



United Technologies
turn to the experts

Miraco
MISR REFRIGERATION & AIR CONDITIONING MFG. CO.

COOL ↑ EER



علامة الجودة الإماراتية
Emirates Quality Mark

CRYSTAL Puron

Cool Only



Tropical

220-240V ~, 50Hz 1Ph

High Efficiency Green High Wall Split Air Conditioners

53KHFT12N-708

53KHFT18N-708

53KHFT24N-708



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|-----------------------------|----------------------------|--------------------------------|---------------------------------|--------------------------|---------------------------------|
| R410A Refrigerant | Efficient Operation | Hydrophilic Aluminum Fins | Louver Position Memory Function | ECO Function | Refrigerant Leak Detection |
| Formaldehyde Filter | Tropical Compressor | Super Quiet | Auto Fan Speed | Timer Functions | Easy Flexible Installation |
| Efficient Anti-dust Filters | Efficient AMS | Smart LCD Wireless Control | Auto Mode | Auto Restart Function | Easy Fast Service & Maintenance |
| Self Clean Function | Efficient Fans | Smart Airflow | Independent Dehumidification | 3 Minutes Time Delay | Cleanable Front Panel |
| Fashion Design | Efficient Coils | Vertical Air flow Auto Swing | Turbo Function | Anti-Freezing Protection | Washable Air Filter |
| LCD Display | Inner Groove Copper Tubing | Horizontal Air flow Auto Swing | Follow Me Function | Self diagnostic function | |



CRYSTAL Puron High Wall Split is the optimum air conditioning solution for the places which require high wall installations, elegant appearance and ultimate comfort combined with efficient, quiet operation, optimum air distribution and efficient Indoor Air Quality (IAQ).

CRYSTAL Puron High Wall Split is ideal for residential and light commercial applications.

KEY FEATURES

SMART CONTROL



Infrared wireless remote

EFFICIENT, TROPICAL & QUIET



OUTDOOR UNIT



Healthy & Clean Indoor Air Quality (IAQ)

Formaldehyde filter filters out formaldehyde and other volatile organic compounds (VOCs) as well as harmful gases and odors. It brings you healthy air always.



Efficient anti dust washable air filters for clean and healthy air.



Self Clean function to clean and dry the indoor coil of indoor unit to prevent the bleeding of odors and bacteria.



Modern Stylish Design

Compact indoor unit with attractive appearance with compact dimensions and light weight fits any interior decor with space saving. New stylish outdoor unit look.



Smart LCD display shows control functions and error code in case of a malfunction.



Efficient Tropical Operation with Minimum Electrical Consumption

Puron works with the new R-410A refrigerant which increases its energy efficiency and does not degrade the ozone layer.



Patented heat transfer and aerodynamics technologies to ensure perfect tropical operation up to 52°C outdoor ambient temperature.



Efficient tropical rotary compressor works in high ambient up to 52°C with high efficiency and low electrical consumption leading to true powerful system cooling.



Efficient Air Management System (AMS) leading to maximum air flow with minimum turbulence for minimum air resistance, smooth airflow and efficient operation.



Carrier innovative uneven aerofoil tangential blower technology efficient operation at all speeds with maximum air flow.



Efficient indoor and outdoor coils with large heat transfer surfaces for minimum electrical consumption.



Efficient trapeziform Inner groove copper tubing compared with traditional copper tubing, it allow more refrigerant flow, improving heat exchange efficiency and lowering power consumption while keeping the same capacity output level.



Precoated Hydrophilic Aluminum Fins of indoor coil to protect the coil against corrosion and to allow easy and quick removal of unrestricted condensate water between the fins to increase airflow, improve efficiency of heat exchange and accelerate cooling process.



Key Features

Quiet with Minimum Sound Level

Patented cross flow fan, elephant ear propeller, new heat exchangers, improved Air Management System (AMS), and quiet rotary compressor.



Complete Control Functions for Comfort

Smart LCD infrared wireless remote control with complete control functions built in the control system to ensure comfort at all operating conditions.



