YMGI, Engineered Comfort Products for A Sustainable and Efficient Green World!

INSTALLER'S INSTRUCTION & USER'S MANUAL

Wall Mount Mini Split Systems
SYMPHONY SOLO DC INVERTER SINGLE ZONE (78)1
09-36k, 18-23 SEER Cooling and Heat Pump

Thank you for choosing this YMGI product. Please read the owner's manual carefully before installation and operation and retain for your records and future reference. If you need a replacement copy, please contact your local agent or visit www.ymgigroup.com to download a current electronic version.

NOTICE

This product is designed and manufactured to be free from any defects in material and workmanship during normal use and maintenance. Installation, operation, maintenance and repair must follow all standards and professional practices for regular cooling and heating equipment, such as NEC, State, or Local Codes and all related documents/manuals provided by YMGI. Failure to follow and adhere to all codes and documentation can cause damage to equipment, property even personal injury.

Installer: Currently licensed/certified HVAC technicians only. Must Read the manual and all provided documents prior to installation. Complete and fill out all required information on the warranty registration card.
User: Retain this manual and all supplied documents for your records and future reference.
Servicer: Use this manual for information concerning servicing and maintenance of this product.

SAFETY WARNING

Only qualified technicians should install and service this equipment. The installation, startup, operation and servicing of this equipment can be hazardous and requires a HVAC professional who has been trained, licensed and certified. Installations, adjustments or any equipment alterations done by an unqualified person could result in serious injury and even death. When working on the equipment, observe all precautions in the provided documents, on the tags, stickers, and labels that are attached to or placed on the equipment.

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Introduction

Read this manual carefully, making sure you understand all the instructions, practices and procedures contained in this manual. Be sure you are familiar with all the safety advisories that appear throughout this manual. Your personal safety depends upon your observance of all precautions contained in this manual.

Safety advisories appear throughout this manual and your personal safety and the proper operation of this appliance depend upon the strict observance of these precautions.

The 3 types of advisories are defined in the following table:

⚠WARNING	Indicates a potentially hazardous situation which if not avoided could result in serious injury or even death.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
NOTICE	Indicates a situation that could result in equipment or property-damage only. It can also be used to call attention to important details within this manual.

Important Environmental Concerns

Studies have shown that certain man-made chemicals can affect the earth's stratospheric ozone layer when released into the atmosphere. Refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs), may affect the ozone layer. Not all refrigerants have the same potential impact on the environment. YMGI Group advocates for the responsible handling of all refrigerants including industry replacements for CFCs such as HCFCs and HFCs.

Responsible Refrigerant Practices

YMGI Group believes that responsible refrigerant practices are important to our customers, the HVAC/R industry and the environment. All HVAC/R technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants, the equipment and tools necessary to perform these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. HVAC/R technicians must know the applicable laws and follow them.

Disposal Notice

Do not dispose this product or its components as unsorted municipal waste, as they contain items that may require special treatment. Contact your local waste management company for details.

⚠WARNING

Proper Field Wiring and Grounding Required!

Failure to follow established electrical codes can result in death, serious personal injury and property damage. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you MUST follow the requirements for field wiring installation and grounding as described in this manual and by NEC and your state and local electrical codes.

⚠WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in serious injury or even death. Technicians must take the necessary precautions to protect themselves from potential electrical, mechanical, and chemical hazards and MUST follow all precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing or servicing this unit, technicians MUST put on all PPE recommended for the work being undertaken. ALWAYS refer to appropriate Material Safety Data Sheets (MSDS) and Occupational Safety and Health Administration (OSHA) guidelines for proper PPE.
- When working with or around hazardous chemicals, ALWAYS refer to the appropriate MSDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection, and handling recommendations.

If there is a risk of arc or flash, technicians MUST put on all PPE in accordance with NFPA 70E or other country-specific requirements for arc flash protection, PRIOR to servicing the unit.

Copyright

⚠WARNING

- Instructions for installation and use of this product are provided by the manufacturer.
- Installation must be performed by authorized and licensed personnel only and in accordance with all the requirements of this manual, the NEC, CEC and any state and local codes.
- For safe operation of this unit, please read and follow all instructions carefully.
- The total operation capacity of the indoor units should not exceed 120% of the total capacity of the outdoor units if all indoor units must operate at their peak capacities all the time. Otherwise, the heating and cooling operation will be diminished and less efficient which could damage the units.
- Any person responsible for system operation or system maintenance should retain this manual for reference.
- If the unit fails to operate normally, please contact your authorized system installer or HVAC professional as soon as possible and provide the following information:
  - Data on the unit (model number, serial number and owner's name).
  - A detailed description of the unit's problem before and after the problem occurred.
- To avoid personal injury or property damage, do not disassemble the unit yourself. If disassembly is required to check the unit, contact your authorized system installer or HVAC professional as they have the experience and training necessary to perform this task.

Note: Each unit has been thoroughly tested to ensure it operates correctly before leaving the factory.

Basic Cautions and Warnings

⚠ CAUTION

All units shall be installed by an experienced HVAC licensed contractor or technician. Read all manuals before installation, startup and operation.

⚠ CAUTION

All NEC, state, local codes and installation instructions must be followed for all units, otherwise, the unit warranty will be void and could result in serious damage to people or property.

⚠WARNING

YMGI Group is not responsible for any damage or loss due to Do-It-Yourself (DIY), self-installation or any improper installation, improper operation, improper service or natural disasters of any kind.

⚠WARNING

Do not connect power to the unit until all wiring, tubing and all unit inspections and testing have been completed. Ground the unit according to the instructions and adhering to NEC, state and local codes.

⚠WARNING

All wiring connections must be correct and secure. Loose wire(s) or improper contacts may cause arcs or overheating which can result in a fire hazard.

Note From YMGI – Must Read

Dear Customers, Purchasers, Installers, and Contractors

Thank you for choosing a YMGI product.

All YMGI's products are fully tested and have passed rigorous safety, performance and manufacturing standards before being packed and shipped. YMGI only uses suppliers that meet our strict standards for high quality and performance for all parts. YMGI also recognizes a quality installation is equally important therefore your system must be installed by a licensed HVAC professional. A quality installation ensures your unit will operate at its highest efficiency and peak performance for many years of worry free comfort; while a poor installation can result in unit failure and cause the unit to operate inefficiently, either immediately or over time, resulting in costly repairs.

Because a quality installation is so critical, YMGI provides detailed information in our manuals which will aid the installing technician and the owner of the unit(s).

At YMGI our goal is to ensure that your YMGI units are installed properly and correctly from the beginning.

The YMGI equipment you purchased is either a split-type or a self-contained cooling/heating system. These types of systems require a certified and licensed HVAC professional technician for proper installation. Only a certified and licensed HVAC professional technician will have the knowledge, experience, and attention for all required details to perform a complete and successful installation. This equipment is different from a window or portable type air conditioners you can purchase from local retail stores such as Home Depot, Lowe's, Sears, etc. which the manufacturer may not require certified and licensed personnel to install.

Reading and following YMGI Group recommendations and requirements contained in the following pages and other documents, is the first step to help ensure a smooth installation and proper operation of your unit for many years.

⚠WARNING
YMGI doesn't recommend nor allow any do-it-yourself (DIY) installation (partially or fully). Due to the complexity of the installation of this product most DIY installations usually have problems, either immediate or near future. These problems can cost more to fix than any upfront savings. **YMGI warranty doesn't cover any DIY units.**

If you have any questions about your unit or if the unit has a problem, you should first check the manual. If you can't find a solution, then contact your local installer or service technician to schedule a service appointment. The technician can physically inspect the unit. If at the time of inspection, the installer or service technician has any questions about the unit, they can contact YMGI technical support division directly at:

Toll Free Number: (866)833-3138 or Email: techsp@ymgigroup.com

IMPORTANT: YMGI Group is the MEDIA AUTHORITY:

YMGI Group, located in O'Fallon, MO 63366 is the author of all media produced for its products and is the only party able to give any additional explanation for any data, definitions and or descriptions found within any of its media, including but not limited to YMGI product brochures, manuals, pamphlets, catalogs, and videos. YMGI's distributors, installers, dealers, agents, customers or any other third parties will not supersede YMGI in anyway concerning YMGI-published materials and their meaning. Any concerns or questions arising from YMGI distributors, installers, dealers, agents, customers or any other third parties, should be presented directly to YMGI. YMGI will respond to any concerns or questions, if necessary, about any of its media in writing.

NOTICE

- Be sure to only hire a certified and currently licensed HVAC Company to complete 100% of the installation so that all details of the installation are performed correctly and completely.
- Be sure to have ONLY the licensed HVAC professional perform all aspects of the installation. Factory Warranty will be void if any portion of the installation is not performed by a licensed HVAC contractor/technician. DIY or partial DIY will also void ALL factory warranties.
- When hiring an HVAC technician that is offering their services as a "side job" and not hiring a licensed HVAC company may pose possible risk. This may result in an incomplete or unsatisfactory installation, no guarantee for workmanship and lack of maintenance and further service to your unit.
- Have the installation technician read in full the installation manual and all supplied documents for the product model you purchased. Details within the documentation contributes greatly to the success and quality of the installation. Experience with other manufacturers may not be applied fully to another manufacturer, although there will be similarities there will also be differences. Ignoring the provided installation procedures is an act of negligence and may cause unit failure or damage which could be irrevocable and permanent.
- It is possible for a licensed contractor/technician to make a mistake during the installation. YMGI doesn't supervise nor is able to control the contractor/technician's installation. It is critical that the installer take each variable into account during the initial installation. This will ensure a complete and professional installation and that all units work properly.

⚠WARNING

The following will damage the unit and its key components resulting in loss of factory warranty:

1. Any foreign substances introduced into the system because of failure to seal the ends of the refrigeration piping before pulling the piping through any structures at time of installation.
2. Not installing an oil P-trap in the copper suction line where the indoor unit is located 18 feet or more below the outdoor unit.
3. Cross piping and/or cross wiring of any units including more than one single zone or a multi zone system.
4. Not conducting a positive leak check prior to the negative leak check.
5. Not conducting a positive leak check by charging the system with dry-nitrogen 350 PSI to hold for 3+ hours, and performing soap bubble testing.
6. Not conducting a negative leak check by evacuating the copper lines for 30 minutes for each zone. Vacuum must be held at 500 microns or better for at least 60 minutes, starting 60-minute timer after the vacuum pump is turned off.
7. Not selecting the correct size of wire or circuit breaker.
8. Not answering ALL questions in the technician's checklist located inside the warranty registration form.

⚠WARNING

The following may be overlooked, ignored, or considered unimportant during your installer's installation, but will cause your unit to underperform and may cause unit failure.

1. Any kinks in or improper bending of the copper piping.
2. Any poorly formed flares or not centering the flare with the flare nut, or not tightening all connections.
3. Not trial testing each indoor unit individually.
4. Not reading technical data (temp/time/pressure/current) after the system is stabilized (normally the compressor needs to run at least 10 minutes before reading the data). If the data is read too early may lead to inaccurate assessments about the unit.

In an effort to help protect our customers from possible faulty installations that can lead to premature unit failure, YMGI provides the above information for you and the technician. You can observe while your system is being installed, even though your observation is not a guarantee your system is being or has been installed properly and professionally. With the information provided above, you will know some things to look for and questions you can ask. If at any time you feel there may be an issue with the installation, please have your technician contact YMGI at (866)833-3138 x 703 with any questions, issues or concerns you may have.

INSTALLING TECHNICIAN/CONTRACTOR'S RESPONSIBILITIES

1. Discuss with the customer detailed information about the structure to be conditioned, local weather (typical design, extreme temperature/humidity conditions, cooling and heating hours), previous and existing HVAC equipment (if any), usage and dependence on new HVAC equipment or YMGI products.
2. Performing a cooling/heating load calculation by using commercially available professional programs/methods such as Right-J (Manual J) for residential HVAC applications and Right-CommLoad (ASHRAE RTS/CLTD) for light commercial and commercial HVAC applications.
3. Contact your YMGI distributor/sales department or contact the manufacturer directly to obtain additional information to fully understand your YMGI products, including but not limited to product features, cooling/heating performance at standard ratings/conditions and extreme conditions, allowed indoor and outdoor temperature and humidity ranges, installation, operation, maintenance, service, warranty, parts and any other issues pertaining to YMGI products.
4. Select the correct (most suitable) YMGI product unit models and accessories necessary for your HVAC applications and list them in the proposal/quote, in writing, on company's quotation form or letter head, based upon the information you collected from 1), 2) and 3).
5. List your currently valid HVAC license number and EPA number in your proposal/quote.
6. Make sure you are the only party to perform the entire installation and you will not sub-contract any part of the installation to any non-licensed parties or persons. You will be solely responsible for the entire installation that you have been contracted.
7. Make sure you have all the materials you need to properly, completely and correctly finish the installation. The YMGI units and accessories may be just a portion of what you will need for the project. When support issues arise, remember YMGI employees and YMGI distributors/sales, dealers and agents are not installers and may only provide suggestions. You are the only decision maker to determine what other materials you need to complete the installation.
8. When connecting electrical wires, follow all NEC, state and local codes and ensure the installation of all YMGI units and accessories meet these requirements.
9. Connect the unit to a correctly sized electrical power source. If the unit is installed in an area where lightning or storms occur frequently, a correctly sized and type of power surge protector must be installed between the outdoor unit and the power source.
10. Select the correct types and sizes of HVAC circuit breakers, disconnect switch boxes, wires and conduit from circuit breaker to disconnect box and then from disconnect box to outdoor unit.
11. Select the proper location for installing indoor units and outdoor units with all factory requirements being followed (cooling/heating air inlets and outlets are not blocked or restricted, mounting structure is secure, installation for convenience is considered, allow adequate clearance for maintenance/service and all applicable codes are met).
12. Cap/tape the two ends of every copper line before running them through any structure to keep any foreign substances from entering the pipe causing contamination. Label them A-A, B-B, C-C, D-D, or any other identifying marks on each pair of copper lines and wiring cable sets to keep from cross-piping or cross-wiring in multiple zone installations or where pipes for different single zone systems are close to one another.
13. Secure the wiring cables that connect between the indoor unit and outdoor unit, following all applicable NEC, state and local codes for your installation. If there is no special NEC, state or local codes to govern how these wires are to be installed, you can tape/cable tie them along with insulated copper line.
14. Tighten all pipe and wire connections ensuring there is no leakage or false connections.
15. Conduct a positive pressure leakage test, checking each of the inter-connecting copper lines between each indoor unit and outdoor unit by charging with dry-nitrogen at the outdoor unit's service port (note: do not back-seat stopping valve). A liquid soap solution shall be applied at all pipe connections to check for leakage. A 1/4" - 5/16" hose/valve adaptor may be needed if you have a 1/4" traditional manifold hose connection.
16. If there is no positive leaking, then conduct a negative pressure leakage test, checking all inter-connecting copper lines between each indoor unit and outdoor unit by pulling vacuum at the outdoor unit's service port (note: do not back-seat stopping valve) and checking that the vacuum level of 500 Microns can be held for at least 60 minutes.
17. If there is no leakage found at any of the refrigeration pipe connections, flip up the indoor unit's face panel and remove filter, carefully pour some clear water onto the up-right aluminum coil surface to test if the water can drain out of each the indoor unit's freely without finding any leakage.
18. If there is water leakage found, locate the source of the leak and correct it. Only after everything is clear, engage the correct electrical power to the system.
19. Then back-seat stopping valves of the outdoor unit to release refrigerant from the outdoor unit into the inter-connecting pipes and indoor unit.
20. Make sure both the indoor unit and outdoor unit are powered on correctly, operating the indoor unit in fan mode first. Then move on to test cooling, dehumidifying/drying, heating and other modes.
21. Read refrigerant pressures and pipe/valve temperatures only after the system is stabilized (normally 10 minutes after cooling/heating mode is started successfully). Record this data into the technician checklist in the lower half section of the Limited Product Warranty Registration Card/Form.
22. Adjust refrigerant charging level (remove refrigerant if pipe is shorter, the temperature is colder; add refrigerant if pipe is longer the temperature is warmer), following the manufacturer's instructions. If the average pipe length is shorter or longer than 25' and pressure/temperature readings at the outdoor unit service valves are not falling into normal ranges.
23. Explain to the user/owner about proper unit operation and maintenance. Leave your contact information to allow them to reach you. If the customer finds the unit doesn't work properly and cannot resolve the issue themselves, check the customer's units/parts/accessories and correct the issue if there is one. Communicate with YMGI-technical support line at (866)833-3138 x 703, if further help necessary.

Following these requirements will aid in ensuring that the units to be installed meet general HVAC practicing standards and necessary factory requirements. Finding any possible problems early, preventing any further damage to the unit will help to ensure a properly working unit for many years.

SECTION 1

LIMITED PRODUCT WARRANTY

Once the installation and successful testing of the system has been completely performed by a qualified licensed/certified HVAC technician/contractor, the registration card/form is filled out completely and correctly, and filed along with a valid installation invoice from the contractor within 7 days of the original installation, the following standard **Limited Product Warranty** is qualified: **5-years** on the **compressor** and **1-year** on **PARTS ONLY**. There is **no labor coverage**.

YMGI products are designed and manufactured free from defects in workmanship, and materials for normal use. However, if for any reason, including occasionally transporting between YMGI factories/warehouses and your delivery location, you discover the unit has issues, YMGI Group will help field a solution by following YMGI's established warranty procedures:

Compressor: YMGI will warrant the compressor of a YMGI-validated and approved warranty filing, for a period of 5 years from the date of successful installation at its original installation location.

Parts: YMGI will warrant parts of a YMGI-validated and approved warranty filing, for one year from the date of successful installation at original installation location.
All warranty compressors and parts replaced will become the sole property of YMGI Group and must be returned to YMGI Group upon request. Warranty parts may be new or refurbished. All parts are tested and approved before shipping.
At no time does YMGI Group warrant labor cost of any type. Warranty will start from the date of successful installation at original installation location, or 90 days as of original shipping date from YMGI Group, whichever comes first.

This is a standard limited liability warranty and DOES NOT cover the following:

- Any damage or repairs to properties, or persons as an incident of or consequence of improper faulty transportation, installation, operation, maintenance or service.
- Any damage caused by frozen or broken water hoses or refrigeration pipes in the event of equipment failure.
- Any damage due to floods, fire, wind, lightening, accidents, corrosive atmosphere or any other conditions beyond the control of YMGI Group.
- Any damage due to interruption or inadequate electrical service to equipment.
- Any products that are installed outside the US or Canada.
- Any unit that has been moved from its original installation address.
- Any labor costs associated with the installation or service of the unit.
- Poor unit performance due to improper unit selection (SEER, Unit size).

