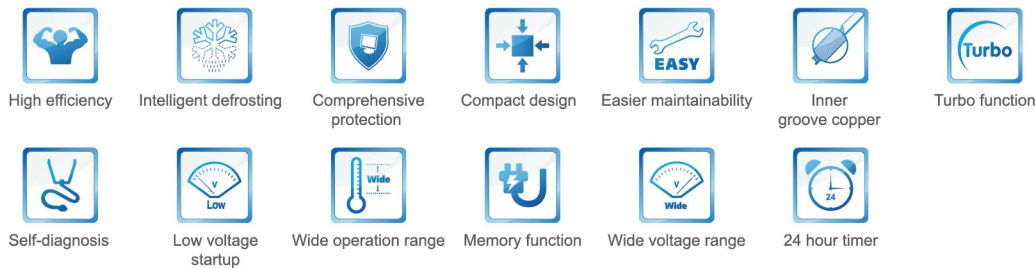
Different units for selection, the same comfortable feeling for you.

G10 Inverter Technology

Less power consumption
Lower noise, more comfort
Precise temperature control

-15°C Low Temperature Operation

Operate stably when heating at -15°C.



Indoor Unit Lineup

Capacity Index(BTU/h)			9000	12000	18000	21000	24000
Wall mounted type	Hansol		●	●	●		●
	Cozy		●	●	●		●
Duct type			●	●	●	●	●
Cassette type				●	●		●
Floor ceiling type			●	●	●		●
Console type			●	●	●		

Item	Nominal operating condition(temperature)				Operation range(temperature)
	Outdoor condition		Indoor condition		Outdoor condition
	DB(°C)	WB(°C)	DB(°C)	WB(°C)	
Cooling	35	23.9	26.7	19.4	-5~48
Heating	8.33	6.11	21.1	15.6	-15~27

Combinations of Outdoor Unit

4 Combinations

	One unit	Two units	
	MQIM-1640182-HCU216A	9 12	9+9 -

11 Combinations

	Two units		Three units	
	MQIM-1640243-HCU216A	9+9 9+18 12+18	9+12 12+12 18+18	9+9+9 9+9+12 12+12+12

24 Combinations

	Two units		Three units		Four units
	MQIM-1640304-HCU216A	9+9 9+12 9+18 9+21 9+24 12+12 12+18	12+21 12+24 18+18 18+21 18+24 21+21 -	9+9+9 9+9+12 9+9+18 9+9+21 9+9+24 9+12+18 9+12+21	12+12+12 12+12+18 -

41 Combinations

	Two units		Three units		Four units	Five units
	MQIM-1640364-HCU216A	9+9 9+12 9+18 9+21 9+24 12+12 12+18 12+21	12+24 18+18 18+21 18+24 21+21 21+24 24+24 -	9+9+9 9+9+12 9+9+18 9+9+21 9+9+24 9+12+12 9+12+18 9+12+21	9+12+24 9+18+18 9+18+21 12+12+12 12+12+18 12+12+21 12+12+24 12+18+18	9+9+9+9 9+9+9+12 9+9+9+18 9+9+9+21 9+9+12+12 9+9+12+18 9+12+12+12

44 Combinations

	Two units		Three units		Four units	Five units
	MQIM-1640425-HCU216A	9+9 9+12 9+18 9+21 9+24 12+12 12+18 12+21 12+24	18+18 18+21 18+24 21+21 21+24 24+24 -	9+9+9 9+9+12 9+9+18 9+9+21 9+9+24 9+12+12 9+12+18 9+12+21 9+12+24	9+18+18 9+18+21 12+12+12 12+12+18 12+12+21 12+12+24 12+18+18 12+18+21	9+9+9+9 9+9+9+12 9+9+9+18 9+9+9+21 9+9+12+12 9+9+12+18 9+12+12+12

