



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 (58)4
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.

Service: 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.





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⚠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 by charging the system with dry-nitrogen and performing soap bubble testing.
5. Not conducting a negative leak check by evacuating the copper lines for 30 minutes. Vacuum must be held at 500 microns or better for at least 5 minutes, starting 5-minute timer after the vacuum pump is turned off.
6. Not conducting a positive leak check prior to the negative leak check.
7. Not selecting the correct size 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 20 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.





LIMITED PRODUCT WARRANTY REGISTRATION FORM

Top Portion and Keep Copy A is for YMGI Internal records. Copy B is for Installer to Fill out and Mail back to YMGI. Bottom Copy C for Customer records.

For YMGI Use Only	Date:	Shipping Packing List Number:	Registration Card Serial No.
	Did the Company Pay YMGI:	Unit(s) Work Successfully:	Yes/No
	Installation Invoice Attached to the Registration Card	Hired YMGI Recommended HVAC Contractor/Technician?	Warranty Approved

Outdoor Unit Serial Number :	Indoor Unit Serial Numbers:	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10
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Contact at Installation Location:

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

Contact of the Installing HVAC Contractor/Technician:

Technician Full Name (Print):	Phone:	Fax:
HVAC Technician's Company:	Email:	
Company Address:	City:	State (Province):
Currently Licensed/Certified HVAC Technician License or Certification Number:	License Approved/Certified by:	
Official Phone # to Check the License Validity:		

Checklist for Installing HVAC Technician to Verify Installation Quality, and for Warranty Processing Purpose (If not filled out completely by technician, warranty will be voided)

1) Did you install the whole system? If not, please note below.	15) Where is the outdoor unit located?	Is the outdoor unit anchored to ground or secured onto wall bracket?
Yes No % of installation done by you (HVAC technician).	Ground wall balcony roof other location or pad	Yes No
2) What had been done, prior to your arrival?	16) Have you checked to make sure there is no cross-piping and/or cross-wiring between any two indoor units (zones)? What was your procedure?	
3) Did you read the User Manual and Installation Instructions before starting the installation?	17) Were the refrigerant pipe ends capped or sealed, prior to running them through structures to keep debris from entering the copper lines?	
Yes No	18) Have you checked both cooling and heating on all indoor units individually to ensure proper function?	
4) Who unpacked the unit and accessory boxes to check for damage?	Yes No	
5) Supply electrical power V/Ph/Hz measured at wiring terminal block of	19) Did you charge the inter-connecting copper pipes and indoor unit with nitrogen to check for positive leakage (pressures 150-200PSI), before conducting a vacuum leak check?	
Indoor unit: Outdoor unit:	Yes No	
6) Incoming electrical power V/Ph/Hz measured at terminal blocks of	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?	
Indoor unit: Outdoor unit:	21) Did you check the compressor's start and stop sequences to determine proper functionality?	
7) Wire gauge, length and terminal colors between circuit breaker/disconnect switch to outdoor unit.	Yes No	
8) Wire gauge, length and terminal colors between each indoor and outdoor unit.	22) If copper length were not made to the supplied or recommended refrigerant pipe length, how much refrigerant added or deducted?	
Unit A Unit B Unit C Unit D	23) Measured refrigerant pressures at outdoor service suction valve, when unit was stabilized.	
9) The size of HVAC circuit breaker/fuse or disconnect switch to the outdoor unit.	Heat pump (PSI): Cooling (PSI): Outdoor Ambient Temp. (°F):	
10) Are the inter-connecting wires and copper lines between indoor and outdoor units installed/covered/protected by line set covers, or anything else?	24) What were the measured temperatures (probe not touching any metal):	
11) What is the refrigerant pipe length between each indoor unit and the outdoor unit?	At cooling: indoor return air °F Discharge air °F and outdoor °F	
Unit A Unit B Unit C Unit D	At heating: indoor return air °F Discharge air °F and outdoor °F	
12) Where is/are the indoor unit(s) located? (Bedroom, kitchen, etc.)	25) Have you checked all unit functions with customer present, and all functions are working correctly?	
Unit A Unit B Unit C Unit D	Yes No	
13) What is the elevation difference between each indoor unit and the outdoor unit?	26) Did you show the user how to operate the unit? Did he/she understand you?	
Unit A Unit B Unit C Unit D	Yes No Yes No	
14) Did you check the indoor unit for condensate leakage and refrigerant leakage, before and after connecting them?	27) Do you provide regular one-year free technical service for this installation?	
Yes No	Yes No	
Installation Finished and Unit Works Successfully.	28) Do you list the working details in the invoice and leave a copy to the customer?	
Print Name of Installation HVAC Technician:	Yes No	
Signature:	Installation Finished and Unit Works Successfully.	
Date and time:	Print Name of Owner:	
	Signature:	
	Date and time:	

By signing above, I acknowledge the liability and responsibility for any false statement or omission of facts, and I authorize YMGI to verify the details provided above, and make its decision on warranty. I understand our filing or filling out of the warranty card/form DOES NOT imply automatic warranty approval, because warranty is approved only to qualified and successful installations by a qualified HVAC technician. I understand that the warranty (if approved) is a standard 5 year compressor and 1 year parts only, and does not include any labor coverage. I agree to and will follow all the contents contained in the Limited Product Warranty Policy of YMGI, and no 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 out 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 unit's room temperature too low. Keeping the temperature difference between indoor and outdoor unit within 41°F (5°C).
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%.

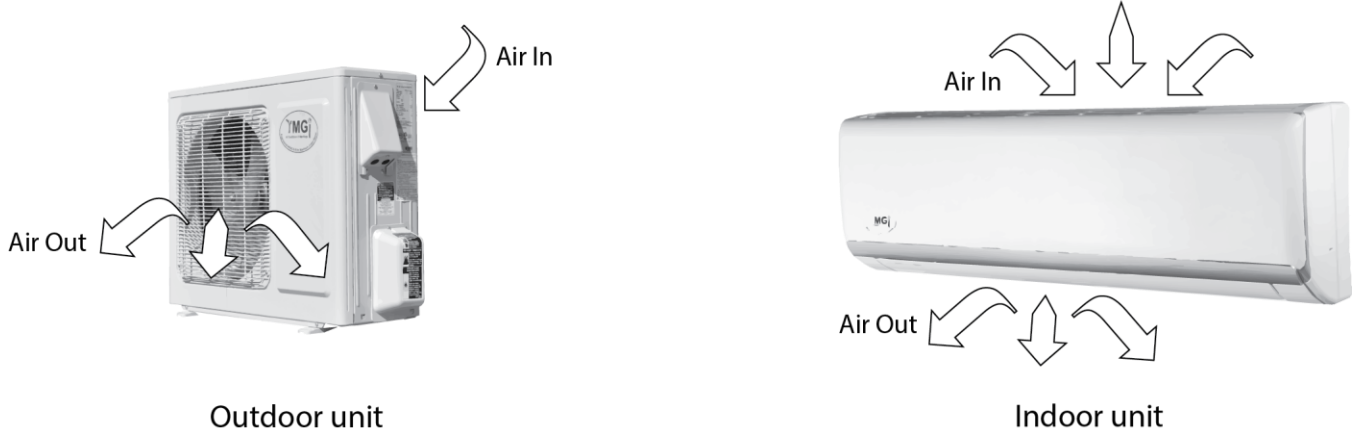
DO NOT operate the unit for prolonged periods without refreshing ambient air. Open a door or window periodically to allow in fresh air.