Smart supply air flow for comfort cool or comfort heat as per the selected mode for optimum distribution of supply air temperature and velocity inside the space to be air conditioned.



Auto-swing horizontal supply air louver to up and down for optimum distribution of supply air temperature and velocity inside the space to be air conditioned.



Auto wing of vertical supply air louvers to right or left for optimum air distribution of supply air temperature and velocity inside the space to be air conditioned.



Louver Position Memory Function
When you start the unit next time, the angle of horizontal supply air louver will automatically move to the same position as you set last time.



Auto fan speed function which automatically changes the fan speed to high or medium or low speed by sensing the temperature difference between room temperature and setting temperature.



Auto mode which automatically changes the operation mode and capacity output by sensing the temperature difference between room temperature and setting temperature.



Independent Dehumidification mode which efficiently dehumidifies the room, but not lower the temperature so obviously as cooling mode.



Turbo function which automatically changes the fan speed to maximum speed for 20 minutes to maximize the cooling capacity, to output make the room cool down rapidly and to attain the desired temperature in the shortest time.



Follow Me function for smart control of comfortable temperature when you stay close to the remote control. With this technology, an efficient temperature sensor is built in the remote control just like the air conditioner is following you.



ECO function for energy saving, quiet and comfortable healthy sleep which automatically changes fan speed to low speed and controls both set and room temperatures.



Programmable timer functions for easy on and off selection with energy savings including off timer, on timer, off/on timer and on/off timer functions.



Durability

Anti-rust, weather proof and long life outdoor unit sheet metal parts made of chemically treated and zinc coated (galvanized) sheet metal.



Powder painted casing of outdoor unit with perfect adhesion of highly resistant polyester paint 60-80 micros thick, which is electro-statically applied and baked at a temperature of 220°C.



Complete Safety & Reliability Functions

Auto restart safety protection function with backup memory. When the power failure happens during the operation of the air conditioner, the microprocessor of the electronic printed circuit board of indoor unit will memorize the operation settings. After the power is recovery happens, the air conditioner will automatically operate according to the previous operation settings (without remote control but after elapse of compressor time delay).



3 (three) minutes time delay, safety protection between compressor turning off and turning on for compressor protection against cycling.



Anti-freezing safety protection function of indoor coil when the air conditioner operates in cool mode with excessive dust on the indoor coil and / or clogged air filters and / or low ambient temperature operation of cool mode.



Smart self-diagnostic, safety protection function for malfunctions detection for easy fast service and maintenance.



Smart Refrigerant leak safety protection function by detection of sensitive sensor mounted on the indoor coil for easy, fast service and maintenance.



The components of both indoor and outdoor units comply with international standards of performance and safety.



Easy Installation, Service & Maintenance

Flexible multi outlet locations for piping from the indoor unit, easy piping connections and easy electrical connection between outdoor and indoor units.



Easy accessibility to all key components. Common spare parts across product family.



Easy removal of front panel for cleaning by easy disassembly of panel engagement with indoor unit cabinet.



Easy removal of washable air filters for cleaning by opening the hinged front panel up and then pulling filters down outside the indoor unit.





Self Clean Function

Self Clean function to clean and dry the indoor coil of indoor unit to prevent the bleeding of odors and bacteria.

- When Self Clean function is activated, firstly, the indoor unit operates as fan - only mode with low fan speed initially. Then during this period the condensed water will take away some dust on the fins of indoor coil.
- The whole process cleans the internal side of indoor unit and prevents the aspiration of bacteria.
- Then Self Clean function will stop and then the air conditioner will stop operation.

Fan Only Mode
Operation



Follow Me Function

Carrier Follow Me technology makes your air conditioner follow you for smart comfortable temperature. When Follow Me function is activated, the room temperature sensor built in the remote control is activated and replaces the sensor of the indoor unit. Then the air conditioner regulates the room temperature based on the temperature around the remote control.



