

OUTDOOR UNIT

PRO | DUAL MINI-SPLIT

INVERTER MULTI-ZONE SPLIT-TYPE AIR CONDITIONER



#700018
#700019



#700020

USER MANUAL

This manual only describes the installation of the outdoor unit.
When installing the indoor unit, refer to the installation manual of indoor unit.

CONGRATULATIONS...

on your purchase of Ideal Air's Pro | Dual Mini-Split, outdoor unit. We're proud to offer this product and believe it's the very best in its class.

READ THIS MANUAL

Thank you for purchasing this air conditioner. This manual will provide you with information on how to operate, maintain, and troubleshoot your air conditioner. Following the instructions will ensure the proper function and extended lifespan of your unit.

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SAFETY PRECAUTIONS

PLEASE PAY ATTENTION TO THE FOLLOWING SIGNS:

Incorrect operation due to ignoring instructions can cause serious damage or injury.

The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**.



Failure to observe a warning may result in death. The appliance must be installed in accordance with national regulations.



CAUTION

Failure to observe a caution may result in injury or equipment damage.

WARNING

- Ask an authorized service technician to install this air conditioner. Inappropriate installation may cause water leakage, electric shock, or fire.
- The warranty will be voided if the unit is not installed by professionals.
- If abnormal situation arises (like burning smell), turn off the power supply and call your installer for instructions to avoid electric shock, fire or injury.
- **DO NOT** let the indoor unit or the remote control get wet. It may cause electric shock or fire.
- **DO NOT** insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- **DO NOT** use a flammable spray such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- **DO NOT** expose heat-producing appliances to cold air or place them under the indoor unit. This may cause incomplete combustion or deformation of the unit due to the heat.
- After long periods of usage, check the indoor unit to see if anything is damaged. If the indoor unit is damaged, it may fall and cause injury.
- If the air conditioner is used together with other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- **DO NOT** climb onto or place objects on top of the outdoor unit.
- **DO NOT** operate the air conditioner when using fumigant insecticides. The chemicals may become layered with the unit and endanger those who are hypersensitive to chemicals.
- **DO NOT** let children play with the air conditioner.
- **DO NOT** operate the air conditioner in a wet room (e.g. bathroom or laundry room). This can cause electrical shock and cause the product to deteriorate.

CAUTION

- **DO NOT** touch the air outlet while the swing flap is in motion. Fingers might get caught or the unit may break down.
- **DO NOT** inspect the unit by yourself. Ask an authorized installer to perform the inspection.
- To prevent product deterioration, **DO NOT** use the air conditioner for preservation purposes (storage of food, animals, works of art, etc.).
- **DO NOT** touch the evaporator coils inside the indoor unit. The evaporator coils are sharp and may cause injury.
- **DO NOT** operate the air conditioner with wet hands. It may cause electric shock.
- **DO NOT** place items that might be affected by moisture damage under the indoor unit. Condensation can occur at a relative humidity of 80%.