To validate the above warranties, ALL of the following conditions must all be fulfilled:

1. The unit was fully (100%) and successfully installed by a licensed or certified HVAC technician.
2. The unit was installed following all NEC, state and local codes.
3. The unit was installed following all the information within the Instructions and User Manuals provided by YMGI Group.
4. ALL fields, especially the technician-checklist, of the **Limited Warranty Registration Card/Form** were filled completely by the installing technician and signed by both the installing company technician and the unit owner.
5. The **Limited Warranty Registration Card/Form** and a copy of the original installing company's invoice have been received by YMGI Group-Warranty Dept., POB 1559, O'Fallon, MO 63366, within 7 days of successful installation.

No warranty filing will be validated or approved, if any one of the above conditions are not met.
Product registration doesn't guarantee the validity of this limited warranty statement.

Steps to follow for warranty part replacement:

1. The installing or service technician must contact YMGI tech support at 1-866-833-3138 ext. 703 from the installation location to check and confirm with YMGI Technical support the exact part(s) needed to fix the problem(s).

2. YMGI will check the customer's warranty filing. There will be no charge for Parts with a validated and approved warranty. Any Parts that have not been validated and approved or have an invalid warranty filing resulting in an unapproved warranty request, will be charged accordingly.

3. ***YMGI will ground ship out the parts ASAP. Expedited shipping is available at the customer's expense.***

4. Replacement parts that have an approved warranty registration are to be warranted for the remainder of the 1-year on parts and a 5-year compressor warranty. Purchasing of replacement parts without a valid warranty filing or unapproved warranty request, will be sold as is and are not covered by any warranty.

YMGI is continually improving products with various engineering changes and these changes are made without prior notice. Such improvements or changes include but are not limited to product specification, appearance, functionality, size, packaging, etc. These improvements or changes will not void the limited warranty stated herein. YMGI is the final authority concerning this warranty policy.

YMGI GROUP

Innovative, Competitive, Efficient & Convenient

LIMITED PRODUCT WARRANTY REGISTRATION CARD / FORM

YMGI to Fill Top Portion, at Shipping, and Keep Copy A; Center Copy B for Installer to Fill and Mail back to YMGI; Bottom Copy C for Customer to Fill and Keep

For YMGI Use Only

The Company the Unit Was Sold Though: _____	Shipping Packing List Number: _____	Registration Card Serial No. _____
Did the Company Pay to YMGI: _____	HVAC Contractor/ Technician--Name _____	Date the Filled Registration Card YMGI Received: _____
Installation Invoice Attached to the Registration Card _____	Hired YMGI-Recommended HVAC Contractor/Technician? _____	Unit(s) Work Successfully (Yes/No): _____ Warranty Approved Warranty Denied

Outdoor Serial Number (One Outdoor Unit, One Registration Card/Form):

Indoor Serial Number: For Multi Zone Units

Unit #1 _____ Unit #5 _____
Unit #2 _____ Unit #6 _____
Unit #3 _____ Unit #7 _____
Unit #4 _____ Unit #8 _____

Contact Where the Units are Installed:

Name: _____ Phone: _____ Fax: _____
Address: _____ Email: _____
City: _____ State (Province): _____ Country: _____

Contact of the Installing HVAC Contractor/Technician:

Technician Full Name (Print): _____
HVAC Technician's Company Name: _____
Address: _____

YMGI-Recommended Contractor/Technician:

Phone:Fax: _____
Email: _____
City:State (Province): _____

Currently Licensed or Certified HVAC Technician License or Certification Number: _____ License Approved or Certified by: _____
Official Phone # to Check the License Validity: _____

List for Installating HVAC Technician to Double Check Installation Quality, and Warranty Processing Purpose (if not filled by technician, or not filled fully, warranty will void)

1) Are you the only one to install whole system? If not, % of installation done by you (HVAC technician).

2) What had been done, prior to your arrival?

3) Did you read the User Manual and Installation Instruction, before you started the installation?

4) Who unpacked the unit and accessory boxes to check for damage?

5) Supply electrical power V/Ph/Hz measured at wiring terminal block of Indoor unit: outdoor unit:

6) Incoming electrical power V/Ph/Hz measured at terminal blocks of indoor unit: outdoor unit:

7) Wire gauge, length and terminal colors between circuit breaker/ disconnect switch to outdoor unit:

8) Wire gauge, length and terminal colors between each indoor and outdoor unit: Unit A Unit B Unit C Unit D...

9) The size of HVAC circuit breaker/fuse or disconnect switch to the outdoor unit:

10) Are the inter-connecting wires and copper lines between indoor and outdoor units installed/covered/protected by line set covers, or anything else?

11) What is the refrigerant pipe length between each indoor unit and the outdoor unit? Unit A Unit B Unit C Unit D...

12) Where is/are the indoor unit(s) located? Unit A Unit B Unit C Unit D...

13) What is the elevation difference between each indoor unit and the outdoor unit? Unit A Unit B Unit C Unit D... (indoor unit above outdoor unit +, below -)

14) Did you check the indoor unit for condensate leakage and refrigerant leakage, before and after connecting them?

15) Where is the outdoor unit located? Ground wall balcony roof other location or pad Is the outdoor unit anchored to ground or secured onto wall bracket?

16) Have you checked to make sure there is no cross-piping and no cross-wiring between any two indoor units (zones)? How did you do it, who was with you?

17) Were the refrigerant pipe ends capped or taped seal, prior to running them through structures to keep debris from entering the copper lines?

18) Have you checked and run cooling or heating, one unit by one unit, all working fine?

19) Did you charge the inter-connection copper pipes and indoor unit with nitrogen to check for positive leakage (pressures 150-200PSI), before conducting vacuuming leakage check?

20) Did you vacuum correctly to check the connecting pipes and indoor unit for leakage, what was the micron gauge reading, for how many minutes?

21) Did you check if the compressor can be started and stopped in a correct (design) manner?

22) If copper length were not made to the supplied or recommended refrigerant pipe length, how much refrigerant added or deducted?

23) Measured refrigerant pressures at outdoor service suction valve, when unit was st.
Heat pump (PSI): Cooling (PSI): Outdoor Ambient Temp. (^{O}F):

24) What were the measured temperatures (probe not touching any metal):
At cooling: indoor return air ^{O}F, discharge air ^{O}F, and outdoor ^{O}F
At heating: indoor return air ^{O}F, discharge air ^{O}F, and outdoor ^{O}F

25) Have you checked all unit functions, with customer's witness, and all functions are correct?

26) Did you show the user how to operate the unit? Did he/she understand you?

27) Do you provide regular one-year free technical service for this installation?

28) Do you list the working details in the invoice and leave a copy to the customer?

Installation Finished and Unit Works Successfully.
Print Name of Installation HVAC Technician:
Signature:

Date and time:

Installation Finished and Unit Works Successfully.
Print Name of Owner:
Signature:

Date and time:

By signing above, I acknowledge the liability and responsibility for any false statement or not telling all the facts, and I authorize YMGI to check the details of the filled above, and make its decision on warranty. I understand our filing or filling the warranty card/form DOESN'T mean automatic warranty approval, because warranty is approved only to those qualified and successful installations by qualified HVAC technician. I know the warranty, if approved, is a standard 5-year compressor and 1-year other parts only, without any labor coverage. I agree to and will follow all the contents contained in the Limited Product Warranty Policy that YMGI, not other entity, stated in public, including but not limited to manuals, web site, email, etc.

Important Note: A copy of the installing HVAC company's invoice to show all their work details, your payment proof, center copy B of this registration card filled after a successful installation, all three (3) MUST be mailed together to Warranty Dept., **YMGI Group, POB 1559, O'Fallon, MO 63366**, for warranty processing. Customer keeps bottom copy C. YMGI will check against copy A that was kept at YMGI.

WHY DOES YMGI GROUP REQUIRE INSTALLATION AND SERVICE TO BE PERFORMED 100% BY CURRENTLY LICENSED OR CERTIFIED HVAC TECHNICIANS/CONTRACTORS?

1. **Expertise and Safety:**
   They have the training and experience to accurately and safely install and service your equipment. The equipment runs with high-pressure refrigerant, oil and electrical current. The copper lines must be installed properly to prevent leakage and foreign substances from contaminating the refrigerant system.
2. **You will save money in the long run:**
   If any problem occurs with the unit that has been fully installed by a currently licensed or certified technician/contractor, contact the original licensed or certified HVAC technician to evaluate the unit as they have the training and experience to correct the problem quickly and efficiently. A technician may be unwilling to repair an issue on a unit that they did not install. If you do find a technician willing to perform this service, there is an increased possibility of higher service fees, increased service visits, or delayed service from that technician.
3. **It's the law!**
   The federal, state and/or local government and authorities have various governing laws or regulations, guidelines, ordinances, etc. These laws may require only licensed or certified professionals can install and service this type of high pressure HVAC equipment.

SUGGESTIONS TO AID YOU IN HIRING AN HVAC CONTRACTOR:

1. Hire a currently practicing, licensed/certified HVAC professional technician/contractor. Technicians, who are no longer practicing (retired, etc.) in this field, may not have current technical knowledge or may lack experience on the equipment you have purchased.
2. Hiring a licensed technician to install your unit as a "side job" and not hiring a licensed HVAC company may pose possible risk. This may result in an incomplete or unsatisfactory installation, no guarantee for workmanship and lack of maintenance and further service to your unit.
3. Hire a technician/contractor who services customers in your local area and one you are familiar with. Local contractors have a faster response time and it will be easier for you to determine if they are reputable.
4. Use only a reputable licensed/certified HVAC installation professional to prevent any unexpected charges because of unethical business practices.
5. Check their references, verify they provide professional service for their customers. N.A.T.E or A.C.C.A certified technicians are strongly recommended.
6. Some contractors/technicians may not feel comfortable about installing equipment that has been purchased by someone other than themselves. They prefer to purchase and install the equipment themselves. You can contact YMGI directly to check and see if there are contractors in your area who have installed our products or any similar products.
7. Ask for a detailed quote for the complete installation project. A flat rate quote is the safest contract for both you and the contractor.
8. Local HVAC technicians may charge you on a project basis or on an hourly basis. It has been our general experience; **a full single head installation normally can cost $800 to $1500**. These costs are estimates, and your actual costs may differ due to your specific job requirements and installation location.
9. Number of hours can vary depending upon each individual situation, some factors are, but not limited to:
   - Difficulty or complexity of securely installing the indoor unit.
   - Difficulty or length of the inter-connecting pipes and wires to be installed.
10. A successful installation is dependent on all these suggestions and all the necessary steps are followed.
11. If the contractor(s)/technician(s) are experienced with the systems/brands you purchased. **You might save on the installation cost, but remember to always ask for and verify references.**
12. The contracts should list and detail all work to be performed and the standards they will follow. Some contractors are willing to include a 1-year installation/service warranty at no extra charge. Check to see if this is an available option. If available, make sure it is included in the contract.
13. Verify and confirm the installation is completed and all the unit functions have been tested and working properly. All items on the checklist should be checked and clearly marked in the warranty registration card/form, prior to paying the contractor in full.

The cost of not having your unit professionally installed can be more expensive than the additional cost of hiring a certified contractor. Protect your investment and warranty eligibility by doing it right the first time.

⚠WARNING

Safety Precautions

1. Follow these instructions to complete the necessary installation process. Carefully read this manual before installation and unit startup or servicing.
2. Wire size of power cord should be properly sized to meet the required electrical loads. Should the power cord get damaged, the power cord should be replaced with a manufacturer approved cable.
3. After connecting the power cord, attach the electric box cover and secure properly.
4. Always meet the nitrogen charge requirements when welding pipes.
5. Never short-circuit or cancel the pressure switch as this will result in damage to the unit.
6. Connect the wired controller before energizing, otherwise the wired controller cannot be used.
7. Before using the unit, verify the piping and wiring are correct. This will avoid water leakage, refrigerant leakage, electric shock, or fire etc.
8. Do not insert fingers or objects into the air outlet or inlet grille.
9. Open a door or window for ventilation for allowing fresh air to enter the room to avoid depleting the oxygen while gas/oil supplied heating equipment is used during the installation.
10. Never start up or shut off the unit by means of directly plugging into or unplugging the power cord from the power outlet.
11. Turn off the unit after it runs at least five minutes, otherwise it will influence the oil return of the compressor.
12. Do not allow children to operate this unit.
13. Do not operate this unit with wet hands.
14. Turn off the unit or disconnect the power supply before cleaning the unit. This will avoid possible electric shock or personnel injury.
15. Never spray or splash water towards the unit. This can cause a malfunction in the unit or can result in electric shock.
16. Do not expose the unit to moist or corrosive environments.
17. While operating in cooling mode, do not set the indoor units room temperature too low. keeping the temperature difference between indoor and outdoor unit within 41℉ (5℃).
18. YMGI Group recommends that only properly trained and authorized personnel be allowed to repair or service the unit. Improper repairs or servicing can result in electric shock or fire hazards. Please contact YMGI Group if you need help locating a qualified repair or service technician.
19. Before installation, check the power supply to ensure it is sufficient to meet and is in accordance with the requirements specified on the nameplate of the unit. Ensure the power overload is functioning correctly and make sure it is properly maintained.
20. Installation must be performed only by an authorized installer or HVAC professional in accordance with the requirements set by the NEC and CEC. Do not attempt to install the unit yourself. Improper handling may result in water leakage, electric shock, fire, and voiding of the warranty.
21. Be sure to use only approved accessories and parts to prevent water leakage, electric shock and fire.
22. Make sure the unit is grounded properly prior to connecting to power source, to avoid electric shock. Do not connect the ground wire to a gas pipe, water pipe, lightning rod or telephone line.
23. Energize the unit for 8 hours before operation. Turn off or disconnect the power within 24 hours to prevent short-cycling (to protect the compressor).
24. If refrigerant leakage happens in a confined space during installation, ventilate immediately. Poisonous gases can occur if the refrigerant gas is exposed to fire.
25. Volatile liquids, such as paint thinners or solvents if exposed to the unit's surface will cause damage to the surface finish. Only use a soft cloth along with a mild non-abrasive detergent to clean the outer casing of the unit.
26. If the unit does not operate normally or if you notice any type of burning odor, power off the unit and turn off the main power supply, then immediately contact your YMGI authorized repair service center or HVAC professional.

NOTICE

YMGI Group will not be responsible for any personal injury or any property damage caused by improper or incorrect installation, improper service or maintenance or by not following the instructions listed in this manual.

DO NOT pull on the power supply cords or refrigeration lines that are connected to the indoor and outdoor units. Install the power supply cords and secure them into position. PVC line set cover is recommended for the outdoor unit to protect against rain, sunlight and accidental damage.

DO NOT allow cold air to blow directly onto people for a prolonged period, as this could make people cold and uncomfortable.

DO NOT undersize any of the power supply wires.

DO NOT connect several units to a single breaker. Don't undersize or oversize the circuit breaker. A poorly sized circuit breaker can cause unit failure and even fire.

DO NOT wire or open a unit while the unit is running. Make sure to disconnect the power supply and switch off all circuits prior to inspecting or servicing the unit. Inspecting and servicing the unit while the power supply is connected, and the circuits are switched on could cause an electrical shock or fire.

DO NOT install the indoor unit near any cooking surfaces, in direct sunlight or any ventilation systems. Poor placement could decrease efficiency and waste energy.

DO NOT install the unit in places where there is exposure to flammable materials or gas.

DO NOT apply chemical solvents, flammable insecticides, or abrasive materials directly on the unit. Clean the unit only with a soft dry cloth.

DO NOT install the unit in a damp laundry room or near flammable gas. All units must be protected by a certified electrical circuit breaker in accordance with all safety and electrical codes.

DO NOT use the system for anything other than what it was designed.

DO NOT store or install the units near food, paint, or other chemicals.

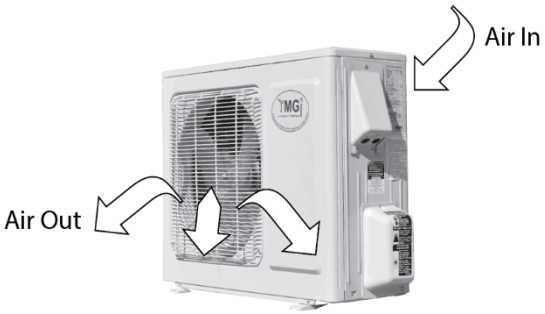
DO NOT use the unit in cool or dry mode for prolonged periods where humidity is higher than 90%.

DO NOT operate the unit for prolonged periods without refreshing ambient air. Open a door or window periodically to allow in fresh air.

BRIEF INTRODUCTION TO MINI SPLIT WALL MOUNT SYSTEM

Mini Split Wall Mount Systems are designed for high performance, easy installation and service. Each system consists of one or several indoor units and one outdoor unit, which are connected by one set or several multiple sets of interconnection refrigerant pipes and electric wires.

As shown in the following sample picture of outdoor unit, air is drawn through the coil from the rear side and then discharged from the front side. In cooling mode, air passing through coil is heated; in heating mode, air passing through coil is cooled.



Outdoor unit

Indoor unit

Sample Wall Mount Mini Split System (For Continuous Engineering Improvement and Various Marketing Needs and Actual Part Availability, Unit Appearance Subject to Change or Update Continuously without Prior Notice)

Outdoor unit(s) provides the electrical and thermal power for the whole system. Electrical and thermal components such as compressors and motors and heat exchange coils and others, are incorporated into the cabinet in an optimized order. They can be either hung on the wall or installed on the ground. Once stacking or bracket kit is used, some outdoor units can be stacked 2 or 3 units high, upon unit size and applications. Air is discharged horizontally, quietly and smoothly. These units are a perfect fit in locations where installation and applications of general up-flow condensing units are limited, such as apartments, condos, lofts, multi-families and high-rise buildings and others named or unnamed.

Indoor unit(s) delivers the thermal and acoustical comfort to the rooms. Air is drawn through the coil from the front or topside and then discharged from the bottom. In cooling mode, air passing through coil is cooled; in heating mode, air passing through coil is heated. Air is filtered or treated by the built in mechanism (washable or enzyme equipped or electrostatic powered filter, varies from model to model), before being delivered into the room, with more than enough comfort and care, at a wide angle (swing or not, varies from model to model).