Smart Air flow

Smart supply air flow for comfort cool mode for optimal air distribution of supply air temperature and velocity inside the air conditioned space.

- During cool mode, the supply air flap is opened counter-clockwise, which leads the supply air to blow out horizontally and then fall down by its gravitation. This results in effectively reducing the temperature difference between top and bottom air space and achieve uniform temperature inside the room in the fastest way.



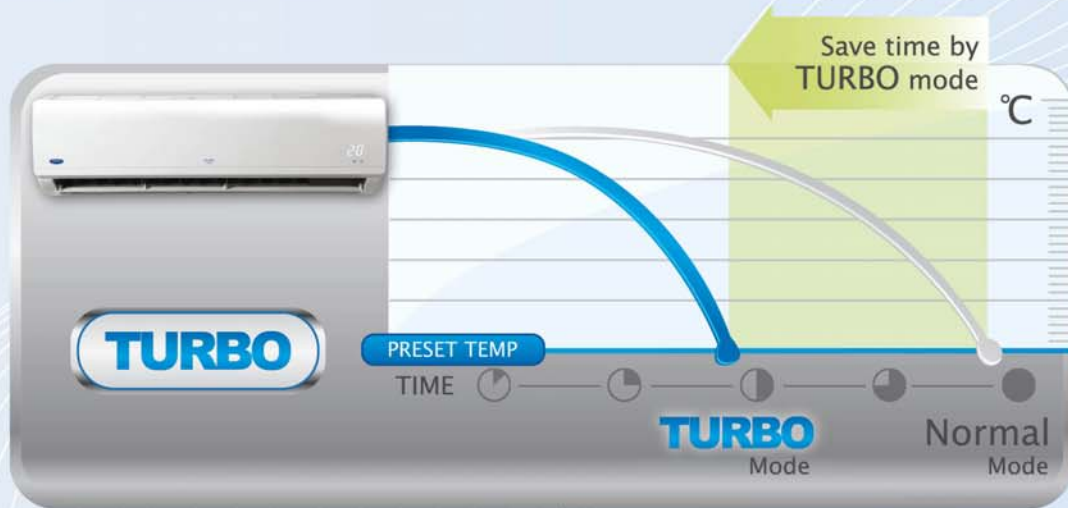
Cool Mode

Key Features



Turbo Function

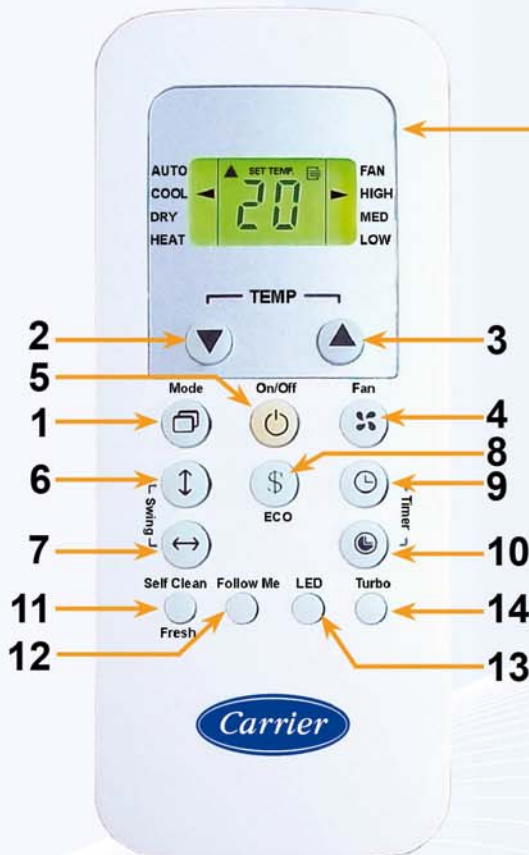
Turbo function is used when you first come home or when you have unexpected guests. When Turbo function is activated, the air conditioner operates in its maximum speed for 20 minutes to maximize the output of cooling capacity. Carrier Turbo cooling technology makes your room cool down rapidly, and attain the desired temperature in the shortest time.