UNIT PARTS AND MAJOR FUNCTIONS

WALL-MOUNTED TYPE

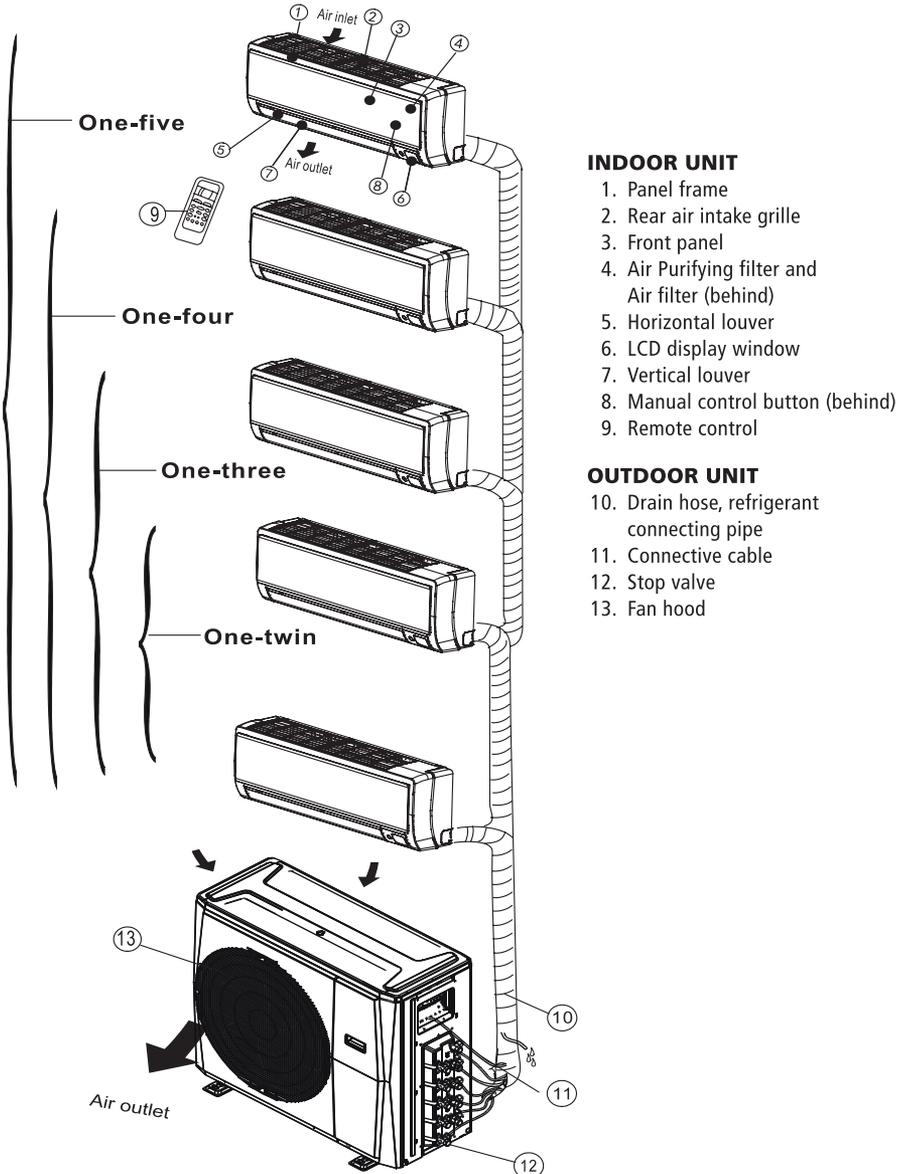
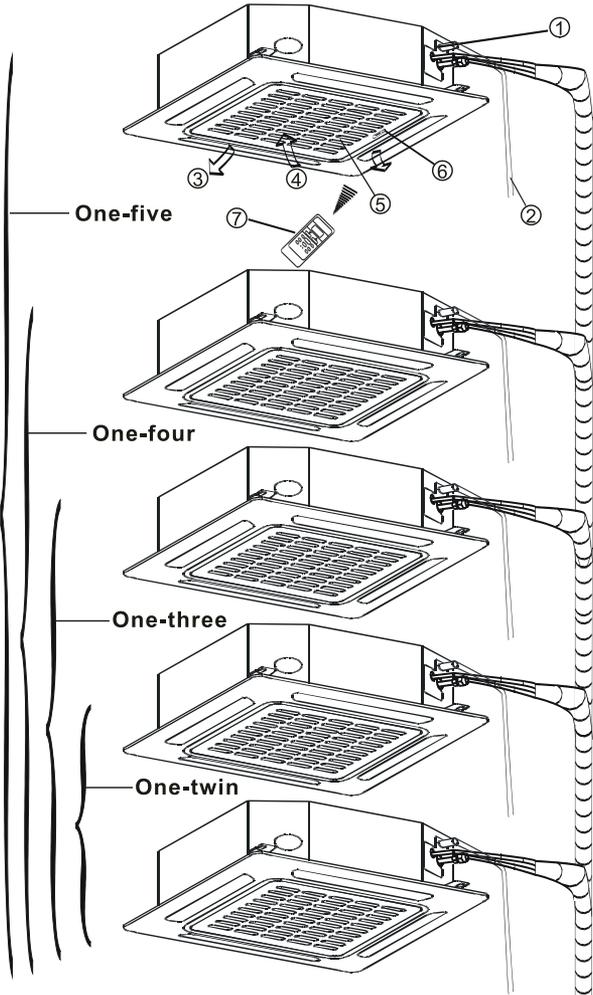