Apartments

Hotels

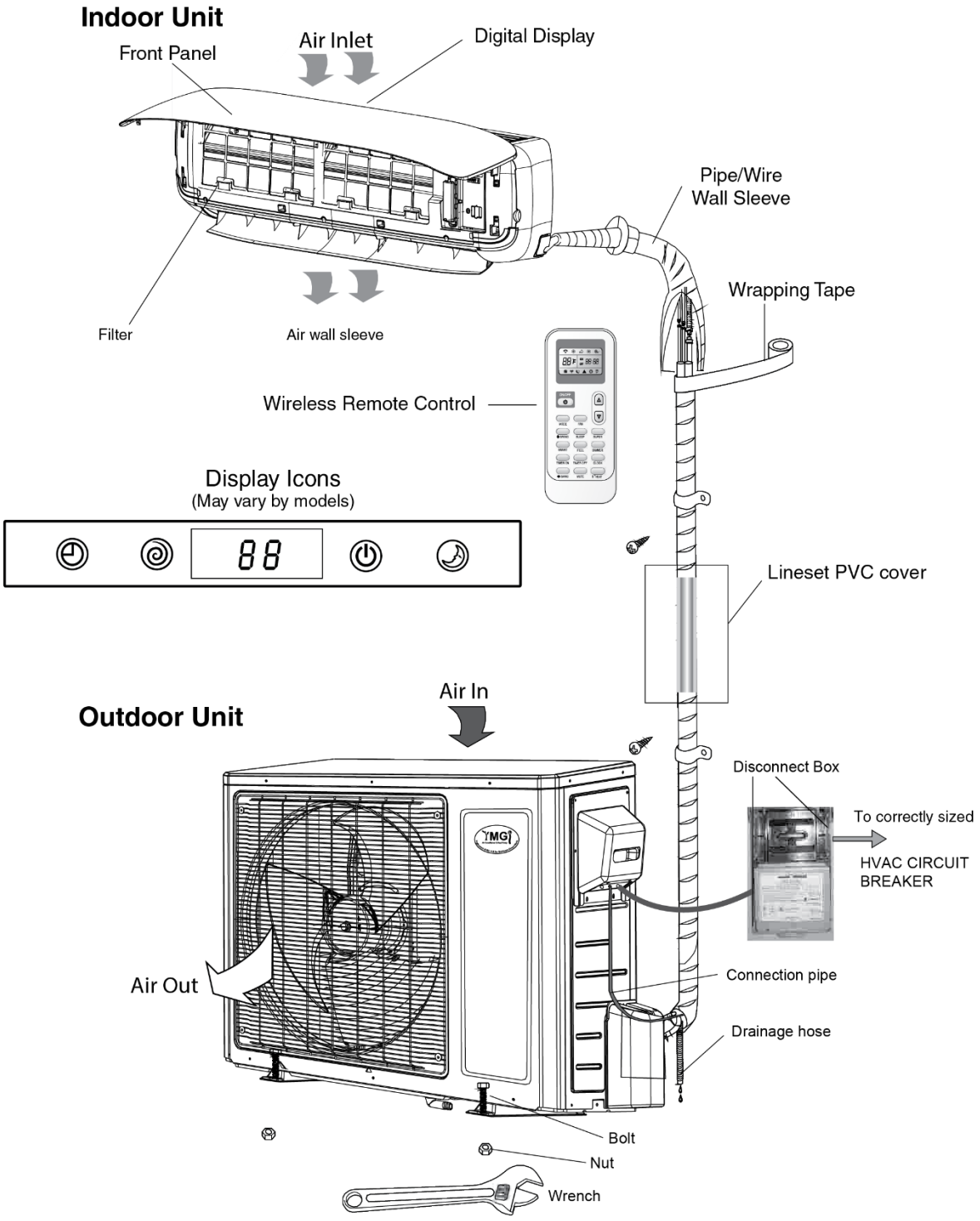
Homes

NOTES: Since ductless system is not designed to incorporate or use with ducted return or discharge tunnels, one single-zone unit SHALL NOT be used to take care of the cooling or heating load of more than one-story room. Several single-zone ductless systems or multiple-zone ductless systems shall be proper in this regard.

These units are designed for applications at:

- **Residential**
- **Light commercial**
- **Institutional**
- **Industrial**
- **Commercial**
- **Hospital**

SAMPLE ILLUSTRATION OF INSTALLED SYSTEM



Notes: Actual unit/ part appearance and installation may vary from illustration.
Subject to continuous improvement and change without notice.

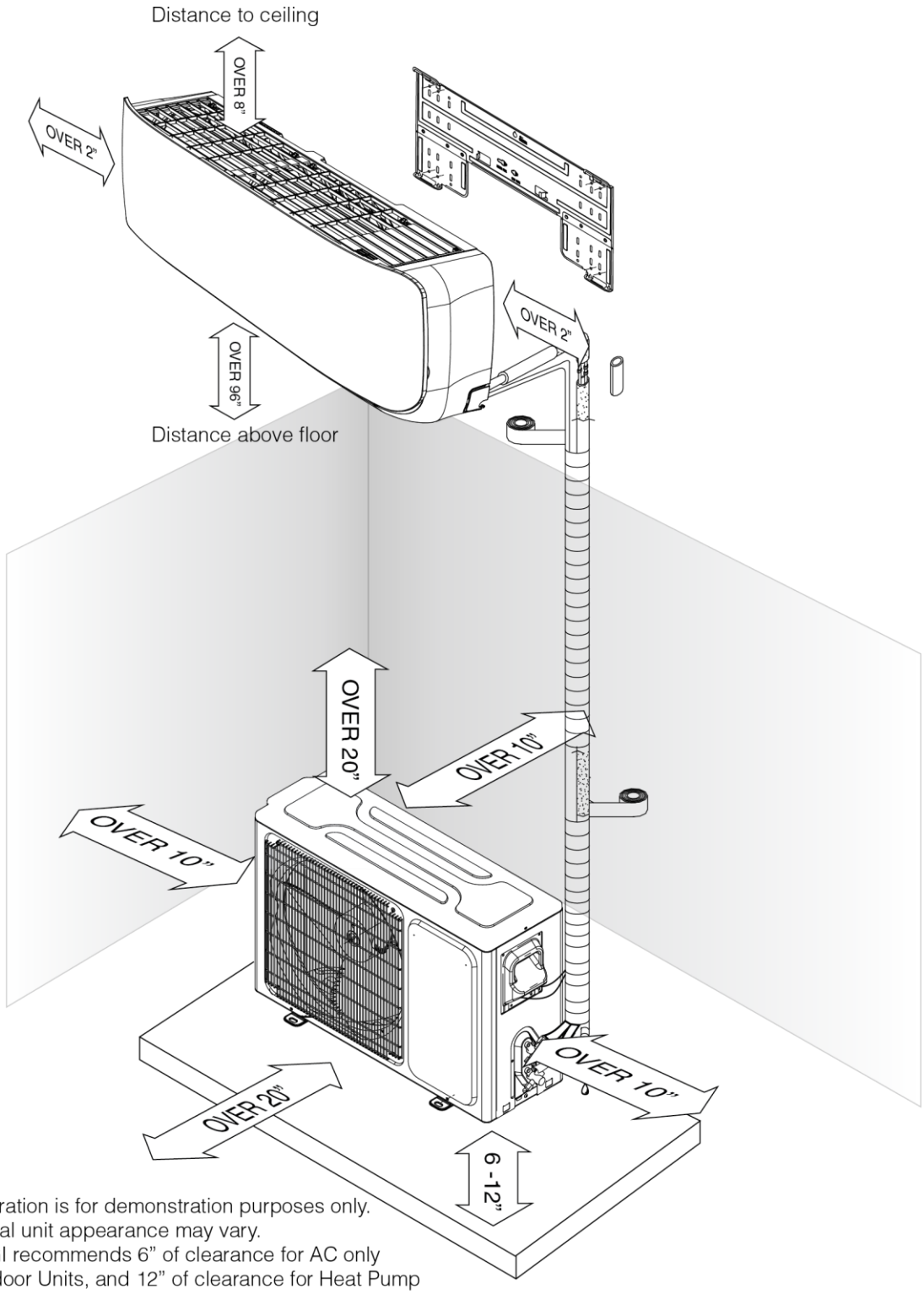
MINI WALL MOUNT SYSTEMS - SPECIFICATION BRIEFS

Unit Specifications and Engineering Submittal

System Model No.			WMMS-09K-V2B(78)1	WMMS-12K-V2B(78)1	WMMS-18K-V2B(78)1	WMMS-24K-V2B(78)1	WMMS-30K-V2B(78)1	WMMS-36K-V2B(78)1
ODU Model No.			WMMS-09C-V2B(78)1	WMMS-12C-V2B(78)1	WMMS-18C-V2B(78)1	WMMS-24C-V2B(78)1	WMMS-30C-V2B(78)1	WMMS-36C-V2B(78)1
IDU Model No.			WMMS-09E-V2B(78)1	WMMS-12E-V2B(78)1	WMMS-18E-V2B(78)1	WMMS-24E-V2B(78)1	WMMS-30E-V2B(78)1	WMMS-36E-V2B(78)1
Climate / Tech			T1 / INVERTER	T1 / INVERTER	T1 / INVERTER	T1 / INVERTER	T1 / INVERTER	T1 / INVERTER
Performance	Voltage, Frequency, Phase	V/Hz/Ph	208~230 / 60 / 1	208~230 / 60 / 1	208~230 / 60 / 1	208~230 / 60 / 1	208~230 / 60 / 1	208~230 / 60 / 1
	Cooling Capacity Rating	Btu/h	9000	12000	18000	24000	30000	33,000
	Cooling Capacity Ranges	Btu/h	3600-10000	4000-13500	6500-19500	8000-26500	11500-33500	12000-36500
	Heating Capacity Rating	Btu/h	9500	13000	19000	24500	31000	33,500
	Heating Capacity Ranges	Btu/h	3600-10500	4000-14000	6500-20000	8000-26500	11500-33500	12000-36500
	Rated Input-Cooling	W	670	920	1385	2035	2900	3300
	Rated Input-Heating	W	730	1130	1595	2080	2700	3100
	SEER	Btu/h/ W	21.5	20.5	23.3	20.5	18.8	17.6
	HSPF	Btu/h/ W	10.5	10.8	11.6	11.8	12.3	9.6
	EER for Cooling	W/W	13.43	13.04	13.00	11.73	10	10
	COP for Heating	Btu/h /W	13.01	11.50	11.90	11.78	8.5	10.81
	Moisture Removal	pts/hr.	1.9	2.53	3.2	5.1	6.3	6.8
	Air Circulation	CFM	341.37	364.91	647.43	706.29	1059.44	1059.44
	R410A Refrigerant charge volume	Oz	33.5	40.9	54.7	66.3	73	79.4
	Indoor Sound Pressure (H/M/L/silence)	dB (A)	40 / 36 / 33 / 26	40 / 36 / 33 / 26	48 / 45 / 40 / 36	48 / 45 / 40 / 36	50 / 45 / 40 / 38	50 / 45 / 40 / 38
	Outdoor Sound pressure	dB (A)	53	53	55	58	60	60
	Airflow Indoor Unit (S/H/M/L)	CFM	412 / 380 / 351 / 276	412 / 380 / 351 / 276	635 / 577 / 482 / 383	635 / 577 / 482 / 383	1107 / 845 / 706 / 589	1107 / 845 / 706 / 589
	Airflow Outdoor Unit (H)	CFM	941.72	1177.15	1648.01	2354.31	2354.31	2354.31
	Cooling Rated Current	Amp.	3.1	4.1	6.3	9.2	12.8	14.8
	Heating Rated Current	Amp.	3.3	5.0	7.2	9.3	12	13.8
	Cooling Current Ranges	Amp.	1.0 - 6.5	1.2 - 7.0	1.5 - 12	1.8 - 13	2.3 - 15	2.5 - 17
	Heating Current Ranges	Amp.	1.0 - 6.5	1.2 - 7.0	1.5 - 12	1.8 - 13	2.3 - 15	2.5 - 17
	Minimum Current Ampacity (MCA)	Amp.	10	10	15	20	25	25
	MAX. Operating Pressure for the Discharge Side at Cooling	PSIG	551	551	551	551	560	560
	MAX. Operating Pressure for the Suction Side at Cooling	PSIG	174	174	174	174	170	170
	Maximum Fuse Size (MFS)	Amp.	15	15	20	30	40	40
Electrical System	Compressor type		Rotary	Rotary	Rotary	Rotary	Rotary	Rotary
	Compressor MFG		Hitachi	GMCC	GMCC	GMCC	Hitachi	Hitachi
	Expansion Device		capillary	capillary	capillary	capillary	capillary	EEV
	Compressor model #		ASD088RKQA6JT6	ASN108D32UFZ	ATM150D43UFZ	ATF235D22UMT	ATL253UDPC9AUL	ATL253UDPC9AUL
	Indoor DC motor		No	No	Yes	Yes	Yes	Yes
	Indoor motor MFG		Weiling	Weiling	Weiling	Weiling	Broad-ocean	Broad-ocean
	Indoor motor model #		DG13G1-21	DG13G1-21	K1B310497	K1B310497	DG13G3D-01	DG13G3D-01
	Indoor motor power output	W	14	14	35	35	50	50
	Indoor motor speed S/H/M/L	RPM	1250 / 1100 / 9500	1250 / 1100 / 9500	1200 / 1040 / 880	1200 / 1040 / 880	1150 / 1000 / 850	1150 / 1000 / 850
	Outdoor DC motor		Yes	Yes	Yes	Yes	Yes	Yes
	Outdoor motor MFG		Welling	WOLONG	Broad-ocean	Weiling	Weiling	Weiling
	Outdoor motor model #		ZWA138D08A	ZWA138D08A	DG13Z2D-04	K1B310499	K1B310499	K1B310499
	Outdoor motor power input	W	30	30	60	70	70	70
	Outdoor motor speed H/M/L	RPM	880 / 650 / 450	800 / 650 / 450	840 / 650 / 500	850 / 550 / 500	850 / 550 / 500	850 / 550 / 500

Evaporator	Evaporator material		Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin
	Number of rows		2	2	2	2	2	2
	Tube outside dia. and type	in.	Ø 9/32, inner groove tube	Ø 9/32, inner groove tube	Ø 9/32, inner groove tube	Ø 9/32, inner groove tube	Ø 9/32, inner groove tube	Ø 9/32, inner groove tube
	Evaporator L x H x W	in.	24 7/16 x 11 9/16 x 1 1/8	24 7/16 x 11 9/16 x 1 1/8	33 5/32 x 14 7/8 x1 1/8	33 5/32 x 14 7/8 x1 1/8	38 25/32 x 16 17/32 x 1 3/32	38 25/32 x 16 17/32 x 1 3/32
	Tube pitch(a)x row pitch(b)	in.	27/32 x 17/32	27/32 x 17/32	27/32 x 17/32	27/32 x 17/32	3/4 x 17/32	3/4 x 17/32
	Fin spacing	in.	1/16	1/16	1/16	1/16	1/16	1/16
Condenser	Condenser material		Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin	Copper tube & Aluminum Fin
	Number of rows		2	2	2	2	2	2.5
	Tube outside dia. and type	in.	Ø 9/32	Ø 9/32	Ø 9/32	Ø 9/32	Ø 9/32	Ø 9/32
	Tube type		Inner groove tube	Inner groove tube	Inner groove tube	Inner groove tube	Inner groove tube	Inner groove tube
	Condenser L x H x W	in.	(26 15/16+25 25/32) x 18 3/16 x 1 7/16	33 5/32 x 21 1/2 x 3/4 + 32 1/64 x 21 1/2 x 3/4	35 1/4 x 24 13/16 x 3/4 34 9/64 x 24 13/16 x 3/4	33 5/32 x 1 5/64 x 14 7/8	(38 3/16 + 37 3/32) x 29 25/32 x 3/4	(38 3/16 + 37 3/32 + 21 21/32) x 29 25/32 x 3/4
	Tube pitch (a) x row pitch (b)	in.	53/64 x 23/32	53/64 x 23/32	53/64 x 23/32	53/64 x 23/32	53/64 x 23/32	53/64 x 23/32
	Fin spacing	in.	1/16	1/16	1/16	1/16	1/16	1/16
	Liquid Pipe Diameter	in.	1/4	1/4	1/4	3/8	3/8	3/8
	Gas Pipe Diameter	in.	3/8	3/8	1/2	5/8	5/8	5/8
ODU Cooling Working Temperature Range		°F	5° - 115°	5° - 115°	5° - 115°	5° - 115°	32°F - 115°	32°F - 115°
ODU Heating Working Temperature Range		°F	-4° - 75°	-4° - 75°	-4° - 75°	-4° - 75°	-4° - 75°	-4° - 75°
IDU Remote Cooling Temperature Range		°F	61° - 86°	61° - 86°	61° - 86°	61° - 86°	61° - 86°	61° - 86°
IDU Remote Heating Temperature Range		°F	61° - 86°	61° - 86°	61° - 86°	61° - 86°	61° - 86°	61° - 86°
Performance Testing Standard			ARI 210-240	ARI 210-240	ARI 210-240	ARI 210-240	ARI 210-240	ARI 210-240
Certifications			ETL / AHRI	ETL / AHRI	ETL / AHRI	ETL / AHRI	ETL / AHRI	ETL / AHRI
Packaging	Indoor Unit Dimensions W x H x D	in.	32.88 x 11 x 8 .69	32.88 x 11 x 8.69	43.31 x 12.81 x 9.63	43.31 x 12.81 x 9.63	50.38 x 14.19 x 10.25	50.38 x 14.19 x 10.25
	Outdoor Unit Dimensions W x H x D	in.	28.13 x 19 x 9 7/16	31.88 x 23 x 11	33.88 x 25.56 x 12.19	34.88 x 31.31 x 14 3/8	34.88 x 31.31 x 14 3/8	34.88 x 31.31 x 14.38
	Indoor Unit Weight Net/Gross	lbs	18.75/ 24.25	19.84 / 24.25	32 / 37.5	32 / 37.5	43 / 50.7	39.68 / 47.4
	Outdoor Unit Weight Net/Gross	lbs	59.52 / 66.14	72.75 / 79.37	99.2 / 108	123.5 / 141	127.86 / 138.89	132.27 / 143.3
	Indoor Unit Packing Dimensions W x H x D (With pipe)	in.	34.25 x 13.19 x 10.44	34.25 x 13.19 x 10.44	46.06 x 15.38 x 12.44	46.06 x 15.38 x 12.44	54.5 x 17.13 x 12.81	54.5 x 17.13 x 12.81
	Outdoor Unit Packing Dimensions W x H x D (With pipe)	in.	32 .69 x 20.88 x 13.38	37 x 25.19 x 15.19	39.19 x 28.75 x 17.5	41.34 x 35.81 x 19.63	41.34 x 35.81 x 19.63	41.34 x 35.81 x 19.63

INSTALLATION DIAGRAM



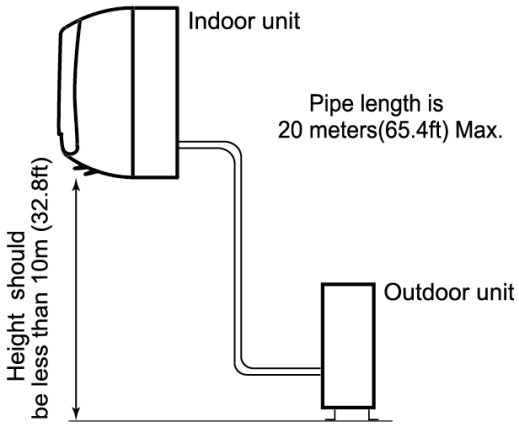
- Illustration is for demonstration purposes only. Actual unit appearance may vary.
- YMGI recommends 6" of clearance for AC only Outdoor Units, and 12" of clearance for Heat Pump Outdoor Units in climates where the ambient air temperature drops below 32 °F, or installation that is higher than average snow accumulation, whichever is greater.
- Installation must be performed in accordance with Federal and Local wiring standards by authorized personnel only.