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 sets of interconnected 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.



Sample Wall Mount Mini Split System

(Due to continuous system improvement Unit Appearance is subject to change or update 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, depending 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



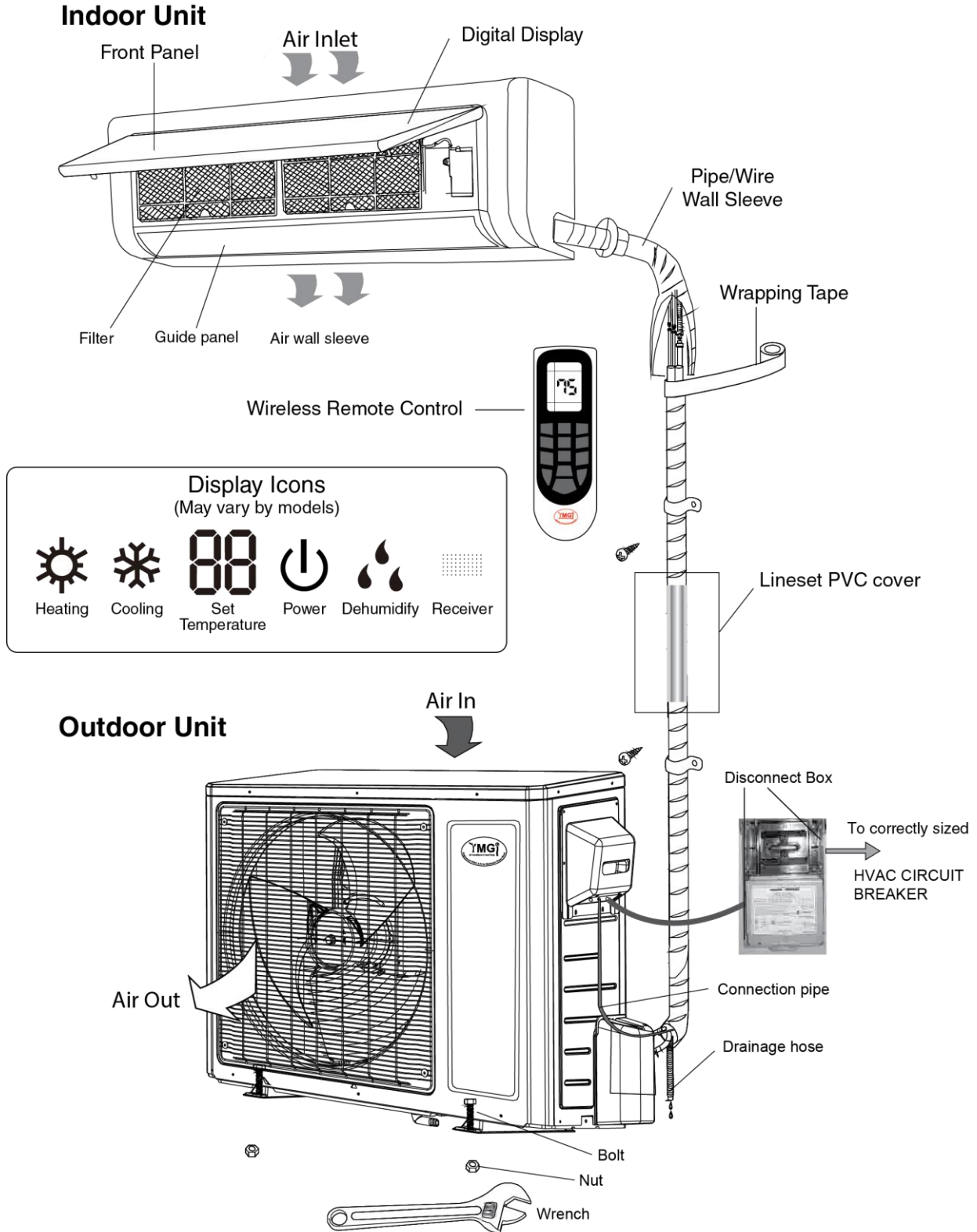
Homes

NOTES: Since ductless system is not designed to incorporate or use ducted returns or discharge tunnels, one single-zone unit SHOULD NOT be used to take care of the cooling or heating load of more than one-story room. Several single-zone ductless systems or a multiple-zone ductless system would be the proper application.

These units are designed for applications at:

- Residential
- Institutional
- Commercial
- Light commercial
- Industrial
- 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		WMMS-09K-V2B(58)4	WMMS-12K-V2B(58)4	WMMS-18K-V2B(58)4	WMMS-24K-V2B(58)4	WMMS-30K-V2B(58)4	WMMS-36K-V2B(58)4
System	Power Supply	V/Ph/H	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60
	Power Voltage Allowed Min./Max.	V	187 / 253	187 / 253	187 / 253	187 / 253	187 / 253	187 / 253
	Surge Protector In Incoming Power	Field-	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended
	Cooling Capacity	Btu/h	3100 / 9000 / 9600	3100 / 12000 / 13000	6800 / 18000 / 20000	6800 / 22000 / 27300	9500 / 28000 / 30000	7400 / 33600 / 36000
	Heating Capacity	Btu/h	1900 / 11000 / 12000	2400 / 13000 / 14000	7300 / 19800 / 23500	6800 / 23000 / 30700	10000 / 28400 / 33000	15000 / 34600 / 36000
	Cooling Power Input	W	160 / 630 / 1300	200 / 960 / 1350	450 / 1435 / 2150	450 / 1760 / 3000	600 / 2700 / 3900	450 / 4100 / 4300
	Heating Power Input	W	160 / 1020 / 1350	400 / 1100 / 1400	580 / 1730 / 2600	450 / 2000 / 3000	650 / 2800 / 4000	560 / 3800 / 4300
	EER	W/W	4.19	3.66	3.68	3.66	3.04	2.40
	EER	(Btu/h)/	14.29	12.50	12.50	12.50	10.37	8.20
	COP	W/W	3.16	3.46	3.35	3.37	2.97	2.67
	COP	(Btu/h)/	10.78	11.82	11.45	11.50	10.14	9.11
	SEER		23.00	22.00	20	20	18.00	18.00
	HSPF		10.50	11.00	10	10	9.00	9.00
	Cooling Current	A	2.80	4.50	6.37	8.05	11.5	17
	Heating Current	A	3.50	5.50	7.68	8.35	12	16.5
	Rated Input	W	1350	1400	3000	3000	4000	4300
	Rated Current	A	5.8	6.0	10.39	14.49	17	20
	Rated Heating Current	A	6.0	6.3	12.56	14.49	17.5	20
Max. Over Current Protection	A	20	20	30	30	30	40	
Min. Current (MCA)	A	9	9	16	20	20	24	
Starting Current	A	2	2	5	5	2	2	
Indoor Unit (IDU)	Indoor Unit Model		WMMS-09E-V2B(58)4	WMMS-12E-V2B(58)4	WMMS-18E-V2B(58)4	WMMS-24E-V2B(58)4	WMMS-30E-V2B(58)4	WMMS-36E-V2B(58)4
	Fan Type		Cross-flow	Cross-flow	Cross-flow	Cross-flow	Cross-flow	Cross-flow
	Fan Diameter Length (DxL)	inch	ø 3 55/64 x 25	ø 3 55/64 x 25	ø4 3/16 x 27 51/64	ø4 1/4x32 43/64	ø 4 1/4 x 20 37/64	ø 4 1/4 x 20 37/64
	Cooling Speed	r/min	1350 / 1200 / 1050 /	1400 / 1200 / 1050 /	1400 / 1200 / 1050 /	1300 / 1100 / 900 / 850	1350 / 1150 / 950 / 850	1400 / 1250 / 1000 /
	Heating Speed	r/min	1300 / 1150 / 1000 /	1400 / 1200 / 1000 /	1400 / 1200 / 1100 /	1300 / 1100 / 1000 /	1350 / 1200 / 1000 /	1400 / 1250 / 1050 /
	Air Flow Volume	CFM	380 / 290 / 240 / 170	400 / 290 / 240 / 170	560 / 490 / 410 / 330	700 / 650 / 590 / 530	710 / 660 / 530 / 410	710 / 660 / 530 / 410
	Dehumidifying Volume	pt/day	1.69	2.96	3.80	4.23	6.34	7.40
	Washable Filter		Yes	Yes	Yes	Yes	Yes	Yes
	Fan Motor Power Output	W	20	20	60	60	70	70
	Fan Motor RLA	A	0.09	0.09	0.24	0.38	0.4	0.4
	Fuse on Control Board	A	3	3	3	3	3	3
	Evaporator Form		Aluminum Fin-Copper	Aluminum Fin-Copper	Aluminum Fin-Copper	Aluminum Fin-Copper	Aluminum Fin-Copper	Aluminum Fin-Copper
	Evaporator Pipe Diameter	inch	ø 9/32	ø 9/32	ø 9/32	ø 9/32	ø 9/32	ø 9/32
	Evaporator Coil Length (LxDxW)	inch	25 x 7/8 x 12 1/16	25 x 7/8 x 12 1/16	28 9/64 x 1 x 12	33 1/4 x 1 x 13 1/2	42 9/32 x 1 x 15	42 9/32 x 1 x 15
	Swing Motor Model		MP24BA	MP24BA	MP35CJ	MP35CJ	MP24BA	MP24BA
	Swing Motor Power Output	W	1.5	1.5	2.5	2.5	1.5	1.5
	Fuse Current	A	3.15	3.15	3.15	3.15	3.15	3.15
	Set Temperature Range	°F	61-86	61-86	61-86	61-86	61-86	61-86
	Sound Pressure Level	dB (A)	43/39/35/29	45/39/35/29	47/43/40/39	48/44/40/36	/	/
	Sound Power Level	dB (A)	53/49/45/39	55/49/45/39	57/53/50/49	58/54/50/46	/	/
	Dimension (WxHxD)	inch	33 9/32 x 11 3/8 x 8 1/4	33 9/32 x 11 3/8 x 8	38 3/16 x 11 13/16 x 8	42 7/16 x 12 13/16 x 9	53 5/32 x 12 27/32 x 9	53 5/32 x 12 27/32 x 9
Dimension of Package (LxWxH)	inch	36 9/32 x 11 1/16 x 14	36 9/32 x 11 1/16 x 14	40 31/32 x 15 5/64 x 12	45 13/64 x 16 1/4 x 13	56 3/4 x 16 19/32 x 14	56 3/4 x 16 19/32 x 14	
Allowed Max. Parallel-Stack Layers		7	7	7	7	7	7	
Net/Gross Weight	lbs.	22.1/26.5	22.1/26.5	27.6/34.2	34.2/41.9	41.9/51.8	41.9/51.8	
Outdoor	Outdoor Unit Model		WMMS-09C-V2B(58)4	WMMS-12C-V2B(58)4	WMMS-18C-V2B(58)4	WMMS-24C-V2B(58)4	WMMS-30C-V2B(58)4	WMMS-36C-V2B(58)4
	Compressor Trademark		GR	GR	GR	GR	GR	MITSUBISHI
	Compressor Oil		DAPHNE FVC50K	DAPHNE FVC50K	RB68EP	RB68EP	PVE	FV50S





	Compressor Type		Swing	Swing	Rotary	Rotary	Rotary	Rotary
	Compressor LRA	A	20	20	25	25	40.00	67.00
	Compressor RLA	A	4.00	4.00	12.08	11.50	13.45	17.50
	Compressor Power Input	W	845	845	1440	2550	2450	3010
	Compressor Overload Protector		KSD115°C or	KSD115°C or	1NT11L-6233 or	1NT11L-6233/HPC	1NT11L-6233	CS01F272H01
	Fan Type / Diameter	--/inch	Axial-flow / 15.748	Axial-flow / 15.748	Axial-flow / 21.654	Axial-flow / 21.654	Axial-flow / 21.654	Axial-flow / 21.654
	Fan Motor Power Output	W	30	30	60	92	120	170
	Fan Motor RLA	A	/	/	0.49	0.65	0.45	0.73
	Outdoor Unit Air Flow Volume	CFM	1060	1180	1880	2350	2350	2590
	Condenser Fin / Tube Structure		Aluminum Fin-copper	Aluminum Fin-copper	Aluminum Fin-copper	Aluminum Fin-copper	Aluminum Fin-copper	Aluminum Fin-copper
	Condenser Pipe Diameter	inch	ø 0.375	ø 0.375	ø 9/32	ø 9/32	ø 5/16	ø 3/8
	Permissible Excessive Operating	PSIG	624	624	624	624	624	624
	Maximum Allowable Pressure	PSIG	624	624	624	624	624	624
	Throttling Method		Electron expansion	Electron expansion	Electron expansion	Electron expansion	Electron expansion	Electron expansion
	Defrosting Method		Automatic Defrosting	Automatic Defrosting	Automatic Defrosting	Automatic Defrosting	Automatic Defrosting	Automatic Defrosting
	Sound Pressure / Power Level	dB (A)	53 / 63	54 / 64	55 / 65	59 / 69	62 / 72	65 / 75
	Dimension of Unit (WxHxD)	Inch	33.41 × 21.31 × 12.59	33.4 × 23.31 × 12.63	37.63 × 27.63 × 15.63	38.63 × 31.13 × 16.8	38.63 × 31.13 × 16.81	38.63 × 31.13 × 16.81
	Dimension of Package (WxHxD)	Inch	34.75 × 23.41 × 14.31	34.75 × 25.41 × 14.31	40.5 × 29.63 × 18	42.63 × 33.75 × 19.22	42.75 × 33.75 × 19.22	42.63 × 33.75 × 19.22
	Allowed Max. Parallel-Stack Layers	--	5	4	3	3	3	3
	Net / Gross Weight	lbs.	78 / 84	86 / 93	106 / 116	142 / 153	154 / 165	161 / 172
	Cooling Operation Ambient Temp.	°F	0-115	0-115	0-115	0-115	0-115	0-115
	Heating Operation Ambient Temp.	°F	-4~75	-4~75	-4~75	-4~75	-4~75	-4~75
Line Connections	R410A Refrigerant Factory Charge	oz.	45.9	47.6	56.44	77.6	84.66	91.71
	Factory Charge for Pipe Length	ft.	24.6	24.6	24.6	24.6	24.6	24.6
	Gas Additional Charge	oz/ft.	0.215	0.215	0.2	0.5	0.538	0.538
	Outer Diameter of Liquid Valve	inch	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
	Outer Diameter of Gas Valve	inch	3/8"	1/2"	5/8"	5/8"	5/8"	5/8"
	Max Elevation Difference IDU-ODU	ft.	32.8	32.8	32.8	32.8	32.8	32.8
	Max Copper Line Length	ft.	50	65	80	80	100	100
Controls	Standard Control		Remote	Remote	Remote	Remote	Remote	Remote
	Wall Controller		No	No	No	No	Optional	Optional
	Bridge Controller Compatible		Yes	Yes	Yes	Yes	Yes	Yes
	Thermostat		Nest, Honeywell, YMGI, Pro1 are compatible with the Bridge Controller (Sold Separately)					