FIG. 2.1

COMPACT FOUR-WAY CASSETTE TYPE



INDOOR UNIT

1. Drain pump (drain water from indoor unit)
2. Drain hose
3. Air outlet
4. Air inlet
5. Air-in grill
6. Display panel
7. Remote control

OUTDOOR UNIT

8. Refrigerant connecting pipe
9. Connective cable
10. Stop valve
11. Fan hood

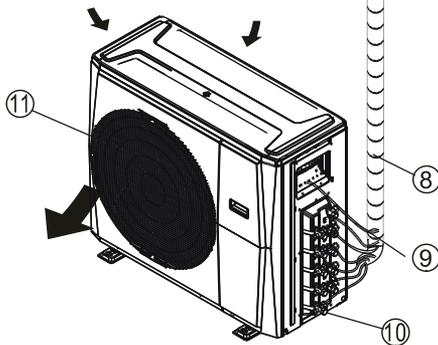


FIG. 2.4

NOTE:

For multi-split type air conditioners, one outdoor unit can be matched to different types of indoor units. All of the pictures in this manual are for demonstration purposes only. Your air conditioner may be slightly different, if similar in shape. The following pages introduce several kinds of indoor units that can be matched with the outdoor units. Please refer to the match up chart provided.

OPERATING CONDITIONS

Use the system under the following temperatures for safe and effective operation. If the air conditioner is used under different conditions, it may malfunction or become less efficient.

ADDITIONAL REFRIGERANT PER PIPE LENGTH

	COOL Mode	HEAT mode	DRY mode
Indoor Temperature	17-32°C (62-90°F)	0-30°C (32-86°F)	17-32°C (62-90°F)
Outdoor Temperature	0-50°C (32-122°F)	-15-24°C (5-76°F)	0-50°C (32-122°F)
	-15-50°C (5-122°F) (low temperature cooling models)		

FEATURES

PROTECTION OF THE AIR CONDITIONER COMPRESSOR PROTECTION

- The compressor cannot restart for 3 minutes after it stops.

ANTI-COLD AIR (COOLING AND HEATING MODELS ONLY)

- The unit is designed not to blow cold air on HEAT mode, when the indoor heat exchanger is in one of the following three situations and the set temperature has not been reached.
 - a) When heating has just started.
 - b) During defrosting.
 - c) Low temperature heating.
- The indoor or outdoor fan stop running when defrosting (Cooling and heating models only).

DEFROSTING (COOLING AND HEATING MODELS ONLY)

- Frost may be generated on the outdoor unit during a heat cycle when outdoor temperature is low and humidity is high resulting in lower heating efficiency in the air conditioner.
- Under these conditions, the air conditioner will stop heating operations and start defrosting automatically.
- The time to defrost may vary from 4 to 10 minutes, depending the outdoor temperature and the amount of frost buildup on the outdoor unit. Auto-Restart (some models) In case of power failure, the system will immediately stop. When power returns, the operation light on the indoor unit will flash. To restart the unit, press the **ON/OFF** button on the remote control. If the system has an auto restart function, the unit will restart with the same settings.