INSTALLATION SITE INSTRUCTIONS

Site for installing the Indoor Unit

- Where there are no obstacles near the air outlet, and air can be easily blown to entire room.
- Where piping and wall hole can be easily placed.
- Required space between the unit and the walls and ceiling, according to the installation diagram on the preceding page.
- Where the air filter can be easily removed.
- Keep the unit and remote control 1m (3.28 ft.) or more from televisions, radios, etc.
- Keep as far as possible from fluorescent lamps.
- Do not put anything near the air inlet that may obstruct air flow.
- Install on a wall that is strong enough to bear the unit weight.
- Install in a place that will not increase operation noise or vibration.
- Avoid direct sunlight and heating sources. Do not place near flammable materials or combustion apparatuses above or on top of unit.

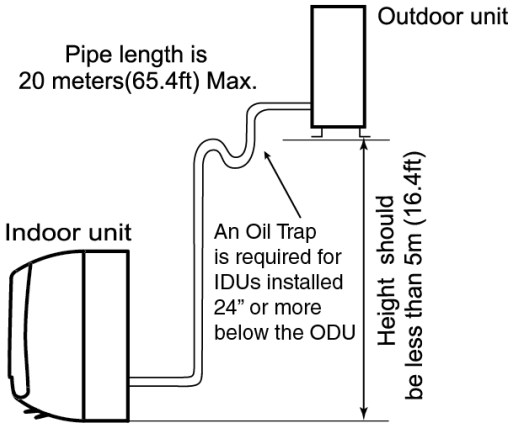
Indoor Unit is higher than Outdoor Unit



Site for installing the Outdoor Unit

- Place unit where it is convenient to install and well ventilated.
- Avoid installing where flammable gas could leak.
- Keep required distance away from walls.
- Keep outdoor unit away from exhaust vents or chimneys.
- Avoid installing unit near street or roadside where there is a risk of mud or water damage.
- Install unit on a fixed base that does not vibrate, which will increase operation noise.
- Avoid blocking any air outlets or vents.
- Strongly recommended that the outdoor unit be installed above the ground either on platform or brackets.

Outdoor Unit is higher than Indoor Unit



- Heat pump unit must be lifted up from ground level, allowing any condensate to drain out of the drain pan of the condensing unit. Otherwise, condensate may ice up causing damage to the unit. We suggest using YMGI brackets and condensate drainage fitting accessories.
- Avoid installing under direct sunlight, in an aisle or sideway, or near open heat sources or ventilation fans.
- Avoid installing near flammable materials, smoke, water, or uneven surfaces.
- In case the pipe length is greater than 7.5m (24.6 ft.), the unit may require an additional charge of refrigerant. Please consult the table below:

Model	Required amount of additional refrigerant (oz./ft.)
9000 Btu/h – 18000 Btu/h	0.6450
24000 Btu/h	0.9675
30000 Btu/h – 36000 Btu/h	1.2900

If the height or pipe length is outside the scope of the above table, please consult YMGI.

1) **Mounting Indoor & Outdoor Units and Running Piping/Wiring**
   - Ruler (Not Shown)
   - Stud-Finder
   - Dry-Wall Saw
   - Electric Drill
   - 3" Hole Saw
   - Drill Extension
   - Hammer Drill and Bit (Not Shown)
   - Measuring Tape
   - Level
   - Flash Light
   - Screw Driver (Phillip's and Flat)
   - Hammer
   - Knife
   - Scissors
   - Goggled Glass
   - Mask
   - Gloves
   - Ladder

2) **Refrigeration Related Work**
   - Individual wrench Set (Use Two at One Time)
   - Flare-Nut Tool Set (Not Shown)
   - Hex Head Allen Wrench Sets (Metric and Imperial)
   - Brazing Rods and Brazing Torch
   - Outfit for AC Application (Not Shown)
   - Brazing Flux
   - Nitrogen Cylinder for Positive Pressure Leakage Check (Not Shown)
   - Soap Bubble for Positive Pressure Leakage Check (Not Shown)
   - Vacuum Pump for Negative Pressure Leakage Check
   - Helium Refrigerant Minor Leakage
   - Check (Not Shown)
   - Manifold

3) **Electrical Related Installation**
   - Wire Cutter
   - Wire Stripper
   - Sharp Plier
   - Cable Ties
   - Black Tape for Electrical Use
   - Electrical Meter

4) **Trial Running Units and Inspection**
   - Clamp Meter (Not Shown)
   - Manifold
   - Infra Thermometer (Not Shown)

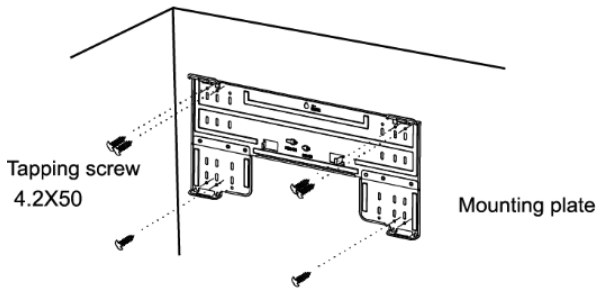
INDOOR UNIT INSTALLATION

1. Installing the Mounting Plate

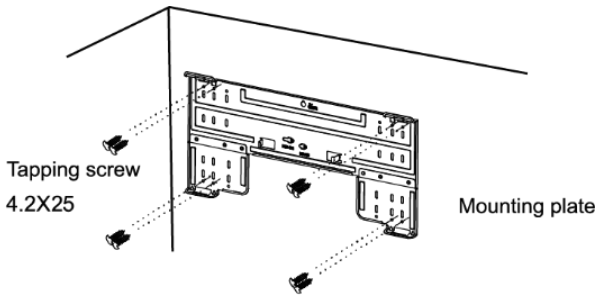
- Choose an installation location for the mounting plate according to the indoor unit location and piping direction.
  Note: We recommend the use screw anchors for sheet rock, concrete block, brick, etc.

- Keep the mounting plate horizontal with a level or drop line
- Mark the center of the indoor unit on mounting plate for future reference.
  Note: The center of the mounting bracket may not be the center of the Indoor unit.

- Attach the mounting plate to the wall with a minimum of five screws, evenly spaced to properly support the weight of the Indoor unit.



Concrete/Brick Wall

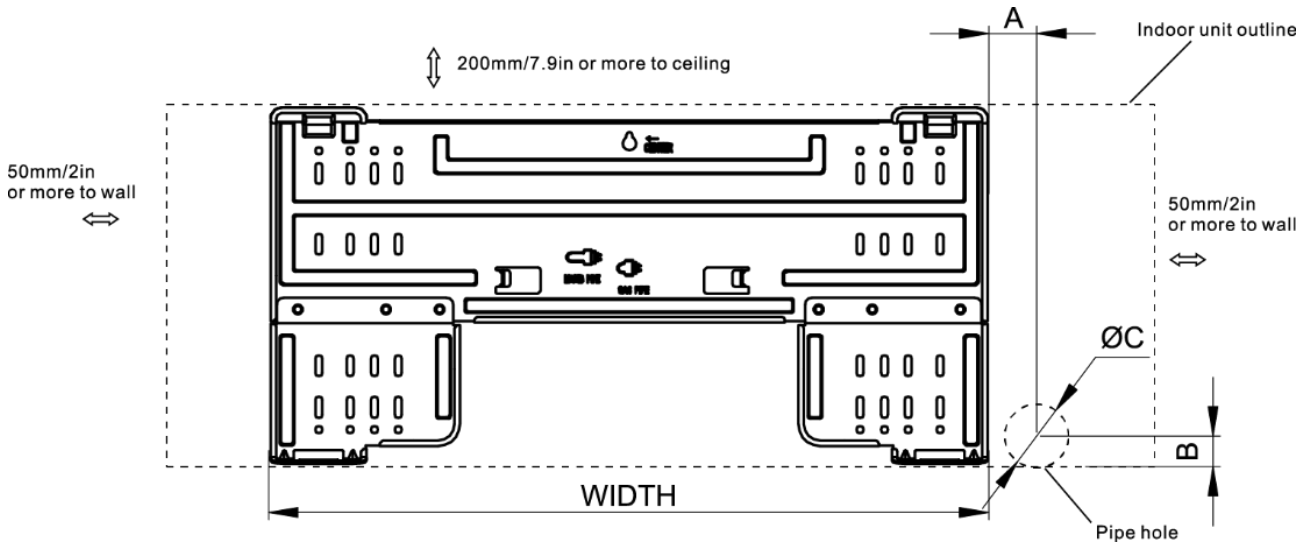


Wooden Wall

Note: The shape of your mounting plate may be different than the one pictured above, but the installation method is similar.

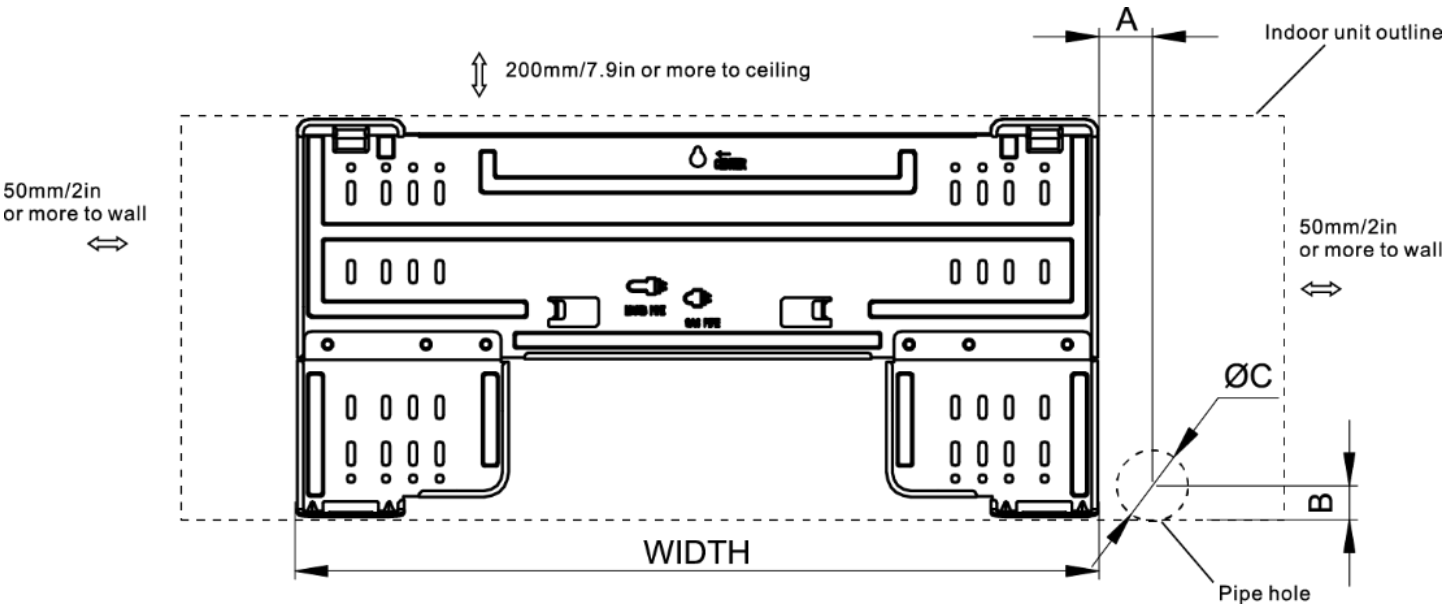
Note: As the above figure shows, the six holes matched with tapping screws on the mounting plate must be used to fix the mounting plate, the others are prepared.

RECOMMENDED MOUNTING BRACKET DIAGRAMS AND DIMENSIONS

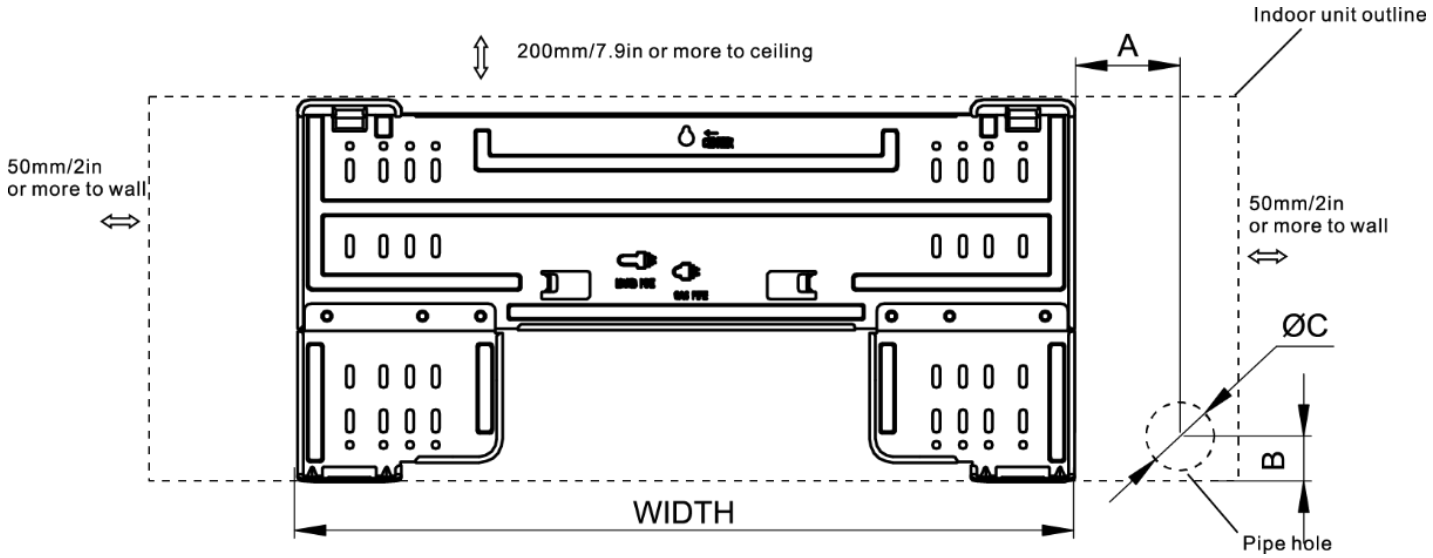


For 9000 Btu/h Series Models Bracket Width: 522mm / 20.6 in.

For 12000 Btu/h Series Models Bracket Width: 592mm / 23.3 in.



For 18000 Btu/h Series Models Bracket Width: 629mm / 24.8 in.



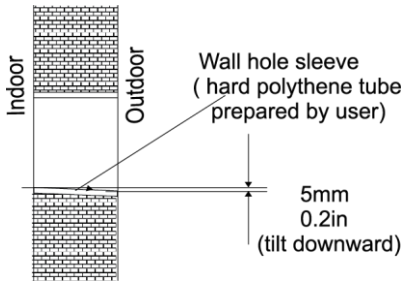
For 24000 Btu/h Series Models Bracket Width: 820mm /32.3 in.

Unit Model	Size A	Size B	Size C
	mm/in.	mm/in.	mm/in.
9k & 12k of 21 SEER Series	70 / 2 ¾”	35 / 1 3/8”	70 / 2 ¾”
18k & 24k of 21 SEER Series	170 / 6 11/16”	40 / 1 37/64”	70 / 2 ¾”
30K & 36k of 17 SEER Series	64 / 2 33/64”	41.2 / 1 39/64”	70 / 2 ¾”

INDOOR UNIT INSTALLATION

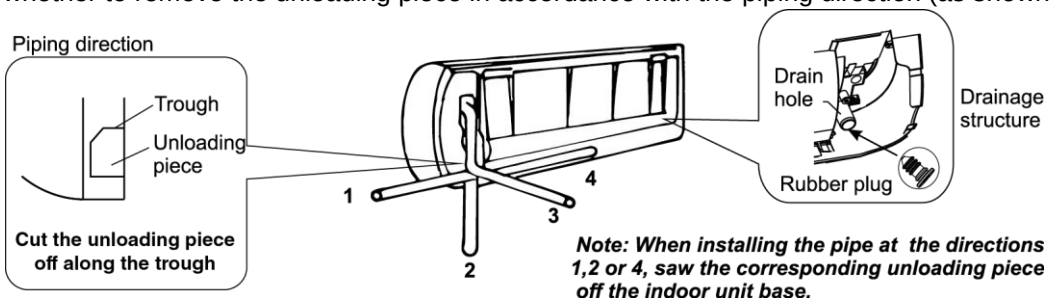
2. Drill a hole through the wall for interconnecting piping, drain and wiring.

- Decide the position of the hole according to the location of the mounting plate.
- Drill a hole through the wall. The hole should tilt slightly downward toward the outside.
- Install a sleeve into the hole to keep the wall tidy and clean.



3. Piping and drain hose connections to the Indoor Unit.

- Feed the piping (liquid and gas pipes) and wiring through the hole from the outside.
  - Decide whether to remove the unloading piece in accordance with the piping direction (as shown below)

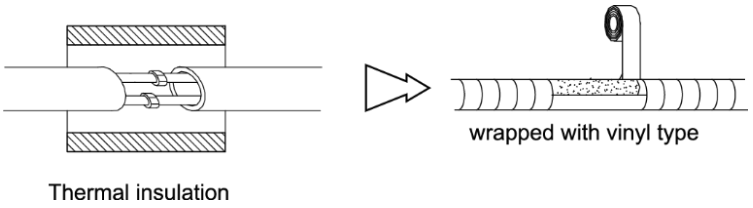


- After connecting the piping, install the drain hose, then the power cords.
- After all lines are connected, wrap the piping, cords and drain hose together with thermal insulation materials.