1. Performance rated for matched system at standard conditions-cooling ID 80/67°F, OD 95°F; heating ID 70/60°F, OD 47/43°F. Unit performance varies when weather changes from the standard one.
2. Select equipment capacity sizes per space load calculation schedule and cooling & heating hours. Not to over size or under size equipment.
3. Watch unit operation during extreme weather conditions in summer and winter. Wind baffle helps system cooling & heating performance in low ambient temperature ranges.

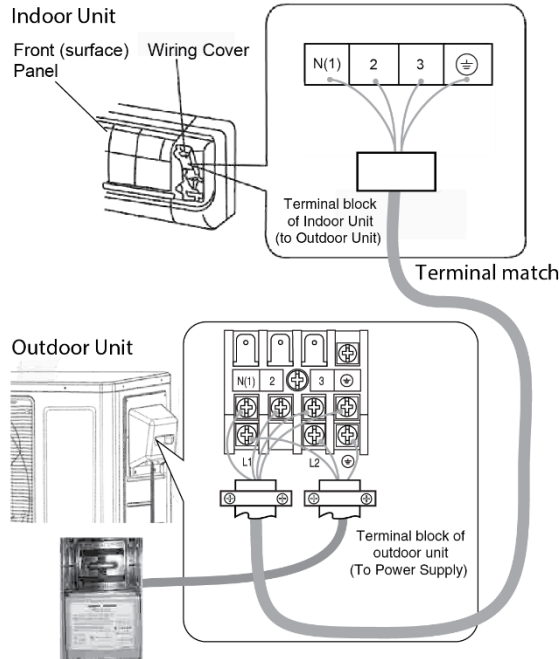


CONNECTION OF WIRES

WIRING AT INDOOR UNIT AND OUTDOOR UNITS

- Open the front cover panel.
- Remove screws from electrical box cover and put screws in secured position.
- Remove screws from fastener and put screws in secured position.
- Prepare wires of right size and grade.
- Recommend to use factory-provided wire/cables.
- Connected to the terminals following wiring diagrams (terminal or color matches).
- Clamp power/control wires to the structure to keep the tension from being transmitted to the wire connection.
- Replace screws or fasteners back to where they were.

9K, 12K, 18K, 24K, 30K, & 36K Models (208~230/1/60)



Note:

- The environment conditions must be taken into consideration when the connections of power cable are made (such as the ambient temperature, direct exposure to heat exposure to sunlight).
- The specifications for the power cable refer to the minimum values of the metal core wires, taking into consideration the voltage losses, the core wire of power cable must be one size larger than the specifications.
- The grounding wire must be connected to the indoor units and outdoor units.
- The laying of power cables must be done by qualified electricians and comply with the regulations of the local power supply authorities and with the standards of the electric appliance.

PIPING AND WIRING SIZES

Model	Liquid / Gas Line	Min/Max Length/ +/-Elevation	Power Wire Min. Disconnect Switch Box to Outdoor Unit	Power/ Control Wire Min. Outdoor to Indoor Unit	Recommended HVAC Circuit Breaker/Fuse AMP (to Outdoor Unit)
09K	1/4" & 3/8"	15/70 /35/45	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208~230/1/60, 16AWG	15
12K	1/4" & 3/8"	15/75 /35/45	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208~230/1/60, 16AWG	15
18K	1/4" & 1/2"	15/100/50/60	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208~230/1/60, 16AWG	20
24K	1/4" & 5/8"	15/100/50/60	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208~230/1/60, 16AWG	30
30K	1/4" & 5/8"	15/125/50/60	L1/L2/G, 208-230/1/60, 8AWG	N(1)/2/3/G, 208~230/1/60, 16AWG	30
36K	1/4" & 5/8"	15/125/50/60	L1/L2/G, 208-230/1/60, 8AWG	N(1)/2/3/G, 208~230/1/60, 16AWG	40

IMPORTANT NOTES FOR UNIT OPERATION AMBIENT & SIZING

Since the outdoor units can be installed on a wall or balcony (close to the indoor unit) the following are some benefits for contractors and customers:

- Indoor unit operates much quieter than air diffuser of central air conditioning system.
- Stylish design of indoor unit adds beauty to rooms.
- Connection pipe, refrigerant usage is much saved compared to installing up-flow condensing units on the ground and long copper/wire lines needed between indoor and outdoor units.
- Contractor work is eased and time is saved.
- Efficiency and lifetime of system is increased.