WHITE MIST EMERGING FROM THE INDOOR UNIT

- A white mist may be generated due to a large temperature difference between air inlet and air outlet on COOL mode in places with high relative humidity.
- A white mist may be generated due to moisture created in the defrosting process when the air conditioner restarts in HEAT mode operation after defrosting.

NOISE COMING FROM THE AIR CONDITIONER

- You may hear a low hissing sound when the compressor is running or has just stopped running. This sound is the sound of the refrigerant flowing or coming to a stop.
- You may also hear a low "squeaking" sound when the compressor is running or has just stopped running. This is caused by heat expansion and cold contraction of the plastic parts in the unit when the temperature is changing.
- A noise may be heard due to the louver restoring itself to its original position when power is first turned on.

DUST BLOWING OUT FROM THE INDOOR UNIT.

This is happens when the air conditioner has not been used for a long time or during its first use.

SMELL EMITTING FROM THE INDOOR UNIT.

This is caused by the indoor unit giving off smells permeated from building materials, furniture, or smoke.

THE AIR CONDITIONER TURNS TO FAN ONLY MODE FROM COOL OR HEAT (FOR COOLING AND HEATING MODELS ONLY) MODE.

When the indoor temperature reaches the set temperature, the compressor will stop automatically, and the air conditioner turns to FAN only mode. The compressor will start again when the indoor temperature rises on COOL mode or falls on HEAT mode to the set point.

Droplets of water may form on the surface of the indoor unit when cooling occurs in relatively high humidity. Adjust the horizontal louver to the maximum air outlet position and select HIGH fan speed.

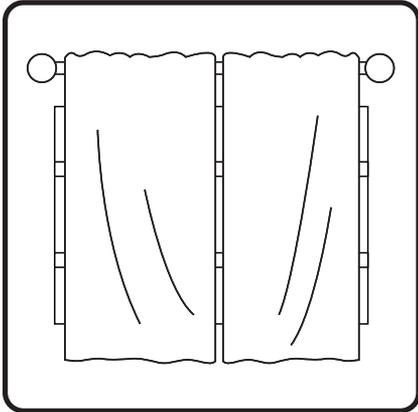
ENERGY SAVING TIPS

- **DO NOT** set the unit to excessive temperature levels.
- While cooling, close the curtains to avoid direct sunlight.
- Doors and windows should be kept closed to keep cool or warm air in the room.
- **DO NOT** place objects near the air inlet and outlet of the unit.
- If you don't plan to use the unit for a long time, remove the batteries from the remote control.
- Clean the air filter.
- Adjust louvers properly and avoid direct airflow.

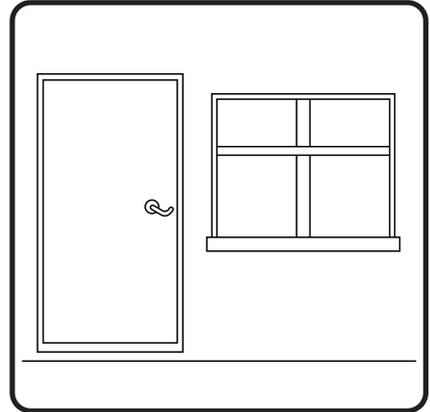
HEATING MODE (FOR COOLING AND HEATING MODELS ONLY)

The air conditioner draws in heat from the outdoor unit and releases it via the indoor unit during heating. When the outdoor temperature falls, heat drawn in by the air conditioner decreases accordingly. At the same time, heat loading of the air conditioner increases due to larger difference between indoor and outdoor temperature. If a comfortable temperature cannot be achieved with the air conditioner alone, it is recommended that you use a supplementary heating device.

Lightning or a car wireless telephone operating nearby may cause the unit to malfunction. Disconnect the unit from its power source and then re-connect the unit with the power source again. Push the ON/OFF button on the remote control to restart operations.