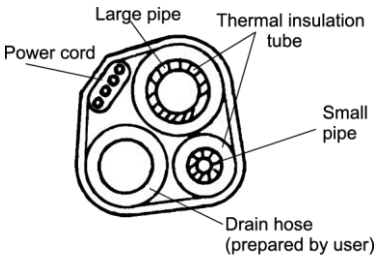
Note: The drainage assembly can be used from both sides. For either side of the drainage assembly, the drain pipe can be installed on the right, left, or both sides. If you are using both drainage connections, a second drain hose will be needed, as only one is provided by the manufacturer. If you are using a single drainage connection, make sure the drain hole on the unused side is securely plugged.

INDOOR UNIT INSTALLATION

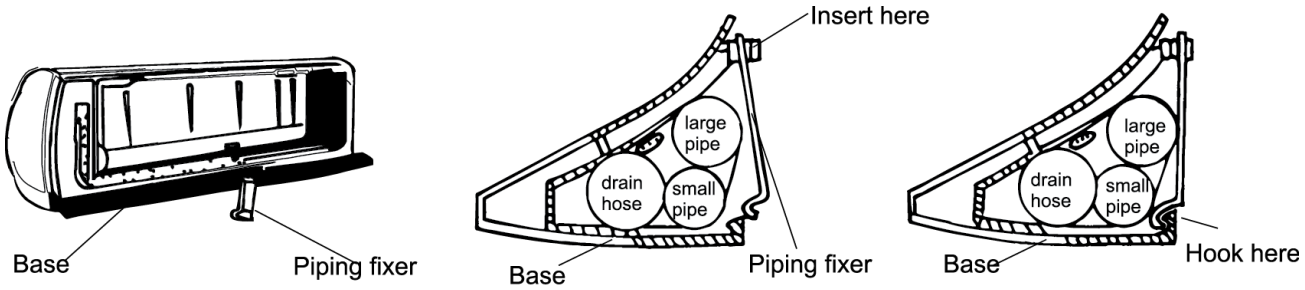
- **Piping Joints Thermal Insulation:**
  Wrap the piping joints with thermal insulation and then wrap with a vinyl tape



- **Piping Thermal Insulation:**
  - Place the drain hose under the piping
  - Use insulation materials that contain polyethylene foam that is over 6mm in thickness
    Note: Drain hose is prepared by the installer.
- Do not arrange the drain pipe twisted, sticking out, or where it can move around. Do not immerse the end of the drain pipe in water.
- If an extension drain hose is connected to the drain pipe, make sure to insulate it when passing behind the indoor unit.



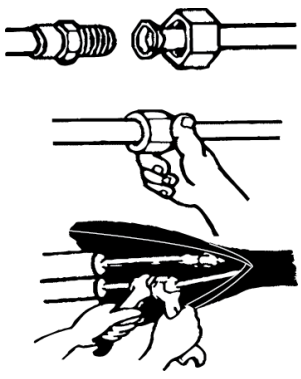
- When the piping is directed to the right, the piping, power cord, and drain pipe should be insulated and fixed to the back of the unit with a piping fastener.



A. Insert the pipe fixer to the slot. B. Press to hook the pipe fixer onto the base.

Piping Connection:

a) Connect indoor unit pipes with two wrenches. Pay special attention to the allowed torque as shown in the table below to prevent the pipes, connectors, and flare nuts from being deformed or damaged
b) Pre-tighten the nuts with fingers, then tighten with wrenches.

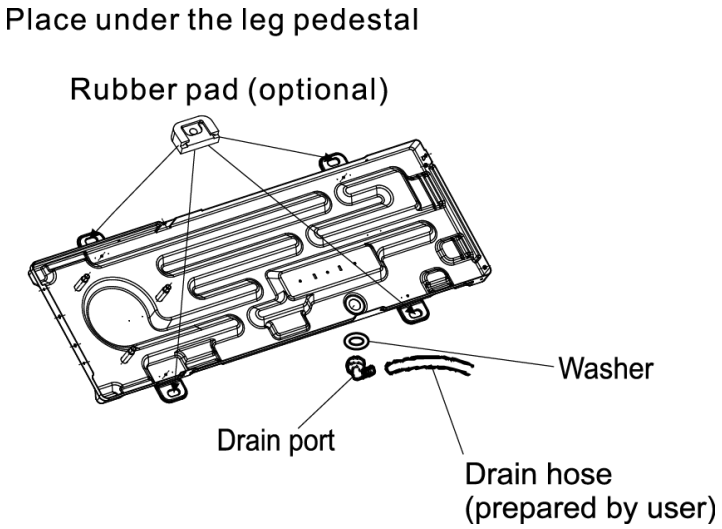


Model	Pipe Size	Torque	Nut Width mm / in.	Min. Thickness mm / in.
9k-18k Btu/h	Liquid Pipe 1/4”	15~20N~m or 11~15 ft.-lbs	17 / 5/8	0.5 / 0.02
24k-36k Btu/h	Liquid Pipe 3/8”	15~20N~m or 11~15 ft.-lbs	22 / 7/8	0.6 / 0.024
9k-12k Btu/h	Gas Pipe 3/8”	15~20N~m or 11~15 ft.-lbs	22 / 7/8	0.6 / 0.024
18k Btu/h	Gas Pipe 1/2”	15~20N~m or 11~15 ft.-lbs	24 / 15/16	0.6 / 0.024
24k-36k Btu/h	Gas Pipe 5/8”	15~20N~m or 11~15 ft.-lbs	27 / 1 1/16	0.6 / 0.024

OUTDOOR UNIT INSTALLATION

1. Install Condensate Drain for Outdoor Unit

The condensate drains from the outdoor unit when the unit operates in heating mode. In order not to disturb your neighbors and to protect the environment, install a drain port and a drain hose to direct the condensate water. Install the drain port and rubber washer to the chassis of the outdoor unit, then connect a drain hose to the port as demonstrated in the figure below.



2. Install Ground Pad or Wall Brackets

- Determine proper location for outdoor unit.
- Follow all instructions provided by the manufacturer for installation of wall brackets and rubber pads.
- Verify the wall brackets or rubber pad can safely support eh Outdoor Unit's weight.
- Verify that the wall hangers or rubber pad is level, and meets all clearance requirements.
- Fix with bolts and nuts, secured tightly on a flat and strong floor.
  If the unit is installed on a wall or roof, make sure that the support structure is firmly attached, and will prevent the unit from shaking due to severe vibrations or strong winds.

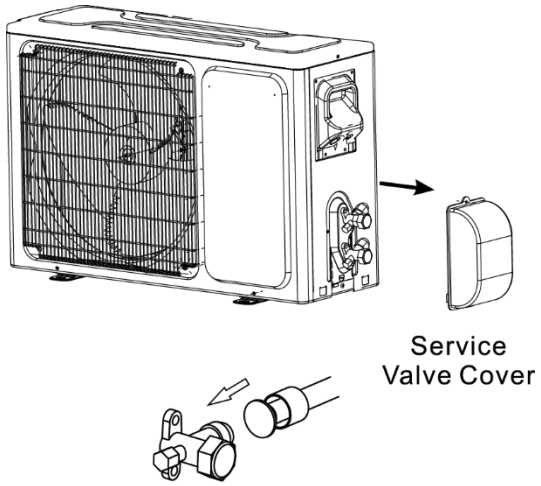
⚠WARNING

Florida wind load requirements state that outdoor units must be anchored to a concrete pad using four 3/8 inch diameter power wedge bolts (or equivalent), with 1 inch diameter fender washers.

Anchor bolts must be embedded into 3000 PSI minimum concrete, at a distance of 4 ½ inches from concrete edge. The concrete thickness must exceed 1.5 times the anchor depth.

3. Piping connections to the Outdoor Unit

- Remove valve service cover (if your unit has one) to access the valves and refrigerant ports.
- Carefully bend and adjust the length(s) of refrigerant pipes to meet the outdoor unit service valves connection(s), using the proper tools to avoid kinks.
- Apply a small amount of refrigerant oil to the flare connection of the refrigerant pipe.
- Properly align piping and tighten the flare nut using a standard wrench and a torque wrench, as shown in the indoor piping section.
- Carefully tighten flare nuts to correct torque level, referring to the Torque Table below.



Torque Table

Pipe Diameter in. (mm)	Nut Size in. (mm)	ft.-lbs	N~m
1/4 (6.35)	1/4” (17)	11 - 15	15 - 20
3/8 (9.5)	3/8” (22)	22 - 26	30 - 35
1/2 (12.7)	1/2” (25)	37 - 41	50 - 55
5/8 (15.9)	5/8” (29)	44 - 48	60 - 65

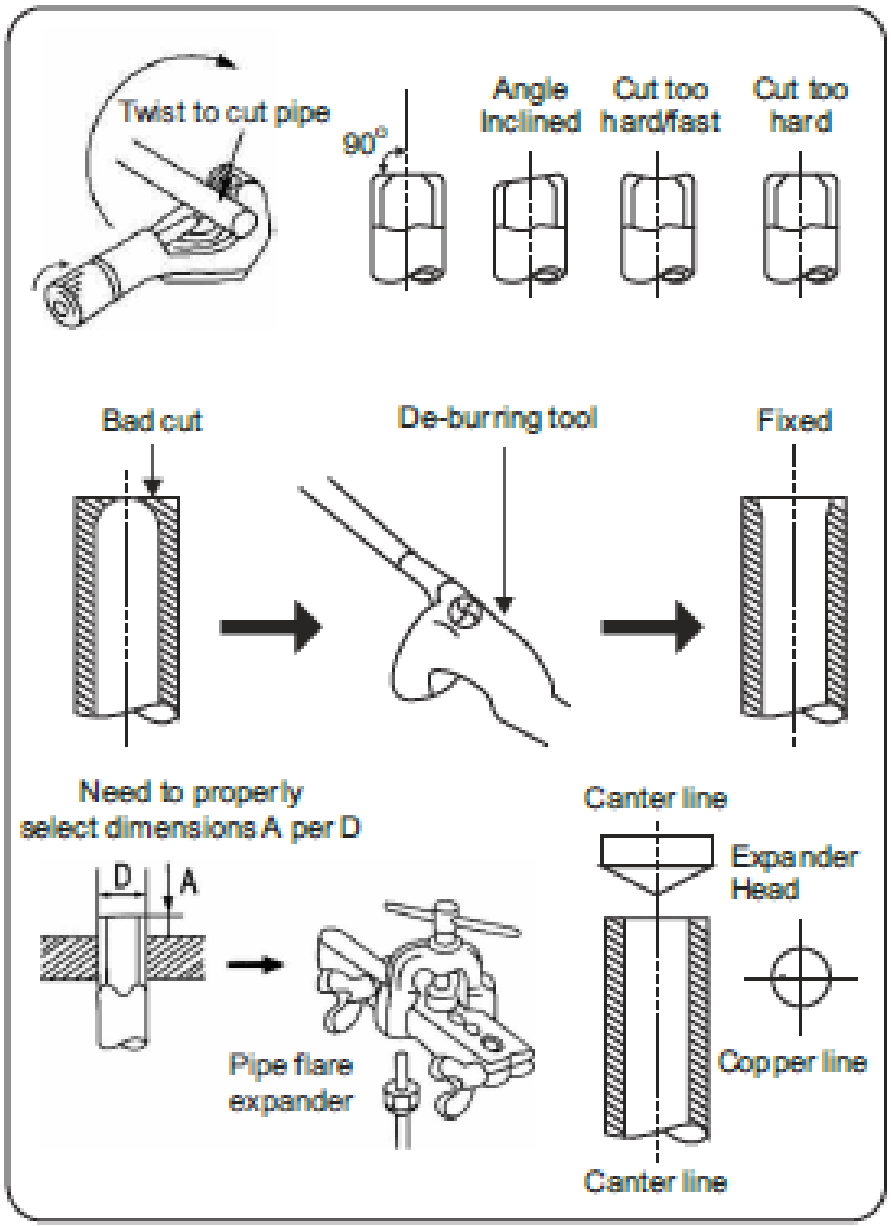
Note: Over tightening may damage flare or cause leaks.

Running Interconnecting Refrigerant Lines:

Use clean refrigeration grade copper pipe only. Keep the copper lines from kinking and transmitting any noise to walls, cabinets, etc. Pipe length not to exceed 150 feet, elevation not to exceed 35 feet. Insulate both the liquid and gas copper lines with at least 3/8-inch-thick insulation tubes. Band, tape and secure the refrigerant lines. Support copper lines at a proper distance apart to keep the tubes from sagging.

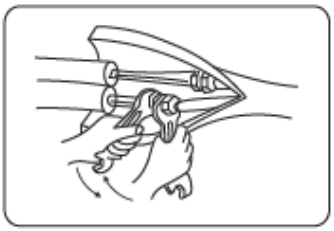
CUTTING REFRIGERANT PIPE

Make sure where the pipe is to be cut is straight and smooth. Engage the cutting blade. The cutting blade must be straight and perpendicular to the pipe surface. Don't cut too fast or apply too much pressure. Turn and tighten the tube cutter slowly. Remove residual and de-bur the cut edge. The cut edge should be smooth and clean.



Connect Copper Pipes-Flare/Nut Connection at Indoor and Outdoor Units

Proper torque should be applied to create a good connection at the female nut, flare and male nut, as recommended in the following table. Too much torque may damage and break the flare/nut seal. Too little torque may not ensure a good seal. ALWAYS use a pair of wrenches when tightening (as pictured in illustration).



Refrigerant Pipe Flare/Nut Connection Tightening Torque

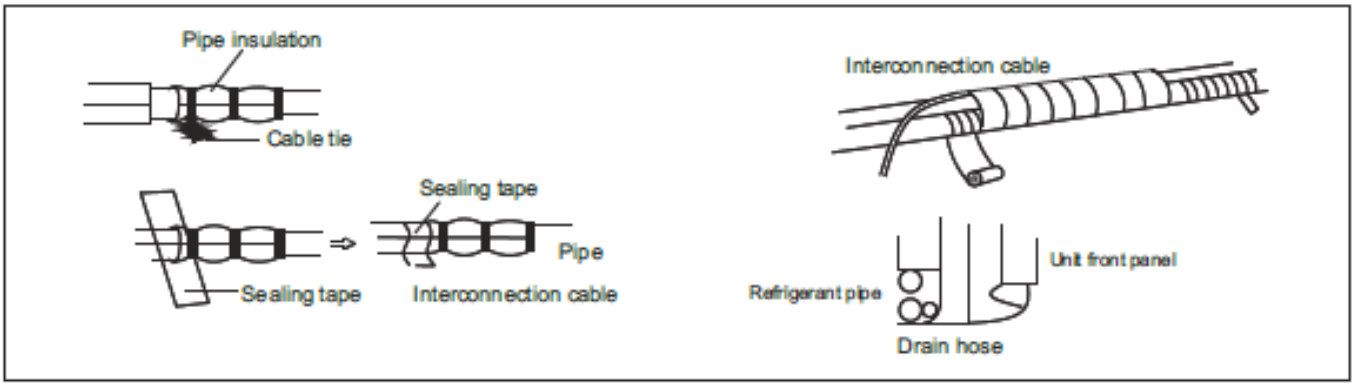
Flare Nut	Tightening Torque
1/4" – 3/8"	25 ft. lbs. (350 kg-cm)
1/4" – 1/2"	40 ft. lbs. (560 kg-cm)
1/2" – 3/4"	60 ft. lbs. (840 kg-cm)
7/8" – 1 1/8"	110 ft. lbs. (1540 kg-cm)

Connect Copper Pipes-Sweat Connection

In this case, wrap a wet rag around the pipe to protect the valves or other components from being overheated. When using flux, rub the tube surface using steel wool to remove any oxidation then clean and dry to protect the system from any possible contamination.

CONNECT REFRIGERANT PIPES BETWEEN THE INDOOR AND OUTDOOR UNITS

Seal Copper Line Set/Wire and Cable/Drain Hose Line Combination



- Run cables along with the refrigerating copper line sets and secure them with tape, 6 feet apart.
- Wrap tape tight (cover a third of the width of the wrapping tape applied early) to ensure a good seal.
- Tape and seal the end of the wrapping tape.
- Shape the pipe combination gently, without causing kinking, sharp bends, or other damage to it.
- Fix the pipe combination securely on the external wall with proper clamps, 6 feet apart.
- Fill the gap between the wall hole and wall sleeve with putty to keep rain or dust entering inside.

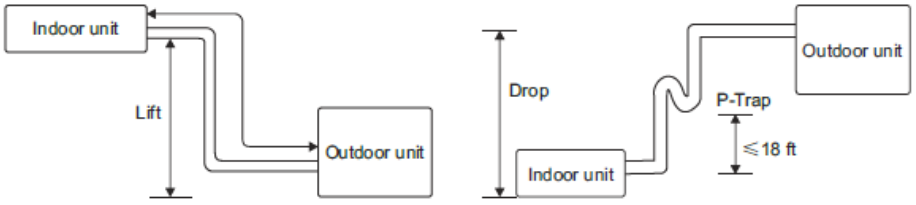
PIPING GUIDE

Set the packed pipes in a vertical position and then unwind them slowly.			Do not unwind only one end of the coiled pipes.
Use pulley or a bending tool to ensure a safe bending radius.			Do not make any sharp or small radius bends.
May also use rolling wheel to reduce internal pipe tension and avoid possible deformation.			Do not bend long sections of pipe without using bending tools.
Use an elbow tool for consistent bending radius.			Do not make bends that are less than 90 degrees.
Maintain the minimum bending radius.			Do not bend shot pipes.

PIPING AND WIRING SIZES-UNITS

Unit	Connection Copper Pipe Sizes	Min. / Max. Length +/- Elevation	Wires from Outdoor to Indoor Unit	Min. Wire Size Outdoor – Indoor Units	Fuse is Factory Installed
09K	1/4” Liq. / 3/8” Gas	15/50/30/15	N(1)/2/3/G	18AWG	At Indoor Control Board
12K	1/4 Liq. / 1/2” Gas	15/50/30/15	N(1)/2/3/G	18AWG	At Indoor Control Board
18K	1/4 Liq. / 1/2” Gas	15/75/30/15	N(1)/2/3/G	16AWG	At Indoor Control Board
24K	3/8 Liq. / 5/8” Gas	15/75/30/15	N(1)/2/3/G	16AWG	At Indoor Control Board

- The indoor unit and the outdoor unit can be at different heights either above or below each other. The height for the difference must follow the stated requirements shown in the table below.
- Keep bending of the piping line to a minimum to avoid any possible negative impacts on the performance of the units.
- Make a P-trap if the elevation drop difference is more than 25 inches, as illustrated below.