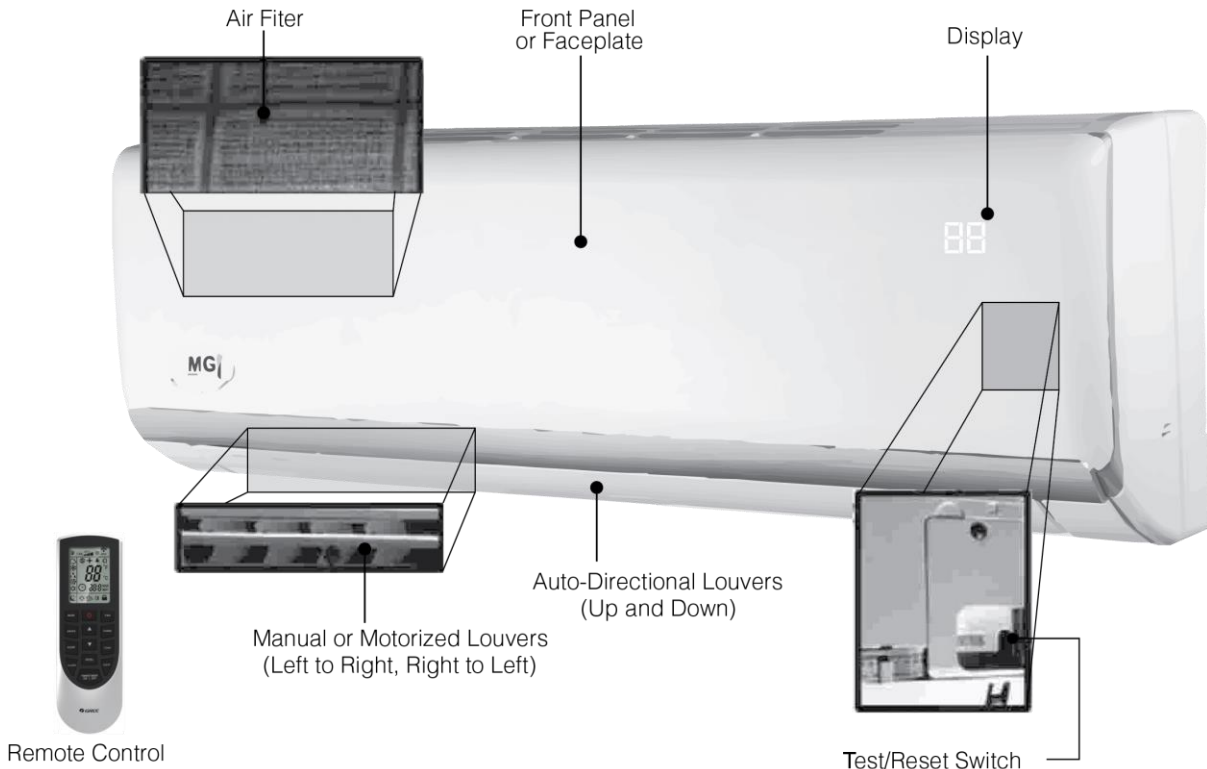
Mini Split Wall Mount Systems come with three types: cooling only and heat pump and heat pump with electric heater. These units can be easily wired. Either indoor unit or outdoor unit can be used with any matched comparable outdoor unit or indoor unit as long as they have matched size and control. Must refer to electrician before doing so.

Each system is thoroughly tested before leaving the factory. Each unit is acoustically, thermally and systematically designed to give optimum quality and reliability.

Find the cooling/heating load capacity of the space where the unit will be in service. Select matched WMMS units for the space. Under sizing or over sizing equipment is NOT recommended.

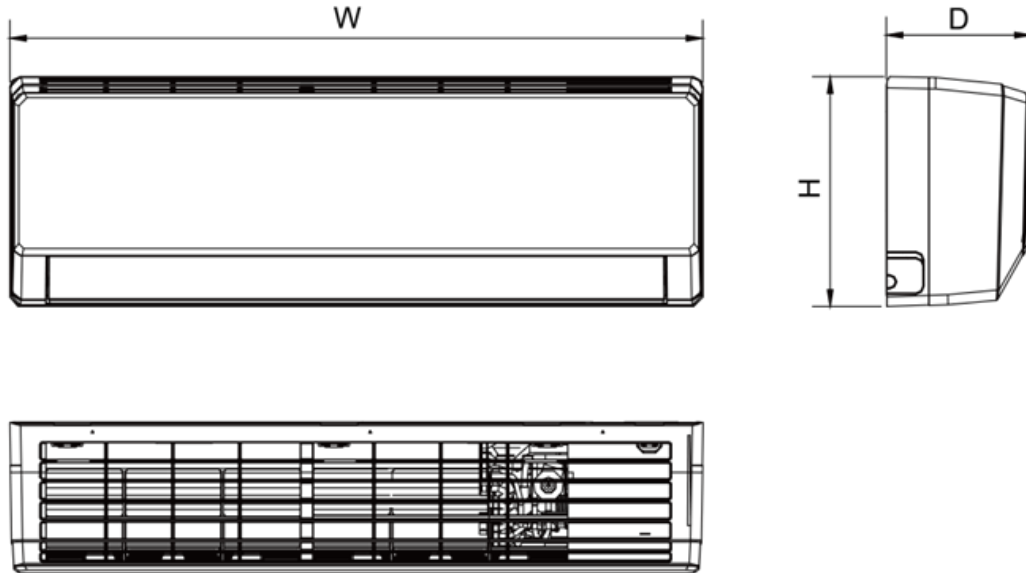
UNIT ENGINEERING SUBMITTALS-MECHANICAL

INDOOR UNIT : MAJOR COMPONENTS



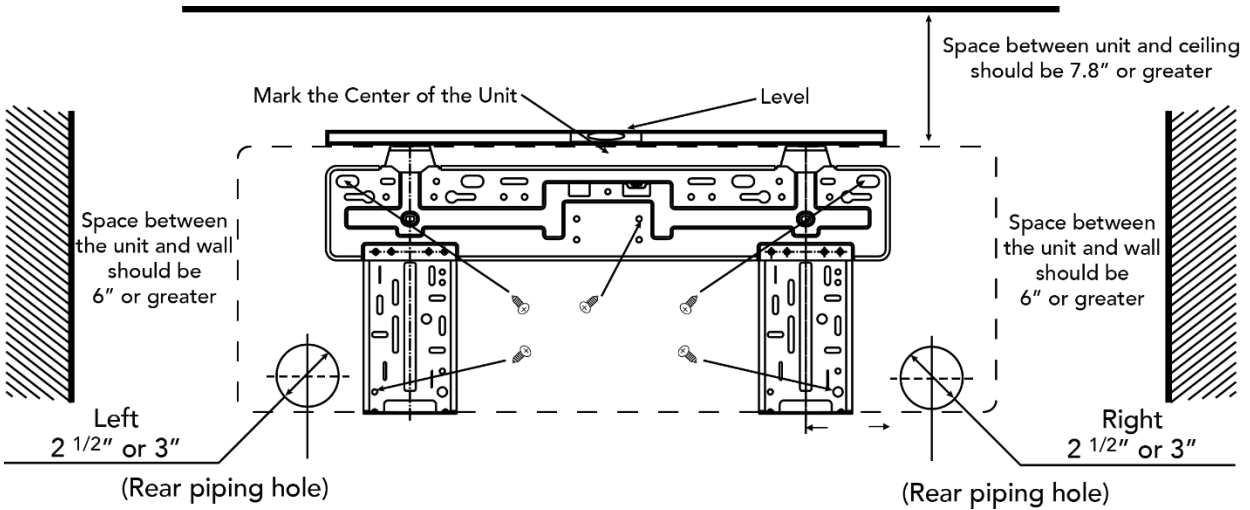
UNIT ENGINEERING SUBMITTALS-MECHANICAL

UNIT DIMENSIONS



Model	W (inches)	H (inches)	D (inches)
WMMS-09E-V2B(58)4 WMMS-12E-V2B(58)4	33.4"	11.4"	8.2"
WMMS-18E-V2B(58)4	38.2"	11.8"	8.8"
WMMS-24E-V2B(58)4	42.4"	12.8"	9.7"