Closing curtains during heating also helps keep the heat in



Doors and windows should be kept closed

MANUAL OPERATIONS AND MAINTENANCE

OPERATION MODE SELECTION

While two or more indoor units are simultaneously operating, make sure the modes do not conflict with each other. The heat mode claims precedence over all other modes. If the unit initially started to operate in HEAT mode, the other units can operate in HEAT mode only. For example: If the unit initially started operates under COOL (or FAN) mode, the other units can operate under any mode except HEAT. If one of the unit selects HEAT mode, the other operating units will stop operation and display "--" (for units with display window only) or the auto and operation indication light will flash rapidly, the defrost indication light will turn off, and the timer indication light will remain on (for units without a display window). Alternatively, the defrost and alarm indication light (if applicable) will light up, or the operation indication light will flash rapidly, and the timer indication light will turn off (for the floor and standing type).

MAINTENANCE

If you plan to leave the unit idle for a long time, perform the following tasks:

- Clean the indoor unit and air filter.
- Select FAN ONLY mode and let the indoor fan run for a time to dry the inside of the unit.
- Disconnect the power supply and remove the battery from the remote control.
- Check the components of the outdoor unit periodically. Contact a local dealer or a customer service center if the unit requires servicing.

NOTE:

Before you clean the air conditioner, be sure to switch off the unit and disconnect the power supply plug.

OPTIMAL OPERATION

To achieve optimal performance, please note the following:

- Adjust the direction of the air flow so that it is not blowing directly on people.
- Adjust the temperature to achieve the highest possible level of comfort. **DO NOT** adjust the unit to excessive temperature levels.
- Close doors and windows in COOL mode or HEAT mode.
- **DO NOT** place any object near the air inlet or air outlet, as the efficiency of the air conditioner may be reduced and the air conditioner may stop running.
- Clean the air filter periodically, otherwise cooling or heating performance may be reduced.
- **DO NOT** operate unit with horizontal louver in closed position.

WHEN THE AIR CONDITIONER IS TO BE USED AGAIN:

- Use a dry cloth to wipe off the dust accumulated on the rear air intake grill in order to avoid the dust being dispersed from the indoor unit.
- Check that the wiring is not broken off or disconnected.
- Check that the air filter is installed and clean.
- Check if the air outlet or inlet is blocked and clean after the air conditioner has not been used for a long time.

TROUBLESHOOTING

ⓘ CAUTION

If one of the following conditions occurs, switch off the power supply immediately and contact your dealer for further assistance.

- The operation light continues to flash rapidly after the unit has been restarted.
- The remote control buttons do not work.
- The unit continually trips fuses or circuit breakers.
- A foreign object or water enters the air conditioner.
- Other abnormal situations.

COMMON PROBLEMS

The following symptoms are not a malfunction and in most situations will not require repairs.

Problem	Possible Causes
Unit does not turn on when pressing ON/OFF button	The unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
	Cooling and Heating Models: If the Operation light and PRE-DEF (Pre-heating/Defrost) indicators are lit up, the outdoor temperature is too cold and the unit's anti-cold wind is activated in order to defrost the unit.
	In Cooling-only Models: If the "Fan Only" indicator is lit up, the outdoor temperature is too cold and the unit's anti-freeze protection is activated in order to defrost the unit.
The unit changes from COOL mode to FAN mode	The unit changes its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating again.
	The set temperature has been reached, at which point the unit turns off the compressor. The unit will resume operating when the temperature fluctuates again.
The indoor unit emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
Both the indoor and outdoor units emit white mist	When the unit restarts in HEAT mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
The indoor unit makes noises	A squeaking sound is heard when the system is OFF or in COOL mode. The noise is also heard when the drain pump (optional) is in operation.
	A squeaking sound may occur after running the unit in HEAT mode due to expansion and contraction of the unit's plastic parts.
Both the indoor unit and outdoor unit make noises	A low hissing sound may occur during operation. This is normal and is caused by refrigerant gas flowing through both the indoor and outdoor units.
	A low hissing sound may be heard when the system starts, has just stopped running or is defrosting. This noise is normal and is caused by the refrigerant gas stopping or changing direction.
The outdoor unit makes noises	The unit will make different sounds based on its current operating mode.
Dust is emitted from either the indoor or outdoor unit	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The unit emits a bad odor	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.
	The unit's filters have become moldy and should be cleaned.
The fan of the outdoor unit does not operate	During operation, the fan speed is controlled to optimize product operation.