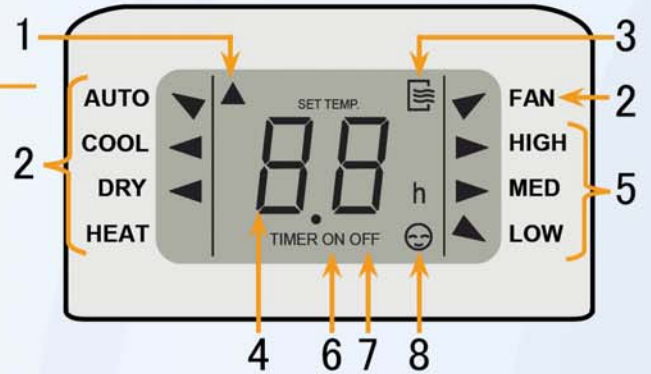
ECO (SLEEP) Function

- ECO (Sleep) function is useful when you go to sleep. This function is useful for energy saving, quiet and comfortable healthy sleep.
- When ECO (Sleep) function is activated the air conditioner changes the set temperature automatically which in turn changes the room temperature automatically to maintain the most comfortable temperature and to avoid overcooling during cool mode.





Display Of Remote Control



1	Signal transmission indicator
2	MODE indicator
AUTO	Automatic
COOL	Cooling
DRY	Dehumidification only
HEAT	Heating (Not Available)
FAN	Ventilation (fan only)
3	ON / OFF indicator
4	SET TEMP. indicator
5	FAN SPEED indicator
LOW	Low FAN SPEED indicator
MED	Medium FAN SPEED indicator
HIGH	High SPEED indicator
AUTO	Automatic FAN SPEED indicator
6	TIMER ON function indicator
7	TIMER OFF function indicator
8	FOLLOW ME function indicator

Control Buttons

1	MODE selection button AUTO - COOL - DRY - FAN
2	Decrease temperature button The set temperature is decreased down to 17°C.
3	Increase temperature button The set temperature is increased up to 30°C.
4	FAN selection button Low - Medium - High - Auto fan speed
5	ON/OFF button
6	Vertical Air Flow Auto Swing
7	Horizontal Air Flow Auto Swing
8	ECO function button
9	TIMER ON function button
10	TIMER OFF function button
11	Self Clean function button
	Fresh function button *
12	Follow Me function button
13	LED Display function button
14	TURBO function button

Display Of Indoor Unit

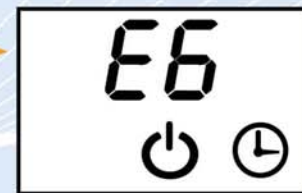


88	SET TEMP. indicator / Error code in indicator
⏻	OPERATION led
🕒	TIMER function led

Note : * This function does not work with this product but if works with other products

Smart Self Diagnostic Function For Malfunction Detection

The electronic printed circuit board in the indoor unit is equipped with smart self diagnostic function which automatically stops the operation of the air conditioner in case of a malfunction.



Leds status refers to malfunction reason

Malfunction Reason	Operation Led ⏻ (No. of references)	Timer Led ⌚	Error Code
Electronic Control PCB - (EEROM defect)	(1) ☆	X	E1
Zero-crossing signal detection error	(2) ☆	X	E2
Indoor Fan speed out of control	(3) ☆	X	E3
Return Air Sensor (open circuit or short circuit)	(5) ☆	X	E5
Indoor Coil Sensor (open circuit or short circuit)	(6) ☆	X	E6
Outdoor Coil Sensor (open circuit or short circuit)	(7) ☆	X	E7
Outdoor fan speed has been out of control	(8) ☆	X	E8
Indoor / outdoor units communication error	(9) ☆	X	E9
Refrigerant leak or any malfunction lead to stopping of compressor operation	(2) ☆	●	EC