MOUNTING BRACKET CLEARANCE

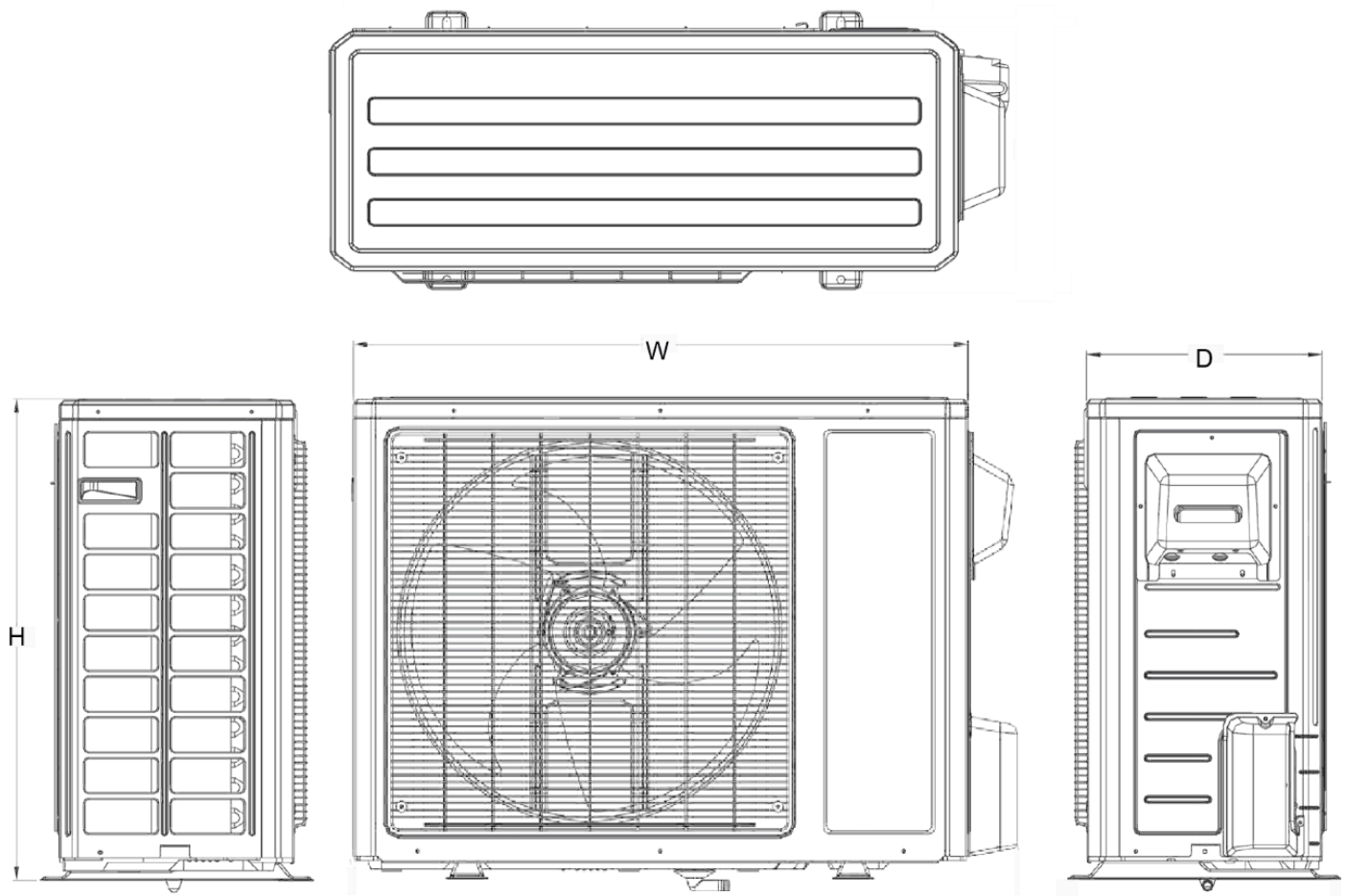


Note: Actual unit/part appearance may be different than the above illustration.