TROUBLESHOOTING TIPS

When troubles occur, please check the following points before contacting a repair company.

Problem	Possible Causes	Solution
The unit is not working	Power failure	Wait for the power to be restored
	The power switch is off	Turn on the power
	The fuse is burned out	Replace the fuse
	Remote control batteries are dead	Replace the remote control batteries
	The unit's 3-minute protection has been activated	Wait three minutes after restarting the unit
Poor cooling performance	Temperature setting may be higher than the ambient room temperature	Lower the temperature setting
	The heat exchanger on the indoor or outdoor unit is dirty	Clean the affected heat exchanger
	The air filter is dirty	Remove the filter and clean it according to instructions
	The air inlet or outlet of either unit is blocked	Turn the unit off, remove the obstruction and turn it back on
	Doors and windows are open	Make sure that all doors and windows are closed while operating the unit
	Excessive heat is generated by sunlight	Close windows and curtains during periods of high heat or bright sunshine
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant
The unit starts and stops frequently	There's too much or too little refrigerant in the system	Check for leaks and recharge the system with refrigerant
	There is air, incompressible gas or foreign material in the refrigeration system	Evacuate and recharge the system with refrigerant
	System circuit is blocked	Determine which circuit is blocked and replace the malfunctioning piece of equipment
	The compressor is broken	Replace the compressor
Poor heating performance	The outdoor temperature is lower than 7°C/44.5°F	Check for leaks and recharge the system with refrigerant
	Cold air is entering through doors and windows	Make sure that all doors and windows are closed during use
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant

DISPOSAL GUIDELINES

Users in European Countries may be required to properly dispose of this unit. This appliance contains refrigerant and other potentially hazardous materials. When disposing of this appliance, the law requires special collection and treatment. **DO NOT** dispose of this product as household waste or unsorted municipal waste.

When disposing of this appliance, you have the following options:

- Dispose of the appliance at designated municipal electronic waste collection facility.



NOTE:

Disposing of this appliance in the forest or other natural surroundings endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain.

GLOSSARY OF TERMS

A/C – Air conditioning also referred to as A/C. A system or device for reducing the temperature and humidity, in a space.

AHAM – Acronym for Association of Home Appliance Manufacturers. AHAM produces the official rating for dehumidifiers.

BTU – British Thermal Unit. A single BTU is the amount of energy required to cool or heat a pound of water one degree Fahrenheit.

Condenser – The unit used to condense a substance from a gaseous state to liquid by cooling it. Condensers are generally recognized as heat exchangers. In the case of air conditioners they extract the inside heat from the interior of the air conditioner to the outside air. Often referred to as “the outdoor unit.”

Dehumidifier – Also called, dehum. Dehumidifiers remove humidity and are used to keep a room's humidity levels in check. Maintaining correct humidity will ensure a healthy crop. Too much humidity will cause molds, rot and devastate your crop.

Digital Inverter Compressor – A digitally controlled compressor that converts AC voltage to DC voltage to control compressor speed. The inverter allows precise throttle control of the conditioning unit based on the load or need. Inverter units are quieter, more efficient and last longer.

Ductless Mini-Split – An air conditioner or heat pump that requires no duct work to function. The unit hangs on the wall or ceiling and cools or heats the surrounding area.