Outdoor Unit

Model		Heat Pump	MQIM-1640182-HCU216A	MQIM-1640243-HCU216A	MQIM-1640304-HCU216A	MQIM-1640364-HCU216A	MQIM-1640425-HCU216A
Capacity	Cooling	BTU/h	18000	26000	29000	34000	40000
	Heating	BTU/h	19000	29000	30500	35800	44500
SEER	W/W		16.0	16.0	16.0	16.0	16.0
Power supply	PhV/Hz		1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz
Power input	Cooling	kW	1.65	3.05	3.45	4.30	4.4
	Heating	kW	1.64	2.8	2.85	3.6	4.6
Refrigerant charge volume	kg		1.35	2.2	2.2	2.9	4.8
Air flow volume	m³/h		2600	3200	3200	3700	5500
Sound pressure level	dB(A)		56	56	56	59	58
Dimension (W×D×H)	Outline	mm	899×378×596	946×396×700	946×396×700	920×427×789	1015×440×1103
	Package	mm	948×420×645	1029×458×750	1029×458×750	1083×488×855	1158×493×1235
Net weight/Gross weight	kg		43/46	61/66	62/67	69.2/74.9	102/112
Connecting pipe diameter	Gas	inch(mm)	φ3/8 (9.52)	φ3/8 (9.52)	φ3/8 (9.52)	φ3/8 (9.52)	φ3/8 (9.52)
	Liquid	inch(mm)	φ1/4 (6.35)	φ1/4 (6.35)	φ1/4 (6.35)	φ1/4 (6.35)	φ1/4 (6.35)
Max. equivalent connection pipe length	m		20	20	20	20	25
Maximum drive IDU NO.	unit		5	5	5	4	5
Loading quantity	40'GP/40'HQ	-	204/272	171/171	171/171	88/132	48/96

Wall-mounted Type Indoor Unit

Cozy



Model			MQIM-164009-HWF216A	MQIM-164012-HWF216A	MQIM-164018-HWF216A	MQIM-164024-HWF216A
Capacity	Cooling	BTU/h	9000	12000	18089	21400
	Heating	BTU/h	9800	13000	19795	23000
Power supply	PhV/Hz		1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V, 60Hz
Air flow volume	m³/h		520	570	850	1000
	CFM		306	335	500	589
Sound pressure level(H/M/L/SL)	dB(A)		41/37/35/26/-	44/39/36/33/-	46/44/40/35/-	53/45/41/37
Connecting pipe	Gas	inch(mm)	φ3/8 (9.52)	φ3/8 (9.52)	φ1/2 (12.7)	φ5/8 (15.9)
	Liquid	inch(mm)	φ1/4 (6.35)	φ1/4 (6.35)	φ1/4 (6.35)	φ1/4 (6.35)
Dimension (W×H×D)	Outline	mm	845×275×180	845×275×180	940×200×298	1007×315×219
	Package	mm	918×258×370	918×258×370	1013×288×395	1076×398×328
Net weight/Gross weight	kg		10/12	10/13	13/17	13.5/17
Loading quantity	20'GP	-	336	336	254	42
	40'GP/40'HQ	-	684/798	684/798	541/609	91/113

Floor Ceiling Type Indoor Unit



Model			MQIM-164009-HFC216A	MQIM-164012-HFC216A	MQIM-164018-HFC216A	MQIM-164024-HFC216A
Capacity	Cooling	BTU/h	8500	11900	17000	22800
	Heating	BTU/h	9500	13100	18700	27400
Power supply	PhV/Hz		1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz
Airflow volume	m³/h		650	650	950	1250
	CFM		382.5	382.5	559	736
Sound pressure level(H/L)	dB(A)		40/36	40/36	45/40	48/44
Connecting pipe	Gas	inch(mm)	φ3/8 (9.52)	φ3/8 (9.52)	φ1/2 (12.7)	φ5/8 (15.9)
	Liquid	inch(mm)	φ1/4 (6.35)	φ1/4 (6.35)	φ1/4 (6.35)	φ3/8 (9.52)
Dimension (W×H×D)	Outline	mm	1220×700×225	1220×700×225	1220×700×225	1220×700×225
	Package	mm	1343×823×315	1343×823×315	1343×823×315	1343×823×315
Net weight/Gross weight	kg		40/50	40/50	40/50	45/54
Loading quantity	20'GP	-	66	66	66	66
	40'GP/40'HQ	-	132/132	132/132	132/132	132/132