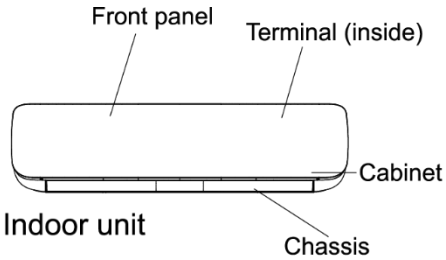


Refrigerant Pipe Min/Max. Length, Rise and Drop Height

Btu/h	Min. Length (ft.)	Max. Length (ft.)	Max Rise Height (ft.)	Max. Drop Height (ft.)
09K - 12K	15	50	20	28
18K - 24K	15	75	25	35

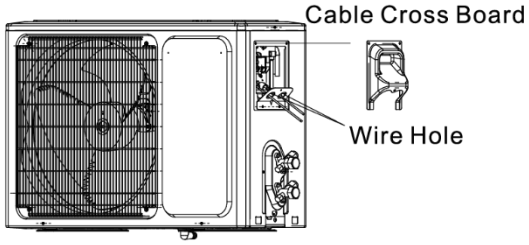
Power and Wiring

Connecting the cables



Indoor unit

- Indoor Unit
  Connect the power cord to the indoor unit by attaching the wires to the terminals on the control board individually, in accordance with the outdoor unit connection.
  Note: For some models, it is necessary to remove the cabinet to connect to the indoor unit terminal



Outdoor unit

- Outdoor Unit
  1. Remove the Cable Cross Board from the unit by loosening the screw. Connect the wires to the terminals on the control board individually.
  2. Secure the power cord to the control board with the cable clamp.
  3. Reinstall the Cable Cross Board to its original position.
  4. Use a recommended HVAC circuit breaker between the power source and the unit. A quick disconnect, installed near the outdoor unit, that can disconnect all power supply lines must be fitted.

⚠ CAUTION

- Always use a dedicated power circuit specifically for the air conditioner. For wiring requirements, refer to the circuit diagram found inside the unit access door.
- Confirm cable gauge as specified in the power supply specification.
- Before running the unit, check the wires to ensure that they are all tightly attached.
- Be sure to install ground fault circuit breaker in wet or moist areas.

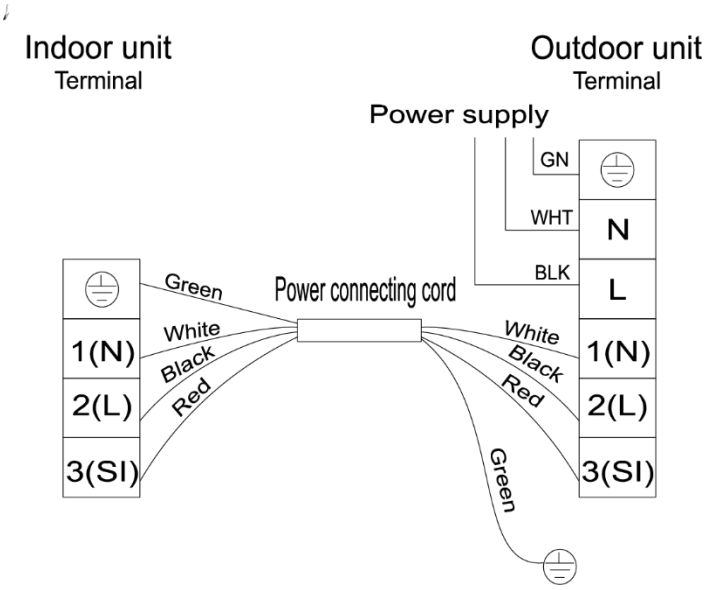
Cable Specifications

Capacity (Btu/h)	Wire Sizes to ODU		Wire Sizes from ODU to IDU	
	Type	Normal cross-sectional areas	Type	Normal cross-sectional areas
9k-12k (208/230v)	SJTW	3x14 AWG	SJTW	4x18 AWG
18k-24k (208/230v)	SJTW	3x12 AWG	SJTW	4x16 AWG
24k-36 (208/230v)	SJTW	3x10 AWG	SJTW	4x16 AWG
9k (110v)	SJTW	3x12 AWG	SJTW	4x18 AWG
12k (110v)	SJTW	3x12 AWG	SJTW	4x18 AWG

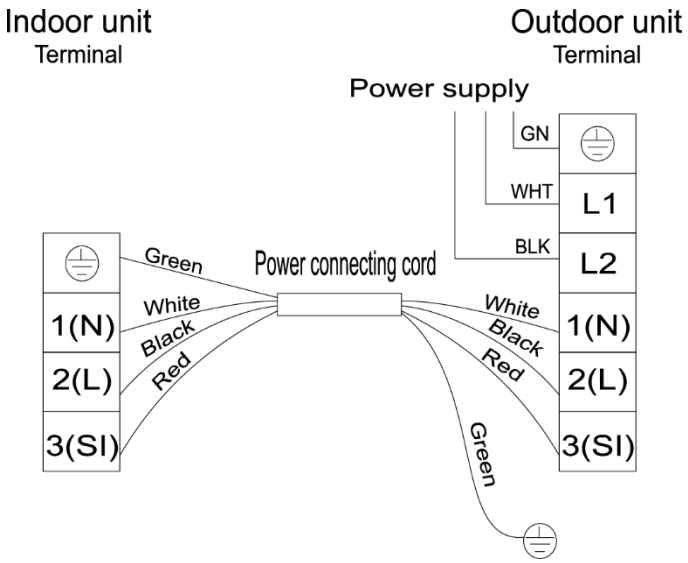
ATTENTION:
Plug must be accessible after the installation of the appliance in the event that there is a need to disconnect it. If not possible, connect the appliance to a double-pole circuit breaker with contact separation of at least 3mm^2 placed in a position that is accessible after the installation.

Wiring Diagrams

115V Systems



208/230V Systems

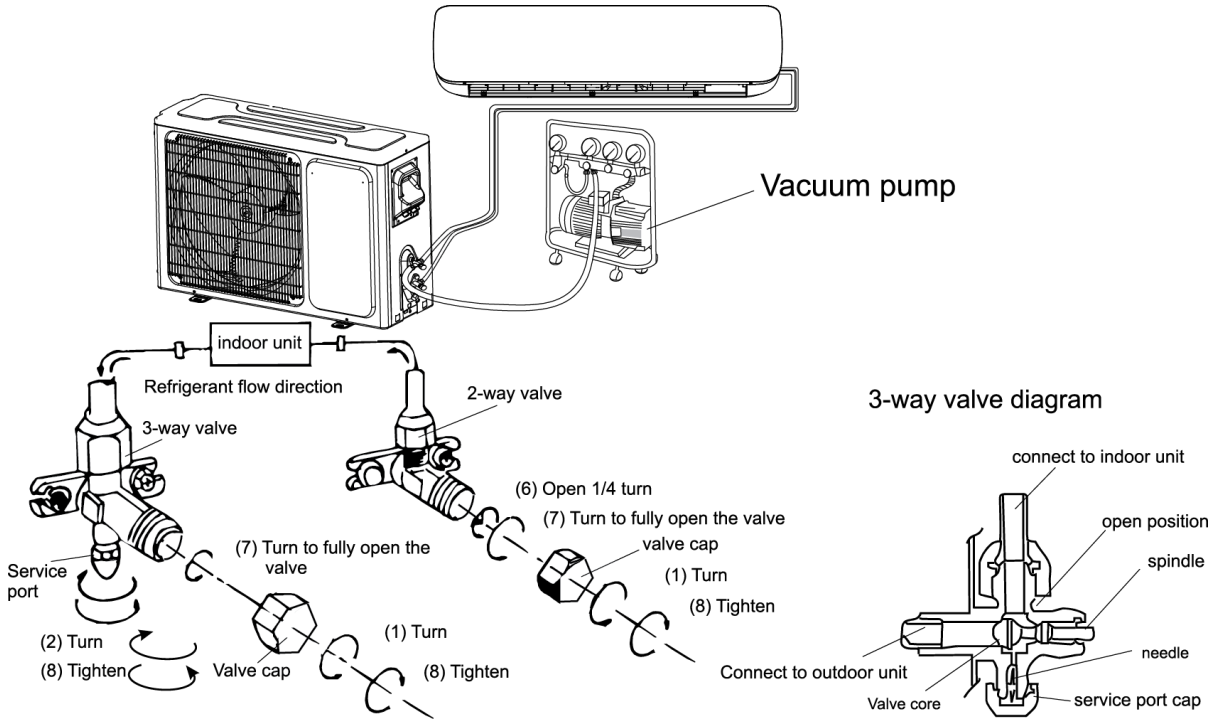


Diagrams are for reference only. Actual terminal may appear different.

Vacuum Testing and Charging

Any air or moisture in the refrigeration lines may cause a malfunction or damage to the compressor. After connecting the indoor and outdoor units, release air and moisture from the refrigerant cycle using a vacuum pump, as shown below.

Note: To protect the environment, be sure not to discharge the refrigerant into the air directly.



How to Vacuum Air Tubes:

1. Unscrew and remove caps from 2-way and 3-way valves.
2. Unscrew and remove cap from service valve.
3. Connect vacuum pump hose to the service valve.
4. Run the vacuum pump for 10-15 minutes, until reaching a vacuum of 10 mm Hg absolutes.
5. With the vacuum pump still running, close the low pressure knob on the vacuum pump manifold.
6. Turn off the vacuum pump
7. Turn the 2-way and 3-way valve stems to fully close the valves. Disconnect the flexible vacuum pump hose.
8. Replace and tighten all valve caps.

Start-up

Test Operation

After completing the gas leaks and electrical safety check, you can perform the operation test.

1. Turn on the electrical disconnect to the outdoor unit.
2. Push the “ON/OFF” button on the Remote Control to start the system and begin testing.
3. Push the MODE button. Select COOLING, HEATING, and FAN mode to confirm all functions are working.

System Checks

1. Conceal refrigerant pipes where possible.
2. Make sure that all drain hoses slope downwards along their entire length.
3. Ensure all refrigerant pipes and connections are properly insulated.
4. Fasten any exposed piping to outside walls where ever possible.
5. Seal and weatherproof the hole in the wall where the interconnecting wires and refrigerant pipes pass through.

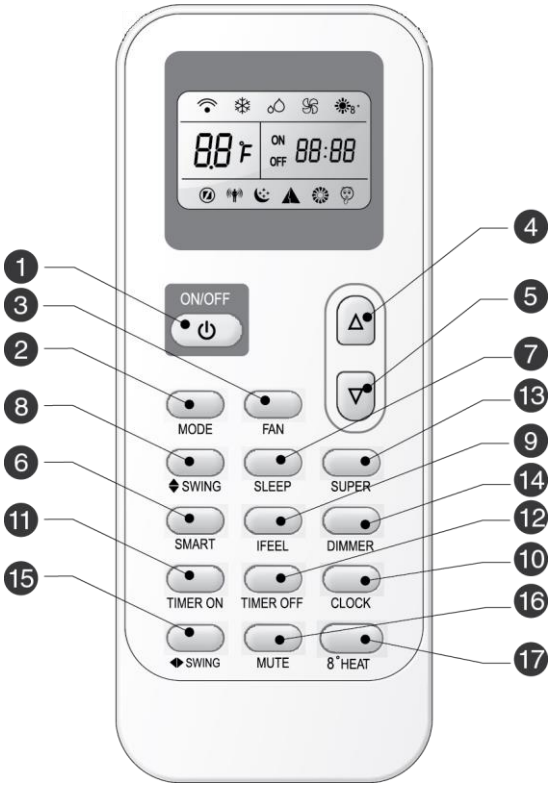
Indoor Unit

1. Do all Remote controller buttons work properly?
2. Does the display panel lights work properly?
3. Does the louver swing function work properly?
4. Does the drain work?

Outdoor Unit

1. Push the MODE button until COOL is selected, and adjust the room temperature setting to 61°F (16°C) and wait for the compressor to turn on. It may take up to 3 minutes for the unit to start.
   Does the compressor and outdoor fan turn on in COOL mode?
2. Push the MODE button until HEAT is selected, and adjust the room temperature setting to 85°F (30°C) and wait for the unit to turn on. It may take up to 3 minutes for the unit to start.
   Does the compressor and outdoor fan turn on in HEAT mode?

Remote Controller



1. **ON/OFF**
   Unit can be powered on or off.
2. **MODE**
   Button allows you to select the operating mode.
3. **FAN**
   Set fan speed. Available settings sequence is:
   Auto, Highest, High, Medium, Low, Lowest
4. **INCREASE** Set Temperature
5. **DECREASE** Set Temperature
6. **SMART MODE**
   Used to enter fuzzy logic operation directly, regardless of whether the unit is on or off.
7. **SLEEP**
   Used to set or cancel SLEEP mode
8. **SWING**
   Used to start or stop the vertical adjustment of the louver. You can set the airflow direction up or down.
9. **I FEEL**
   In I FEEL mode, the air conditioner operates based on the temperature sensor on the remote control instead of the machine, to keep your current location at the temperature you are comfortable at.
10. **CLOCK**
    Used to set the current time.
11. **TIMER ON**
    Used to set the timed start function.
12. **TIMER OFF**
    Used to set the timed shut down function.
13. **SUPER BUTTON**
    Used to start of stop the Fast Cooling/Heating function. Fast Cooling operates at High fan speed with an automatically set temperature of 61°F (16°C). Fast Heating operates at the Auto fan speed with an automatically set temperature of 86°F (30°C).
14. **DIMMER**
    Pressing this button will turn off all of the displays on the Indoor Unit. Press the button again to turn the display back on.
15. **SWING**
    Used to start or stop the horizontal adjustment of the louver. You can set the airflow direction left or right.
16. **MUTE**
    Used to turn on and off the Mute operation. Fan speed is automatically set to Low.
17. **8° HEAT**
    Set the 8° heating mode.

Indication symbols

Cooling indicator | Dry indicator | Fan only indicator | 8° Heating indicator | Heating indicator

Auto fan speed | Higher fan speed | High fan speed | Medium fan speed | Low fan speed

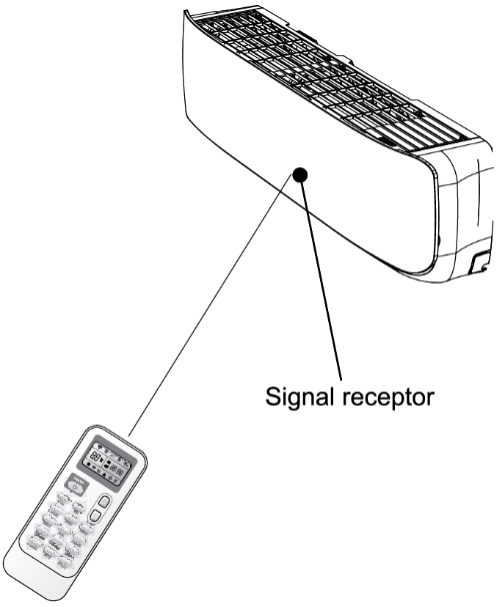
Lower fan speed | Sleep 1 indicator | Sleep 2 indicator | Sleep 3 indicator | Sleep 4 indicator

Smart indicator | Super indicator | Mute indicator | Signal transmit | Display set timer / Display current time

I feel | Display temperature

Remote Controller

Using the Remote Controller



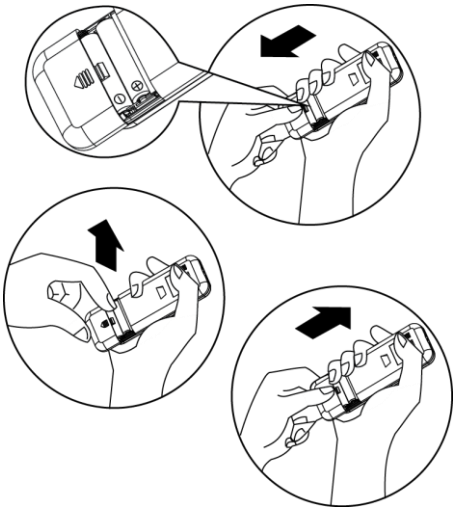
To operate the air conditioner, aim the remote controller at the signal receptor on the Indoor Unit. The remote controller can be used at a distance of 23 ft. (7m).

For best signal transmission between the remote controller and Indoor Unit, keep the signal receiver away from the following:

- Direct sunlight, or other powerful lights or heat sources
- Flat panel television screens, or other electronic appliances that may react to the remote controller.

Additionally, the air conditioner will not operate if curtains, doors, or other items block the signal from the remote controller to the Indoor Unit. If the signal cannot be transmitted properly, either move the item(s) blocking the signal or consult your local dealer.

How to Insert Batteries



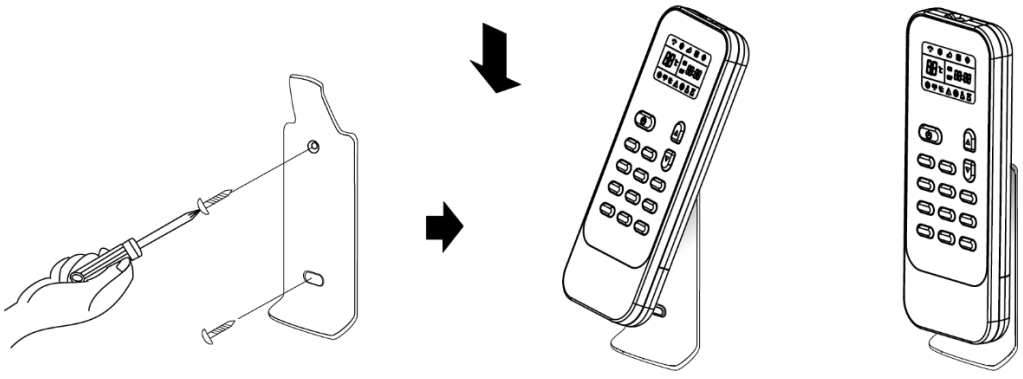
- Remove the battery cover according to the arrow direction.
- Insert new batteries, making sure that the (+) and (-) poles of the batteries are matched correctly.
- Slide the cover back into position

Notes:

- Use 2 LR03 AAA (1.5v) batteries.
- Do not use rechargeable batteries.
- When the display becomes dim, you will need to replace the batteries.
- When replacing batteries, use new batteries of the same type.

Optional Remote Controller Cradle

The remote controller may be stored in a (optional) wall mounted cradle. The wall mounted cradle can be purchased separately.



Remote Controller

Turning On

Press once to turn the system on or off. Indoor Unit Display will light up when On.

Notes:

- During operation, a unit may take a few moments to switch modes. Wait at least 3 minutes between Mode changes.
- In HEAT Mode, the unit will not blow air when powered on. Preheating can take 2-5 minutes before the unit begin blowing warm air.
- When restarting the unit, wait 3 minutes for it to resume operation.

Selecting Mode

Each time MODE button is pressed, the operation mode is changed in the following sequence:

COOLING → DRY → FAN ONLY → HEATING

Heating mode is NOT available for cooling only air conditioners.