UNIT ENGINEERING SUBMITTALS-MECHANICAL

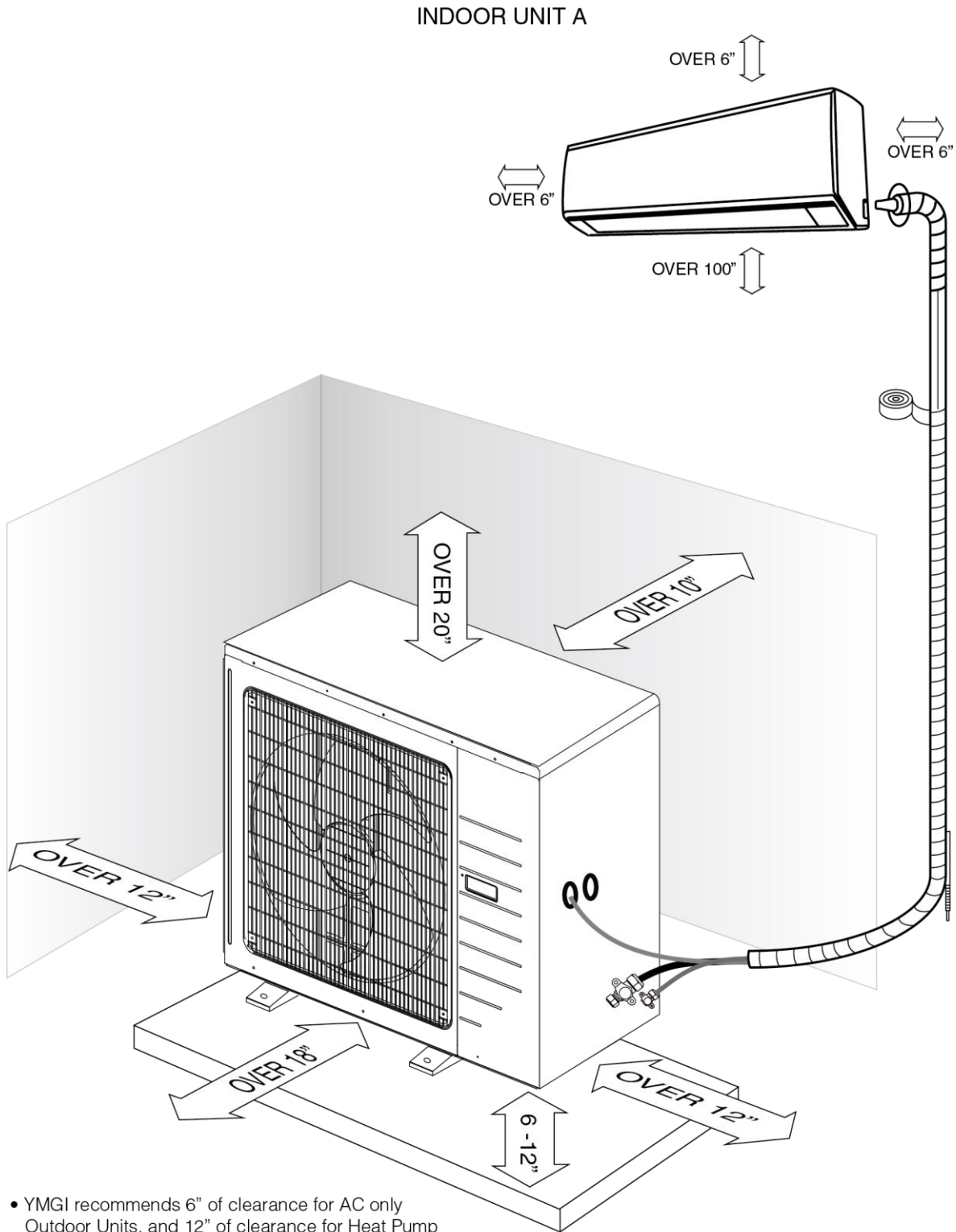
OUTDOOR UNIT



Model	Dimensions (In)			Weight (lbs.)	
	W	H	D	Net	Operation
09K	30	21.3	10.1	79	82
12K	30	21.3	10.1	88	92
18K	35.0	27.6	13.4	110	115
24K	36.2	31.1	14.6	119	125
30K	38.5	31.3	16.8	155	163
36K	38.5	31.3	16.8	161	170



INSTALLATION CLEARANCE REQUIREMENTS GENERAL



- 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 CLEARANCE REQUIREMENTS-OUTDOOR UNIT

MAKE SURE OF ENOUGH SPACE FOR INSTALLATION AND MAINTENANCE

To take into consideration the operational convenience and safety in installation, it is recommended to ensure enough space between the unit and the walls.

<p>1. When there are obstacles above the unit</p>	<p>2. When the front (air outlet) is open</p>	<p>3. When there are obstacles only in the front (air outlet)</p> <p>Space for maintenance Shown in the following figure. Keep the maintenance space in front of the unit open.</p>
<p>4. When there are obstacles at the front and rear sides</p>		<p>5. When there are obstacles all around the unit on all four sides. Although the top side is open, the installation is not to be done if there are obstacles on all sides.</p> <p>● At least to sides should be kept open</p>



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)





⚠ CAUTION

**All Units Shall Be Installed by Licensed Contractors or Technicians.
Read Manuals before Installation.**

- The location and structure should also be convenient for both installation and service.
- The location should NOT be where discharge air and noise could annoy a neighbor.
- The location should NOT be where drain may cause any damage to property or annoy a neighbor.
- The location should NOT be where brazing work may cause fire or smoke to the surrounding materials.
- The location should NOT be near flammable gases.
- The location should NOT be in or close to corrosive gases.
- The location should NOT be where children can access.

⚠ CAUTION

CAUTION & SUGGESTIONS TO FOLLOW PRIOR TO INSTALLATION

- Check the unit for damage and missing parts or accessories. If there is damage is found or parts are found missing, call the distributor right away.
- Spin fan wheels or blades to check if they can rotate freely. If the fan wheel scratches the housing, call the distributor right away and do not proceed with the installation until it is fixed.
- Check the unit to make sure no foreign materials have been left inside the unit.
- Check to be sure you have all the additional parts and accessories that are required for the installation and those provided with the unit.
- It is strongly recommended to only use YMGI supplied or approved parts and accessories.
- Be sure a properly sized circuit breaker is installed for the electric power supplying the units.
- Pre-build the support platform on the ground or bracket for the wall before or during construction and before installation.
- Read installation instructions for all units thoroughly.
- Ask rep./distributor/YMGI Group anything you are not sure about.
- Get your tools and parts ready and start the installation.

BASIC REQUIREMENTS FOR THE INSTALLATION LOCATION

- Choose a location where there are no strong heat sources, vapors, flammable gas or volatile objects.
- Choose a location where there are no high-frequency waves being generated by radio equipment, welders and medical equipment.
- Choose a location where there are not a lot of salinities, such as coastal areas.
- Choose a location where there is no oil (machine oil) contained in the air.
- Choose a location where there is no Sulfur gas present, such as areas close to hot springs.
- Choose a location where there is no other special circumstance.

SELECTION OF INDOOR UNIT INSTALLING LOCATION

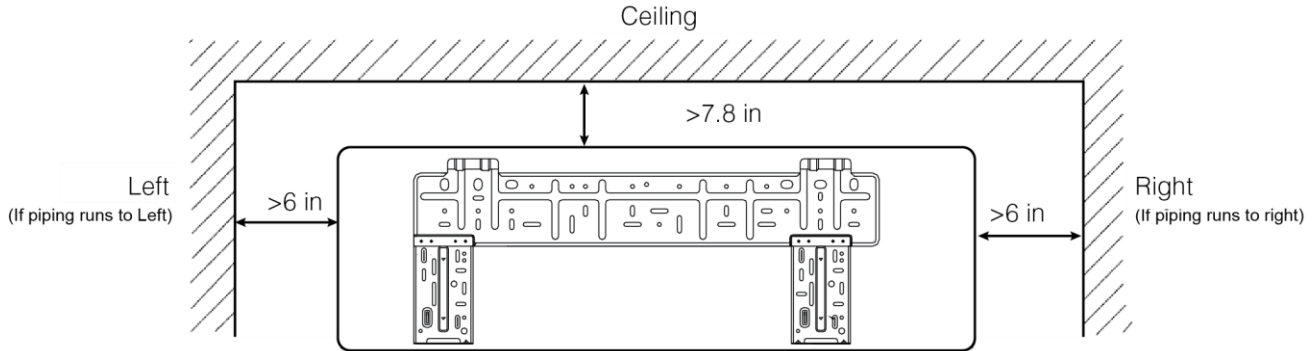
- The air inlet and outlet vent should be far from any obstructions, making sure that the air can be blown through the entire room.
- Select a location where the condensate water can be easily drained, and can be easily connected to the outdoor unit.
- Select a location where children cannot reach the unit.
- Select a location that is strong enough to support the full weight of the unit and the vibration which will allow the unit to operate more quietly.
- Be sure to leave enough space to allow access for routine maintenance. The height of the installed location should be 78 inches or more from the floor.
- Select a place about 3 feet or more away from television or any other electric appliances.
- Select a place where the filter can be easily maintained.
- Make sure that the indoor unit is installed in accordance with the dimensioned diagram.



INSTALLATION CLEARANCE REQUIREMENTS-INDOOR UNIT

MAKE SURE OF ENOUGH SPACE FOR INSTALLATION AND MAINTENANCE

To take into consideration the operational convenience and safety in installation, it is recommended to ensure enough space between the unit and the walls.



Attention: If there are some additional function devices to install on the unit, be sure add to the installation space for the function devices.