Evaporator – The indoor portion of the heat pump or air conditioner. In a mini-split system this hangs on the wall or ceiling and provides the heating or cooling of the space.

H/P – Heat Pump. A unit that can operate as both an air conditioner or a heater. When it's cold outside a heat pump extracts the outside heat and transfers it inside. When it's warm outside, it reverses directions and acts like an air conditioner, removing heat. A heat pump moves heat instead of generating it, giving you more energy efficiency.

HSPF – Heating Seasonal Performance Factor. The greater the number/rating the more efficient the heating. A 10 HSPF, for example is a very good rating.

Humidifier – Humidifiers use water to put humidity in the growing space. Many plants we grow indoors are accustomed to growing outdoors in tropical areas where humidity is high. Also certain parts of the country are drier than others so you will need to add humidity.

Line Set – Insulated copper tubing used to connect the evaporator and condenser. The refrigerant travels back and forth through the line set between the evaporator and condenser to create either cooling or heating.

R-410 – A type of refrigerant. Unlike alkyl halide refrigerants, R-410A (which contains only fluorine) does not contribute to ozone depletion. Because of that attribute it's preferred and used more broadly instead of R-22 which are phased out. R-410 refrigerants allow for higher SEER ratings therein reducing power consumption and improving unit efficiency.

SEER – Seasonal Energy Efficiency Ratio. The greater the SEER rating, the more efficient the cooling system. The minimum SEER rating allowed by the Federal Government is 14.

Ton – The size of air conditioning unit (heating or cooling) is common referred to in “tons”. A one ton unit, for example, is 12,000 BTU's. A two ton, 24,000 BTU's, etc. This was arrived at using a standard of how long it would take to melt ice. A one ton unit takes 12,000BTU's of heat one hour to melt a ton of ice.

VFD – Variable Frequency Drive. The VFD is an electrical device that's used to control the speed and torque of an air conditioning motor, like those used in an inverter compressor.

INDOOR UNITS	OUTDOOR UNITS
<p>WALL MOUNT</p>  <p>#700021 9,000 BTU → 9K</p> <p>#700023 12,000 BTU → 12K</p> <p>#700024 18,000 BTU → 18K</p> <p>#700025 24,000 BTU → 24K</p> <p>#700026 9,000 BTU ← 9K</p> <p>#700027 12,000 BTU ← 12K</p> <p>#700028 18,000 BTU ← 18K</p> <p>#700029 24,000 BTU ← 24K</p> <p>CEILING MOUNT</p> 	<p>PAIRING OPTIONS</p> <p>700018 24,000 BTU 22 SEER</p> <p>9K + 9K 9K + 12K 12K + 12K</p> <hr/> <p>PAIRING OPTIONS</p> <p>700019 36,000 BTU 22.5 SEER</p> <p>9K + 9K + 9K + 9K 9K + 9K + 9K</p> <p>9K + 9K + 12K 12K + 12K + 12K</p> <p>9K + 9K + 18K 12K + 18K</p> <hr/> <p>PAIRING OPTIONS</p> <p>700020 48,000 BTU 21.5 SEER</p> <p>9K + 9K + 12K 9K + 12K + 24K 18K + 24K</p> <p>9K + 9K + 18K 9K + 18K + 18K 18K + 18K</p> <p>9K + 9K + 24K 12K + 12K + 12K 12K + 12K + 12K</p> <p>9K + 12K + 12K 12K + 12K + 18K 24K + 24K</p> <p>9K + 12K + 18K 12K + 12K + 24K</p>

SEER RATINGS MAY VARY BASED ON SYSTEM MATCH.

IMPORTANT

Product not working properly?

**DO NOT return this product
to the store where you
purchased it.**

Contact Ideal-Air™ support directly
at support@ideal-air.com or call

1-877-943-3251

For answers to most common questions and a complete
technical support library please visit www.ideal-air.com



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notice for product improvement. Contact Ideal-Air™ for details,
updates and other information.