Fan Mode

Each time the FAN button is pressed, the fan speed is changed it the following sequence:

Auto → Higher → High → Medium → Low → Lower

- In FAN ONLY mode, AUTO is not available.
- In DRY mode, fan speed is set to AUTO automatically. FAN button is not adjustable in DRY mode.

Setting Temperature

Press once to raise the set temperature 1°F (1°C)

Press once to lower the set temperature 1°F (1°C)

Available Temperature Ranges	
Mode	**Range**
HEATING, COOLING	61°F ~ 86°F (16°C-30°C)
DRY (Dehumidify)	-7°F ~7°F
FAN	Not Available

Notes:

- Press and hold the MODE and for 3 seconds to change temperature display between °F to °C
- HEATING Mode is not available on Cooling Only models.
- In DRY Mode, the unit can decrease or increase 7°F above or below the temperature set on the remote controller.

Remote Controller

Airflow Direction Control

Vertical and Horizontal airflow is automatically adjusted depending on the operation mode once the unit is turned on.

The direction of airflow can be adjusted to your own preferences by pressing the SWING button on the remote controller.

OPERATION MODE	AIRFLOW DIRECTION
COOLING, DRY	Horizontal
HEAT, FAN	Vertical

Vertical Airflow Control

Using the remote controller to set various angles, or adjusting the louvers to direct air flow in a specific vertical direction.

Swinging airflow

Press the ⇕SWING button once, and the vertical louver will swing up and down automatically.

Directed Airflow

Press the ⇕SWING button when the vertical louvers are at the preferred angle. The automatic swing will stop, and hold the set position.

Horizontal Airflow Control

Using the remote controller to set various angles, or adjusting the louvers to direct air flow in a specific horizontal direction.

Swinging airflow

Press the ⇔SWING button once, and the horizontal louver will swing left and right automatically.

Directed Airflow

Press the ⇔SWING button when the horizontal louvers are at the preferred angle. The automatic swing will stop, and hold the set position.

Notes:

- If your unit has motorized louver adjustment, do not adjust louvers manually. It can cause malfunction. If a malfunction occurs, turn off the unit, and shut off all power to the unit, then restore power.
- It is best to not allow the vertical louver to point downward for prolonged periods in COOL or DRY mode, to prevent condensed water from dripping.
- If the unit does not have four way airflow control function, you can adjust the horizontal louvers manually.

Remote Controller

Smart Mode

By pressing the SMART button, the unit will enter SMART mode (a fuzzy logic operation) whether the unit is ON or OFF. In this mode, the temperature and fan speed are automatically set based on the current room temperature.

Operation MODE and Temperature are determined by the indoor room temperature		
Heat Pump Models		
Indoor Temperature	**Operation Mode**	**Target Temperature**
70°F (21°C) or below	HEATING	72°F (22°C)
70°F~73°F (21°C~23°C) or below	FAN	
73°F~79°F (23°C~26°C)	DRY	Room temperature decrease 2°F after operating for 3 minutes
Over 79°F (26°C) or below	COOLING	79°F (26°C)
Cooling Only Models		
Indoor Temperature	**Operation Mode**	**Target Temperature**
73°F (23°C) or below	FAN	72°F (22°C)
73°F~79°F (23°C~26°C) or below	DRY	Room temperature decrease 2°F after operating for 3 minutes
Over 79°F (26°C)	COOLING	79°F (26°C)

- SMART button is inoperable in SUPER Mode.
- Press the MODE button to cancel SMART Mode.
- Temperature, airflow, and direction are controlled automatically in SMART mode. However, for the invertor you can adjust -7°~7° if you still feel uncomfortable.

What you can do in SMART Mode		
Your Comfort	Button	Adjustment
Uncomfortable because of amount of air flow.	FAN	Indoor fan speed alternates between Highest, High, Medium, Low, and Lowest each time this button is pressed.
Uncomfortable because of air flow direction	SWING SWING	Press the desired SWING button once. The vertical adjustment louver will swing to alternate the air flow direction. Press the button again, and the swing will stop. For horizontal airflow direction, please refer to the previous page for details.

Remote Controller

Clock

By Pressing the CLOCK button you can set the current time, and use the ▵ and ▿ buttons to adjust the clock. Press the CLOCK button again to set the time.

TIMER

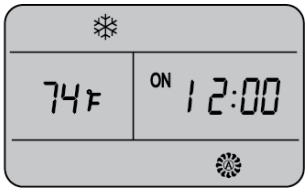
The TIMER ON/ TIMER OFF allow you to set the start and stop time of your unit, so that your system can shut off when you are at out, or turn on before you return home.

Setting the TIMER ON

Press the TIMER ON button. The display will flash “ON 12:00” on the LCD display. You can adjust the start time by using the ▵ and ▿ buttons to the time you want your unit to start.

▵ Increase

▿ Decrease



- Press the ▵ and ▿ button once to increase or decrease the time setting by 1 minute.
- Press the ▵ and ▿ button 2 seconds to increase or decrease the time setting by 10 minutes.
- Press the ▵ and ▿ button and hold to increase or decrease the time setting by 1 hour.
- When your desired time is displayed on the LCD screen, press the TIMER ON button again to confirm it.
- A beep will sound, ON will stop flashing, and the TIMER ON indicator on the Indoor Unit will light up.
- After 5 seconds, the clock will resume displaying the current time on the remote control.

Note:

- If you do not set a time within 10 seconds of pressing the TIMER ON button, the remote will exit the TIMER ON function automatically.

Cancel TIMER ON

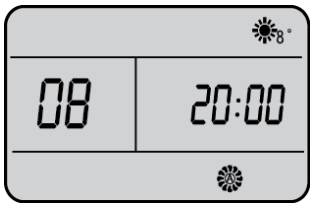
Press the TIMER ON button. A beep will sound and the indicator will disappear, indicating the TIMER ON mode has been cancelled.

TIMER OFF

The TIMER OFF setup, adjustment and cancel functions work the same way as described above, allowing you to automatically turn off your system at your set desired time.

Remote Controller

8° HEATING



- 8° HEAT mode can be set using this button. In 8° HEATING Mode, the fan speed is set to AUTO by default.
- Pressing any button except TIMER ON, TIMER OFF, CLOCK, IFEEL or SWING, you will cancel the 8° HEATING mode and resume normal operation. The 8° HEATING icon will no longer display on the remote controller LCD.

SUPER

- SUPER Mode is used to start or stop fast cooling or heating. In SUPER Mode, the Super icon will display on the remote controller LCD screen.
- SUPER Mode can be set when the air conditioner is turned on and running.
- In SUPER Mode, you can set the temperature, airflow direction, and timer.
- If you would like to turn off SUPER Mode, press the SUPER, MODE, FAN, ON/OFF or SLEEP buttons. The display will return to its normal mode.

Notes:

- SMART mode is not available in SUPER mode.
- The unit will stay in SUPER mode, until one of the buttons above is pressed.
- SUPER mode is not available while heating. It is available in COOLING only.
- For first generation units, you cannot set temperature in SUPER Mode, but you can press the increase or decrease temperature buttons to escape SUPER Mode

Wi-Fi Control Setup

This feature is an option on some units.

Follow these easy steps to set up your air conditioning system's Wi-Fi connection

1. Install the Wi-Fi appliance and turn the system on.
2. Open Android Play Store or IOS App Store on your smart phone. Enter "Smiling Air" in the search bar to find the latest version of the control app. Download and install the app.
3. Follow the Wi-Fi instruction to pair your phone with your air conditioning system.
4. Manage and enjoy complete control over your appliance.

FCC Statement
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- **Radiation Exposure Statement**
  This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 50 cm (8 in.) between the radiator and your body.

Radiation Exposure Statement
This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. It also complies with Part 15 of FCC RF Rules.

This equipment should be installed and operated with minimum distance of 20 in (50 cm) between the radiator and your body. This transmission must not be co-located or operated in conjunction with any other antenna or transmitter.

CAUTION:
To comply with the limits of the Class B digital device, pursuant to Part 15 of FCC Rules, this device is compliant with Class B limits. All peripherals must be shielded and grounded. Operation with non-certified peripherals or non-shielded cables may result in interference to radio or reception.

MODIFICATION:
To assure continued compliance, any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

Label Statement
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

IC Statement
This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Note:
To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product. "Contains Transmitter module FCC ID: 2AGCCAEH-W4B1".

To satisfy IESD exterior labeling requirements, the following text must be placed on the exterior of the end product. "Contains Transmitter module IC: 20778-AEHW4B1".

Error and Protection Codes

Indication on the outdoor unit

When the unit has an issue, or the compressor stops running, the LEDs on the outdoor control board will show the error sequence automatically.

Key: ★ : LIGHT ○ : FLASHING LIGHT X : OFF

Outdoor Unit Failure Description	LED 1	LED 2	LED 3	Possible Cause
Lights will flash every second for the following faults				
Normal Operation	x	x	x	
Outdoor coil temperature sensor issue	★	X	★	• Outdoor coil sensor connection is loose • Outdoor coil temperature sensor has failed • Outdoor control board has failed
Compressor exhaust temperature sensor issue	★	X	X	• Compressor exhaust temperature sensor connection is loose • Compressor exhaust temperature sensor has failed • Outdoor control board has failed
Communication failure between Indoor Unit and Outdoor Unit	X	X	○	• Communication cable connection is loose • Communication cable has failed • Connection between the filter board and the outdoor control board is incorrect or loose • Connection between the filter board and the terminal is incorrect or loose • Indoor unit control board failure • PFC board failure • Power board failure • Outdoor control board failure
Current Overload Protection	★	○	X	• Fan motor is running abnormally • Condenser and evaporator are dirty • Air inlet and outlet are abnormal
Maximum Current Protection	★	○	★	• Outdoor control board has a short circuit • Drive board has a short circuit • Other component has a short circuit
Communication issue between Outdoor Unit and Driver	X	★	★	• Connection wires connection loose • Outdoor board or drive board failure
Outdoor EEPROM issue	★	★	★	• EEPROM chip is loose • EEPROM chip is inserted backwards • EEPROM chip has failed
Compressor exhaust temperature is too high protection	X	○	★	• Compressor exhaust temperature sensor failure • Unit does not have enough refrigerant
Outdoor ambient temperature sensor issue	★	★	X	• Outdoor ambient temperature sensor connection is loose • Outdoor ambient temperature sensor failure • Outdoor control board failure

Compressor shell temperature too high protection	X	★	○	• Compressor exhaust temperature sensor connection is loose • Unit does not have enough refrigerant
Anti-freeze protection with cooling or Overload protection with heating in Indoor Unit	X	○	○	• Indoor unit coil temperature sensor is loose • Indoor unit coil temperature sensor failure • Indoor unit control board failure • Refrigerant system is running abnormally
Compressor drive issue	○	X	○	• Outdoor drive board failure • Compressor failure • Outdoor control board failure
Locked rotor outdoor fan motor protection	○	○	★	• Outdoor fan motor connection is loose • Outdoor fan has blockage • Fan motor failure • Outdoor control board failure
Outdoor coil anti-overload protection with cooling	X	★	X	• System has too much refrigerant • Outdoor fan motor failure • Dirty condenser • Air inlet and/or air outlet of the indoor unit or outdoor unit is blocked or abnormal
IPM module protection	X	○	X	• IPM board failure • Outdoor unit fan is broken • Outdoor unit motor failure • Outdoor unit fan is blocked • Condenser requires cleaning • Outdoor unit installed improperly
PFC protection	○	X	X	• PFC failure • Outdoor Unit drive board failure
Compressor preheating process	○	★	○	• Unit in normal mode during cold weather
Outdoor board chip issue	★	X	○	• Wrong drive board • Wrong compressor
AC voltage too high or too low protection	★	★	○	• Supply voltage is higher or lower than normal • Internal voltage supply of the unit is higher or lower than normal
DC compressor	○	○	X	• Outdoor drive board failure • Compressor failure
Outdoor ambient temperature too low protection	★	○	○	• Outdoor ambient temperature is too low
Light flash every 2 seconds for the following faults				
Outdoor radiator overheated protection	○	X	X	• Radiator sensor failure • Detection circuit of the sensor on control panel failure
System high pressure failure protection	○	○	X	• Pressure switch failure • Pressure detection switch on the control panel failure • System pressure measurement exceeds system limit

When the compressor is in operation

Key: ★ : LIGHT ○ : FLASHING LIGHT X : OFF Flash cycle is 1 second

No.	LED 1	LED 2	LED 3	Reason current operating frequency of the compressor is limited
Lights will flash every second for the following faults				
1	○	○	○	Normal frequency increasing and decreasing. No limitation
2	x	x	★	Frequency decreasing or prohibition of frequency increasing caused by over current
3	x	★	★	Frequency decreasing or prohibition of frequency increasing caused by anti-freezing of refrigeration or anti-overload in heating
4	★	x	★	Frequency decreasing or prohibition of frequency increasing caused by compressor discharge temperature is too high
5				Limit to maximum operating frequency caused by low voltage
6	★	★	★	Operation at fixed frequency (in case of capability measuring or compulsory operation at fixed frequency)
7	○	x	x	Protective frequency decreasing against outdoor overload (over power, over frequency conversion rate, over torque, and detection of DC under-voltage)
8	★	x	x	Frequency decreasing caused by indoor and outdoor communication fault
9	x	★	○	Frequency decreasing or prohibition of frequency rising protection against overload of outdoor coiled pipe
10	x	★	x	Frequency decreasing or prohibition of frequency increasing for power-saving when it is being used simultaneously with other applications

Indication on the Indoor Unit

The 88 display of the indoor display board will show the error code automatically when the unit has the following issue

Error Code	Error	Reason current operating frequency of the compressor is limited
EA	Error code indicates an issue with communication between the display board and control board	• Connection between display board and control board is loose • Indoor control board failure • Wiring to the display board is incorrect

If the unit has the following issue, and the compressor stops running, press the sleep button on the remote controller 10 times in 10 seconds, and the Indoor unit 88 display on the display board will show the error code. If two malfunctions happen at the same time, pressing the sleep button an additional 10 times in 10 seconds will display the second error code.

Note:
When you perform a troubleshooting inquiry using the Indoor unit 88 display, the error code will be displayed after entering the command with the remote control. If the error code can't be displayed on the indoor unit, you will need to check the LED display board on the outdoor unit.

Key: ★ : LIGHT ○ : FLASHING LIGHT X : OFF Flash cycle is 1 second

Error Code	Running	Timer	Sleep	Power	Issue	Cause may be one of the following:
	1	2	3	4		
0					Normal Operation	
1	X	○	X	X	Outdoor coil temperature sensor failure	• Outdoor temperature sensor connection is loose • Outdoor temperature sensor failure • Indoor control board failure
2	X	○	★	X	Compressor exhaust temperature sensor issue	• Compressor exhaust temperature sensor connection is loose • Compressor exhaust temperature sensor failure • Outdoor control board failure
5	★	○	X	X	IPM module protection	• IPM board failure • Outdoor unit fan is broken • Outdoor unit fan motor failure • Outdoor unit fan motor is blocked • Condenser is dirty • Outdoor unit not installed properly
6	★	○	X	★	AC voltage out of range protection	• Supplied voltage is higher or lower than normal • Indoor unit supply voltage is higher or lower than normal
7	★	○	★	X	Communication failure between Indoor Unit and Outdoor Unit	• Communication cable connection is loose • Communication cable failure • Connection between the filter board and the outdoor control board is incorrect or loose • Connection between the filter board and the terminal is incorrect or loose • Indoor control board failure • PFC board failure • Power board failure • Outdoor control board failure
8	★	○	★	★	Current overload protection	• Fan motor is running abnormally • Condenser and evaporator are dirty • Air inlet and/or outlet is abnormal
9	X	X	○	X	Maximum current protection	• Outdoor control board has a short circuit • Drive board has a short circuit • Other component has a short circuit
10	X	X	○	★	Communication issue between Outdoor unit and driver	• Connection wires connection loose • Outdoor board or drive board failure

11	X	★	○	X	Outdoor EEPROM issue	• EEPROM chip is loose • EEPROM chip installed backwards • EEPROM chip failure
12	X	★	○	★	Outdoor ambient temperature too low	• Outdoor ambient temperature is too low
13	★	X	○	X	Compressor exhaust temperature too high protection	• Compressor exhaust temperature sensor failure • Refrigerant level is low
14	★	X	○	★	Outdoor ambient temperature sensor issue	• Outdoor ambient temperature sensor connection is loose • Outdoor ambient temperature sensor failure • Outdoor control board failure
15	★	★	○	X	Compressor shell temperature too high protection	• Compressor exhaust temperature sensor connection is loose • Refrigerant level is low
16					Anti-freeze protection during cooling, or overload protection during heating	• Indoor coil temperature sensor connection is loose • Indoor coil temperature sensor failure • Indoor control board failure • Refrigerant system is abnormal
17					PFC protection	• PFC failure • Outdoor drive board failure
18					DC compressor start failure	• Outdoor drive board failure • Compressor failure
19	X	X	X	○	Compressor drive issue	• Outdoor drive board failure • Compressor failure • Outdoor control board failure
20	★	X	X	○	Outdoor fan motor-locked rotor protection	• Outdoor fan motor connection loose • Outdoor fan is blocked • Outdoor fan is broken • Outdoor control board failure
21					Outdoor coil anti-overload protection while cooling	• Too much refrigerant in system • Outdoor fan motor failure • Outdoor fan is broken • Dirty condenser • Air inlet and/or outlet of Indoor unit and/or Outdoor unit are abnormal
22					Compressor preheating process	• This is a normal function of the unit during cold weather
24					Outdoor board chip issue	• Incorrect drive board installed • Incorrect compressor installed
26					Outdoor unit radiator overheated	• Radiator sensor failure • Control panel detection circuit on the sensor failure

27					High system pressure protection	• Pressure switch failure • Pressure detection switch on the control panel failure • Measured system pressure exceeds system limit
33	○	X	X	★	Indoor unit temperature sensor failure	• Indoor unit temperature sensor is loose • Indoor unit temperature sensor failure
34	○	X	★	X	Indoor unit coil temperature sensor failure	• Indoor coil temperature sensor is loose • Indoor coil temperature sensor failure • Indoor control board failure
36	○	★	X	★	Communication failure between Indoor unit and Outdoor unit	• Communication cable is loose • Communication cable has failed • Connection between filter board and Outdoor unit control board is incorrect or loose • Connection between filter board and terminal is incorrect or loose
38	○	★	★	★	Indoor EEPROM failure	• EEPROM chip is loose • Indoor control board failure
39	○	X	★	★	Indoor fan motor running abnormally	• Fan motor is blocked • Fan motor cord connection is loose • Fan motor failure • Indoor control board failure
41	★	★	○	★	Indoor grounding protection failure	• Indoor control board failure