X = OFF
 ● = ON
 ☆ = Flash at 5 Hz

System type			Cool Only	Cool Only	Cool Only
System model			53KHFT12N-708	53KHFT18N-708	53KHFT24N-708
Indoor unit model			42KHFT12N-708	42KHFT18N-708	42KHFT24N-708
Outdoor unit model			38KHFT12N-708	38KHFT18N-708	38KHFT24N-708
Cooling capacity	@ T1 / T3 Ambient	Btu/hr	12500 / 11100	18000 / 16820	24000 / 21670
		kW	3.66 / 3.25	5.27 / 4.93	7.03 / 6.35
Input power	@ T1 / T3 Ambient	W	1100 / 1330	1700 / 1959	2250 / 2700
Input current	@ T1 / T3 Ambient	A	5.2 / 5.9	7.5 / 8.7	10.0 / 12.1
E.E.R.	@ T1 / T3 Ambient	Btu/wh	11.36 / 8.35	10.59 / 8.59	10.67 / 8.03
		W/W	3.33 / 2.45	3.10 / 2.52	3.12 / 2.35
Indoor unit model			42KHFT12N-708	42KHFT18N-708	42KHFT24N-708
Dehumidification		l/h	1.3	1.9	2.4
Nominal air flow (low/med/high)		cfm	236 / 313 / 354	366 / 419 / 490	472 / 578 / 661
		m ³ /hr	400 / 530 / 600	620 / 710 / 830	800 / 980 / 1120
Sound Pressure (low/med/high)		dB(A)	30 / 37 / 41	36 / 39 / 45	41 / 46 / 48
Net Dimensions (WxHxD)		mm	800 x 275 x 188	940 x 275 x 205	1045 x 315 x 235
Net Weight		kg	8	10	13
Outdoor unit model			38KHFT12N-708	38KHFT18N-708	38KHFT24N-708
Tropical Compressor type			Rotary	Rotary	Rotary
Refrigerant type / Coupler type			R410A / Flare	R410A / Flare	R410A / Flare
Sound pressure		dB(A)	56	57	62
Net Dimensions (WxHxD)		mm	780 x 540 x 250	845 x 695 x 335	945 x 810 x 395
Net Weight		kg	33	50.2	64.5
Installation data					
Pipe connection sizes (inch)		Gas	1/2"	1/2"	5/8"
		Liquid	1/4"	1/4"	3/8"
Maximum pipe length		m	10	20	20
Maximum height difference		m	4	10	10
Condensate drain hose diameter		inch	5/8"	5/8"	5/8"
Recommended Wire Size / No. of Wires from Power Supply to Outdoor Unit		mm ² (Qty)	3 mm ² (2 Wires + 1 Earth)	3 mm ² (2 Wires + 1 Earth)	4 mm ² (2 Wires + 1 Earth)
Recommended Wire Size / No. of Wires between Outdoor Unit and Indoor Unit		mm ² (Qty)	1 mm ² (2 Wires + 1 Earth)	4 mm ² (2 Wires + 1 Earth)	1 mm ² (3 Wires + 1 Earth)
Power supply		V/ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50

* **T1 Cooling Capacity and Energy Efficiency Ratio (EER) based on ISO 5151, UAE.S ISO 5151:2011 & UAE.S 5010-1:2014 Standards :**
 35°C ambient Temperature. 27/19°C db/wb Indoor Temperature. 230 volts power supply. High Air Flow

* **T3 Cooling Capacity and Energy Efficiency Ratio (EER) based on ISO 5151, UAE.S ISO 5151:2011 & UAE.S 5010-1:2014 Standards :**
 46°C ambient Temperature. 29/19°C db/wb Indoor Temperature. 230 volts power supply. High Air Flow

* **Systems work in cooling at high ambient temperature up to 52°C**

* **Cooling Capacity & EER tolerances 5%**

* **Systems comply with Safety Standards IEC 60335-2-40**

* **Carrier is committed for continuous improvement of Carrier products according to national and international standards to ensure the highest quality and reliability standards, and to meet market regulations and requirements. All specifications subject to change without prior notice according to Carrier policy of continuous development.**