Cassette Type Indoor Unit



Model			MQIM-164012-HCK216A	MQIM-164018-HCK216A	MQIM-164024-HCK216A
Capacity	Cooling	BTU/h	12000	14400	22800
	Heating	BTU/h	13000	16000	27400
Power supply	PhV/Hz		1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz
Airflow volume	m³/h		600	600	1180
	CFM		353	353	694
Sound pressure level(H/L)	dB(A)		56/52	56/52	39/35
Connecting pipe	Gas	inch(mm)	φ3/8 (9.52)	φ1/2 (12.7)	φ5/8 (15.9)
	Liquid	inch(mm)	φ1/4 (6.35)	φ1/4 (6.35)	φ3/8 (9.52)
Main body	Dimension (W×D×H)	mm	570×570×230	570×570×230	840×840×240
	Net weight/Gross weight	kg	851×731×325	851×731×325	963×963×325
Panel	Dimension (W×D×H)	mm	18/23	18/23	28/35
	Net weight/Gross weight	kg	650×650×50	650×650×50	950×950×60
Loading quantity	20'GP	-	733×673×117	733×673×117	1043×1028×130
	40'GP/40'HQ	-	2.5/3.65	2.5/3.65	6.5/10
Loading quantity	20'GP	-	102	102	72
	40'GP/40'HQ	-	209/246	209/246	144/144

Duct Type Indoor Unit



Model			MQIM-164009-HUF216A	MQIM-164012-HUF216A	MQIM-164018-HUF216A	MQIM-164021-HUF216A	MQIM-164024-HUF216A
Capacity	Cooling	BTU/h	8500	11900	15300	20478	23800
	Heating	BTU/h	9500	13100	18700	22600	27400
Power supply	PhV/Hz		1Ph,220-240V,50Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz
Airflow volume	m³/h		450	550	700	1000	1000
	CFM		265	324	412	589	589
Sound pressure level(H/L)	dB(A)		37/31	39/32	41/33	42/34	42/34
Connecting pipe	Gas	inch(mm)	3/8 (φ9.52)	φ3/8 (9.52)	φ1/2 (12.7)	φ5/8 (15.9)	φ5/8 (15.9)
	Liquid	inch(mm)	1/4 (φ6.35)	φ1/4 (6.35)	φ1/4 (6.35)	φ3/8 (9.52)	φ3/8 (9.52)
Dimension (W×H×D)	Outline	mm	700×615×200	700×615×200	900×615×200	1100×615×200	1100×615×200
	Package	mm	893×743×305	893×743×305	1123×743×305	1323×743×305	1323×743×305
Net weight/Gross weight	kg		22/27	23/29	27/36	31/41	31/41
Loading quantity	20'GP	-	108	108	90	72	72
	40'GP/40'HQ	-	234/234	234/234	192/192	162/162	162/162

Console Type Indoor Unit



Model			MQIM-164009-HVF216A	MQIM-164012-HVF216A	MQIM-164018-HVF216A
Capacity	Cooling	BTU/h	8870	11940	18084
	Heating	BTU/h	9550	12965	19789
Power supply	PhV/Hz		1Ph,208~230V,60Hz	1Ph,208~230V,60Hz	1Ph,208~230V,60Hz
Airflow volume	m³/h		600	650	650
	CFM		381	382	383
Sound pressure level(H/L)	dB(A)		40/38/36/33/30/27/25	43/40/37/32	48/46/44/41/37/35/32
Connecting pipe	Gas	inch(mm)	φ3/8 (9.52)	φ3/8 (9.52)	φ1/2 (12.7)
	Liquid	inch(mm)	φ1/4 (6.35)	φ1/4 (6.35)	φ1/4 (6.35)
Dimension (W×H×D)	Outline	mm	700×600×215	700×600×215	700×215×600
	Package	mm	791×286×710	791×286×710	791×286×710
Net weight/Gross weight	kg		15/18	15/18	15/18
Loading quantity	20'GP	-	168	168	168
	40'GP/40'HQ	-	348/440	348/440	348/440