LED Display

Key: ★ : LIGHT ○ : FLASHING LIGHT X : OFF Flash cycle is 1 second

Error Code	Sleep	Timer	Running	Issue	Cause may be one of the following:
	1	2	3		
0				Normal Operation	
1	○	★	★	Outdoor coil temperature sensor failure	• Outdoor temperature sensor loose • Outdoor temperature sensor failure • Indoor control board failure
2				Compressor exhaust temperature sensor issue	• Compressor exhaust temperature sensor is loose • Compressor exhaust temperature sensor failure • Outdoor control board failure
5	★	○	X	IPM module protection	• IPM board failure • Outdoor fan is broken • Outdoor fan motor failure • Outdoor fan is blocked • Dirty condenser • Outdoor unit has been installed incorrectly
6	X	○	X	AC voltage high or low protection	• Supplied voltage is higher or lower than normal • Internal supplied voltage of the unit is higher or lower than normal
7	★	★	X	Communication failure between Indoor unit and Outdoor unit	• Communication cable is loose • Communication cable failure • Connection between filter board and outdoor control board is incorrect or loose • Connection between the filter board and terminal is incorrect or loose • PFC board failure • Power board failure • Outdoor control board failure
8				Current overload protection	• Fan motor is running abnormally • Dirty condenser and evaporator • Air inlet and/or outlet is abnormal
9				Maximum current protection	• Outdoor control board has a short circuit • Drive board has short circuit • Another component has a short circuit
10	★	X	X	Communication issue between Outdoor unit and driver	• Connection wires connection loose • Outdoor board or drive board failure
11	○	X	X	Outdoor EEPROM issue	• EEPROM chip is loose • EEPROM chip is installed backwards • EEPROM chip failure

12				Low outdoor ambient temperature protection	• Outdoor ambient temperature is below system operation range
13	○	X	★	High compressor exhaust temperature protection	• Compressor exhaust temperature sensor failure • System refrigerant level is low
14	★	★	○	Outdoor ambient temperature sensor issue	• Outdoor ambient temperature sensor is loose • Outdoor ambient temperature sensor failure • Outdoor control board failure
15	X	○	★	High compressor shell temperature protection	• Compressor exhaust temperature sensor connection loose • System refrigerant level is low
16	★	X	★	Anti-freeze protection in cooling, or overload protection in heating	• Indoor coil temperature sensor is loose • Indoor coil temperature sensor failure • Indoor control board failure • Refrigerant system is abnormal
17	X	★	X	PFC protection	• PFC failure • Outdoor drive board failure
18	X	★	★	DC compressor start failure	• Outdoor drive board failure • Compressor failure
19	X	★	○	Compressor drive issue	• Outdoor drive board failure • Compressor failure • Outdoor control board failure
20	★	X	○	Outdoor fan motor locked rotor protection	• Connection of outdoor fan motor is loose • Outdoor fan motor blocked • Fan motor failure • Outdoor control board failure
21	X	X	○	Outdoor coil anti-overload protection while cooling	• Too much refrigerant in the system • Outdoor fan motor failure • Outdoor fan is broken • Dirty condenser • Air inlet and/or air outlet of the indoor unit and/or the outdoor unit is abnormal
22				Compressor preheating protection	• This is a normal mode of operation in cold weather
24				Outdoor board chip issue	• Incorrect drive board is installed • Incorrect compressor is installed
26				Outdoor radiator overheated	• Radiator sensor failure • Detection circuit of the sensor on the control panel failure
27				High system pressure protection	• Pressure switch failure • Pressure detection switch on control board failure • Measured value of system pressure exceeds system pressure limit

33	★	○	○	Indoor temperature sensor failure	• Indoor temperature sensor is loose • Indoor temperature sensor failure • Indoor control board failure
36	○	★	○	Communication failure between indoor and outdoor unit	• Communication cable is loose • Communication cable failure • Connection between the filter board and outdoor control board is incorrect or loose • Connection between the filter board and terminal is incorrect or loose • Indoor control board failure • Power board failure • Outdoor control board failure
38	○	○	X	Indoor EEPROM failure	• EEPROM chip is loose • Indoor control board failure
39	○	○	★	Indoor fan motor running abnormally	• Indoor fan motor is blocked • Fan motor cord connection is loose • Fan motor failure • Indoor control board failure
41	X	X	★	Indoor ground protection failure	• Indoor control board failure

A room temperature sensor failure is displayed if the sensor does not respond for over 5 seconds.

A heat exchange temperature sensor failure is displayed if the sensor does not respond for over 5 seconds.

A failure is displayed when the settings data does not match after the EEPROM self-checks two times.

A ground signal failure is displayed if the signal is not detected after the air conditioning system is powered ON.

Indoor Coil and Temperature Sensor Parameters.

Temperature (°C)	Resistance (k)	Voltage (V)		Temperature (°C)	Resistance (k)	Voltage (V)
-20	38.575	0.58143512		31	4.292	2.715076661
-19	36.844	0.60795346		32	4.137	2.76063657
-18	35.038	0.63530819		33	3.989	2.805589174
-17	33.331	0.66352684		34	3.847	2.850117358
-16	31.719	0.69257720		35	3.711	2.894109636
-15	30.196	0.72246147		36	3.58	2.937788018
-14	28.755	0.75321223		37	3.455	2.980713033
-13	27.392	0.78480857		38	3.335	3.023117961
-12	26.103	0.81722911		39	3.219	3.065272268
-11	24.882	0.85051031		40	3.108	3.106725146
-10	23.727	0.88458737		41	3.001	3.147759536
-9	22.632	0.91951536		42	2.899	3.187898487
-8	21.594	0.95527085		43	2.801	3.227439565
-7	20.611	0.99179340		44	2.706	3.266717909
-6	19.678	1.02913875		45	2.615	3.305249514
-5	18.794	1.06721353		46	2.528	3.342947037
-4	17.954	1.10609872		47	2.444	3.380169671
-3	17.158	1.14565549		48	2.363	3.416856492
-2	16.401	1.18599135		49	2.286	3.45247766
-1	15.683	1.22696435		50	2.211	3.487894953
0	15	1.26865672		51	2.139	3.522585993
1	14.351	1.31098658		52	2.07	3.556485356
2	13.734	1.35393437		53	2.003	3.590032381
3	13.148	1.39741342		54	1.939	3.622673675
4	12.589	1.44157386		55	1.877	3.654865988
5	12.058	1.48618720		56	1.818	3.686036427
6	11.553	1.53125563		57	1.76	3.717201166
7	11.071	1.57689691		58	1.705	3.747244673
8	10.613	1.62286005		59	1.652	3.776658768
9	10.176	1.66928515		60	1.6	3.805970149
10	9.76	1.71601615		61	1.551	3.834009923
11	9.363	1.76311968		62	1.503	3.861880963
12	8.985	1.81043663		63	1.457	3.888973616
13	8.624	1.85805887		64	1.413	3.91524643

Temperature (°C)	Resistance (k)	Voltage (V)		Temperature (°C)	Resistance (k)	Voltage (V)
14	8.279	1.90597205		65	1.37	3.941267388
15	7.951	1.95387327		66	1.328	3.967019291
16	7.637	2.00204130		67	1.289	3.991234935
17	7.337	2.05033368		68	1.25	4.015748031
18	7.051	2.09859271		69	1.213	4.039284017
19	6.778	2.14682606		70	1.177	4.062450215
20	6.516	2.19524793		71	1.142	4.085229093
21	6.267	2.24333597		72	1.109	4.106941536
22	6.028	2.29151689		73	1.076	4.12888601
23	5.8	2.33944954		74	1.045	4.149715216
24	5.581	2.38741691		75	1.015	4.17007359
25	5.372	2.43506594		76	0.986	4.189944134
26	5.172	2.48247664		77	0.957	4.210004953
27	4.981	2.52951096		78	0.93	4.228855721
28	4.797	2.57653834		79	0.904	4.247168554
29	4.622	2.62291710		80	0.878	4.265640683
30	4.453	2.66931854				
Note: The AD value in the table is calculated on the basis of the pull-down resistor is 5.1k.						

⚠ CAUTION

INSTALLATION OF ACCESSORIES

CONNECT REFRIGERANT PIPES

Seal Copper Line Set/Wire Cable/Drain Hose Line Combination:

- Use factory-recommended components, as briefly illustrated below.
- Cover line set in a sequence, either from indoor to outdoor, or the other way.
- Secure line set covers onto the wall using factory-recommended accessories.

LINE SET COVERS

⚠ CAUTION

Do not damage line sets.

OUTDOOR UNIT FOOT RISER OR BRACKETS

BRKT-XXXX-SC1

- Made of steel.
- Coated with weatherproof polyester powder.

Model	Size(Inch)		Capacity	
	A	B	LBs	Btu/h
BRKT-0918-SC1	17.7	15.4	320	09K-18K
BRKT-1860-SC	21.7	18.3	360	18K-60K

BRKT-XXXX-ST1

- Made of stainless steel.

Model	Size(Inch)		Capacity	
	A	B	LBs	Btu/h
BRKT-0918-ST1	17.7	15.4	320	09K-18K
BRKT-1860-ST1	21.7	18.3	360	18K-60K

RIST-XXXX-PVC

- **Foot Riser**
- **Accessories: End Caps (Optional)**
- Shock-proof PVC, Weatherproof & UV resistant.
- Supplied with fastening screws and anchor bolts.
- Easy to install.
- Honeycomb structure acts as an anti-vibration & humming absorption for quiet operation.

Model	Size(Inch)				Capacity	
	A	B	C	D	LBs	Btu/h
RIST-0918-PVC	14.2	3.7	3.1	4.1	220	09K-18K
RIST-1860-PVC	17.7	3.7	3.1	4.1	260	18K-60K

CLEANING AND CARE

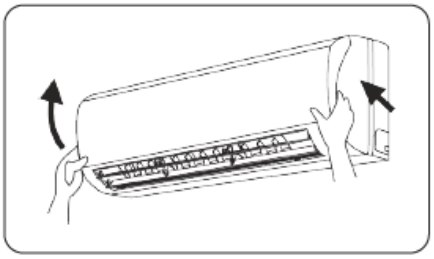
⚠ CAUTION

- Turn the unit power off and unplug the power cord before cleaning the air conditioner. Failure to do so can result in electric shock.
- Never sprinkle water on the indoor unit for cleaning because it can cause an electric shock.
- Volatile liquids (e.g. thinner or gasoline) will damage the air conditioner. (So, wipe the units with a dry soft cloth, or a cloth slightly moistened with water or a mild nonabrasive cleanser.)

CLEAN THE FRONT PANEL (MAKE SURE TO TAKE IT OFF BEFORE CLEANING)

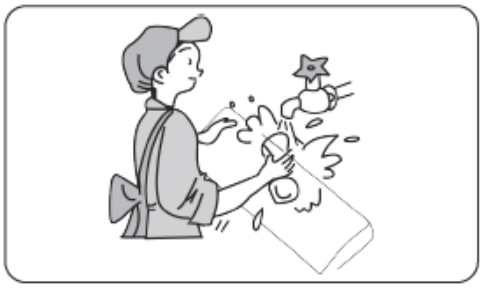
Take off the front panel

Along the direction of arrows, lift the front panel up, meanwhile hold both slots of the front panel and remove.



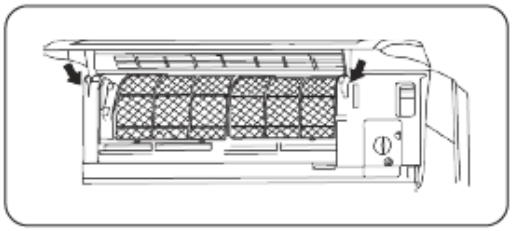
Washing

Clean with a soft brush, water and neutral detergent and then dry it. (Note: Before cleaning the unit, please remove the display box first, then wash the panel. (If the unit has displayed on the front panel.) Never use water that has a temperature above 113°F to wash the panel or it could cause deformation or discoloration.)



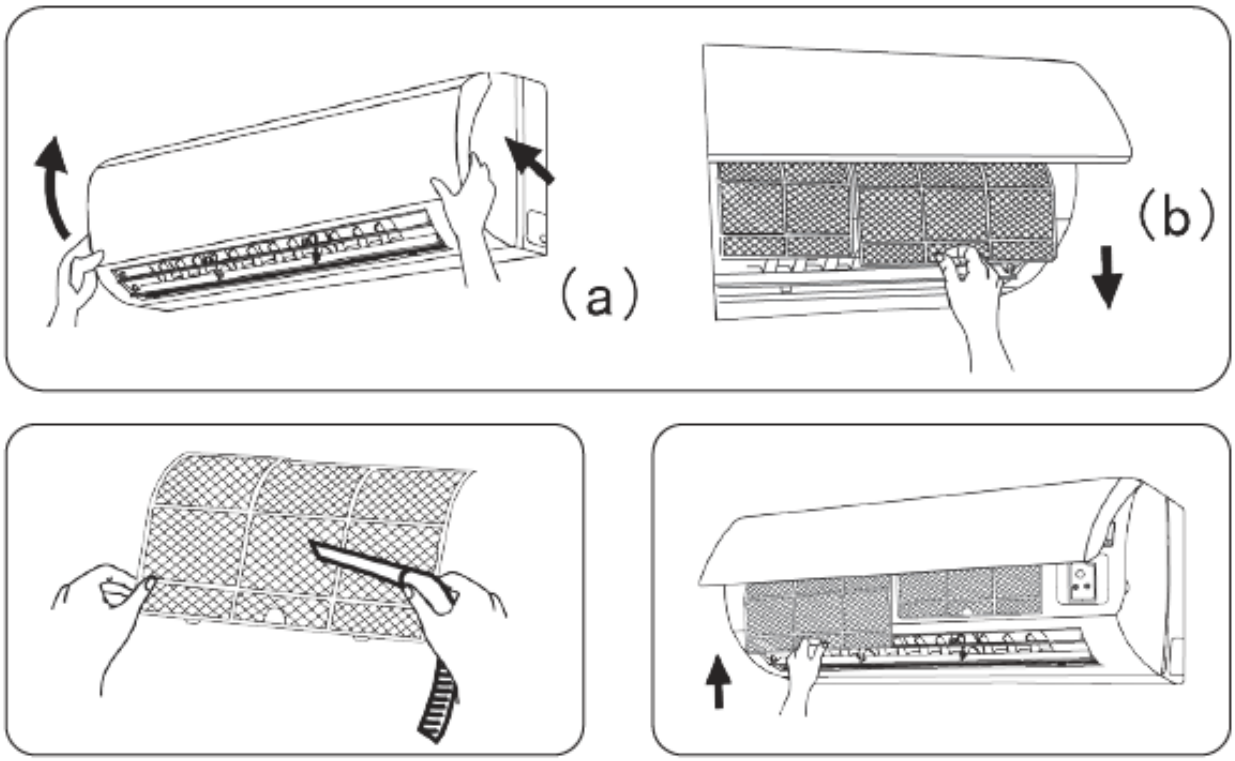
Install front panel

Place two supports of the front panel into the slots, along the direction of arrows to cover and clasp the front panel. As show in figure.



CLEANING THE AIR FILTERS (RECOMMENDED ONCE EVERY THREE MONTHS)

Note: If the unit is in a dusty area, the air filters should be cleaned more often. After taking off the filter, be sure not to touch the fin on the indoor unit as this can cause injury.



To Remove the Air Filter

By holding onto the bottom slot of the air filter slightly push the filter in an upward at a slight angle and pull downward carefully.

Cleaning

To clean the dust adhering to the filters, you can either use a vacuum cleaner, or wash them with warm water and a neutral detergent, the water should be below 113°F. When the filters have been cleaned, dry them air dry completely out of direct sunlight.

NOTE: Never use water hotter than 113°F to wash the unit or the filters as this can discolor and/or deform the unit. Never dry the filters by a fire or open flame as this can be dangerous. Always air dry the filters.

Reinsert the filters

Reinsert the filters aligning with the arrow head, then cover the surface panel and clasp it.

CHECKING BEFORE COOLING/HEATING SEASON COMES:

1. If the unit is still connected to the correct electric power V/Ph/Hz.
2. If the unit is still securely fastened.
3. If the batteries of remote control are good.
4. If the filter is loaded and clean
5. If the intake and discharge vents are clear from any obstructions.

MAINTENANCE AFTER USING

1. Turn main power off, by disconnecting electrical power disconnect switch.
2. Clean filter and unit.
3. Cover the unit to keep dust or moisture out of the unit.

USER NOTES AND INSTALLATION/SERVICE/MAINTENANCE NOTES

INSTALLATION NOTES

Put down any questions you have or problems you have seen as a unit history:

No.	Date	Noes	Asked Your Technician for Help?	Did You Ask YMGI Tech. for Help?

USER NOTES

Put down any questions you have or problems you have seen as a unit history:

No.	Date	Service Company Name, Technician Name, Phone & HCAC License #	Job Not Performed by Technician	Technician Checklist Completed Fully?

SERVICE / MAINTENANCE NOTES

No.	Date	Contents of Service / Maintenance	Technician's Company Name, Technician Name, Phone & HCAC License #

YMGI is dedicated to designing, manufacturing and distributing the highest quality, energy saving and environmentally friendly air conditioner and heat pump products, while providing the best service and support to all of our customers. Our mission is to help build a sustainable, efficient and green world.

YMGI Symphony-Ductless & Ducted Heat Pump & Heat Recovery:

- **Symphony SOLAR DC Inverter**
  (56) Single PV, (79) Single PH 12-18K Btu/h
  (86) Single Zone All DC 09-24K Btu/h
  (55) Multi Zone Solar VRF 3, 4, 8, 16, and 24 Ton.
- **Symphony SOLO DC Inverter**
  (57)2,3 Single Zone 16 SEER, 09-36K Btu/h
  (58)4, (78)1-Single Zone 18-23 SEER, 09-36K Btu/h
- **Symphony CHOIR DC Inverter**
  (46)2 DC Inverter Multiple Zone 15 SEER, 2x09K and 2x12K Btu/h
  (59)2S-DC Inverter Multiple Zone 16 SEER 6x09K to 9x09K Btu/h
  (59)4-DC Inverter Multiple Zone 21 SEER 2x09K to 5x12K Btu/h
- **Symphony VRF - DC Inverter HP, Heat Recovery, and Solar. Up to 64 zones**.
- **Symphony HARMONY-Packaged Self-Contained**
  42”x16” PTAC/PTHP Electric Heater or Hot Water Coil, and 26” TTWA
- **Symphony CONDUCTOR-Split Type Condensing Units**
  Side Discharge SHCR & VPAK

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