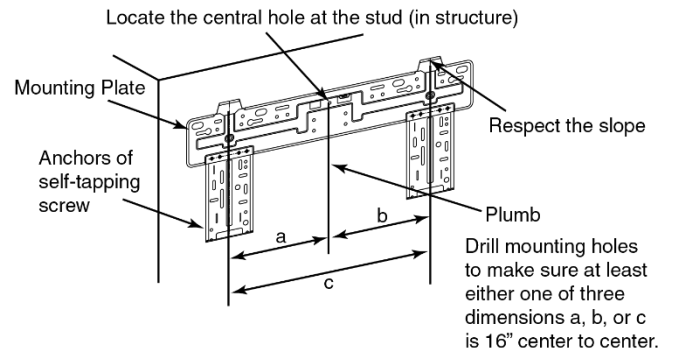
INSTALL THE WALL MOUNTING PLATE

- Prior to installing the mounting plate, check the unit and make sure the unit is in good condition and ready to install.
- Check to make sure the installation location is strong enough to hold the weight of the whole unit and is in a location that is convenient to install, maintain, service and close to the outdoor unit.
- Install the indoor unit. Use enough anchor bolts to secure the mounting plates to the wall for indoor units. The mounting plate should be level and secure and ready to receive the indoor unit.

Install Mounting Plate and Drill Hole for Combination of Copper Line/Wire Cable/Drain Hose

NOTES:

Anchors must be put into the holes, where the solid arrows are pointing, as shown, to secure the mounting plate firmly and to hold the weight of the indoor unit. If more screws/anchors are required, make sure, to keep the two holes close to each other, at least 2 inches apart. The mounting plate should be attached to the structural part of the wall. Minimum clearance, as shown, is required to ensure proper airflow and allows enough room for easier service.



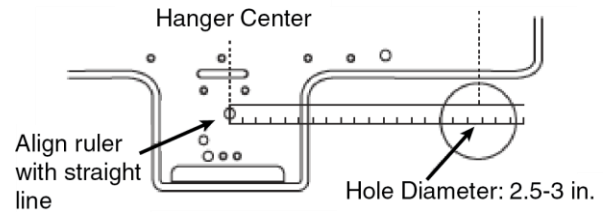
Steps to Mount Plate

- Mark all drill positions. At least 4 anchor holes are required, one at each perimeter corner of the plate. These are needed to secure the plate, where the bold arrows are pointing, as shown in the picture above. Refer to the specification sheet for unit weight so that enough anchors are installed at the proper locations.
- Pre-drill guiding holes which are marked for anchors or screws on the wall.
- Confirm the position of the holes and finish drilling to the depth required for anchors (NOT for screws).
- Align the mounting plate holes with the holes drilled on the wall and put anchors or screws into the holes to secure the mounting plate.

INSTALLATION OF INDOOR UNIT

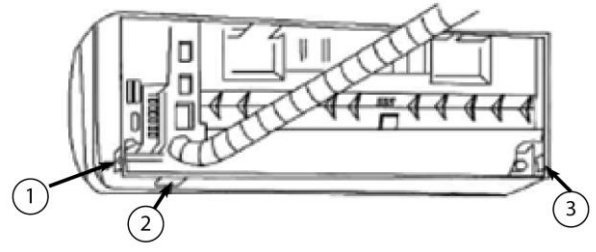
DRILL 3 INCH HOLE FOR PIPING/WIRING/DRAIN

- Locate the center where the hole will need to be drilled.
- Drill the holes of 2.5 – 3 Inches in diameter. A down pitch of about 1/4 inch per foot, as illustrated, is needed for the hole, to drain the condensate properly.



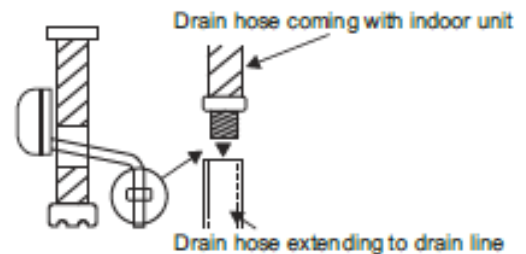
PREPARE INDOOR UNIT- COPPER LINE SET/DRAIN HOSE

- If pipes need to come out of the right side (facing the front of indoor unit) of the indoor unit, snap off portion (1) on plastic casing.
- If pipes need to come out of the bottom side (facing the front of indoor unit) of the indoor unit, snap off portion (2) on plastic casing.
- If pipes need to come out of the left side (facing the front of indoor unit) of the indoor unit, snap off portion (3) on plastic casing.
- If pipes need to be rerouted to a different direction from the one preset at factory (towards left side, if facing the front cover of indoor unit), lay down the indoor unit on soft cushion or foam. Don't rub the plastic casing.
- To keep from damaging the pipes, bend the copper tubing set gently and slowly (A 90° bend should take a minimum of 10 seconds), by firmly holding the pipe at the root of the original 90° bend. Don't rub the two copper lines while bending. It is better to cut off the insulation and bend the two pipes individually and not together.
- If the pipes need to come out of the rear side (facing the front of the indoor unit) of the indoor unit, there is no need to snap off anything.



INSTALL THE INDOOR DRAIN PIPE

- The drain hose must be placed beneath the copper pipes and **MUST NOT** be kinked or bent sharply.
- Do not pull the drain hose too hard, as it may break.
- Before passing the drain hose through the hole, wrap it with insulation to keep it from possible damage.
- The copper pipe and the drain hose must be wrapped with piping wrap.
- The insulation pad (underlay) should be used where the pipe contacts the wall.



REFIT DRAIN HOSE FROM THE RIGHT TO THE LEFT SIDE

If the drain hose needs to be refitted from its original position (right side) to left side of the indoor unit, careful handling is necessary as not to damage the unit.

- Refitting method: remove the drain hose from its original position, without breaking the hose. Remove the plug at the left side. Apply water-resistant glue to fit the drain hose and the fitting before securing it.
- Apply water-resistant glue onto the plug and fit it back into the condensate connection at right side.

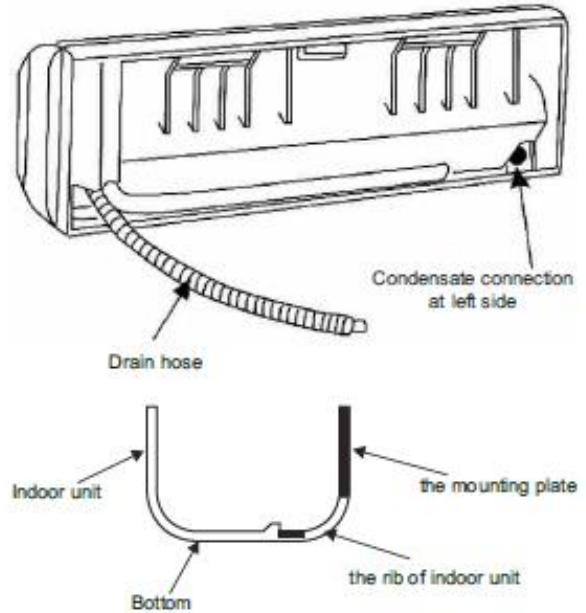
NOTES:

A clamp may be used to further secure connections.

HANG INDOOR UNIT

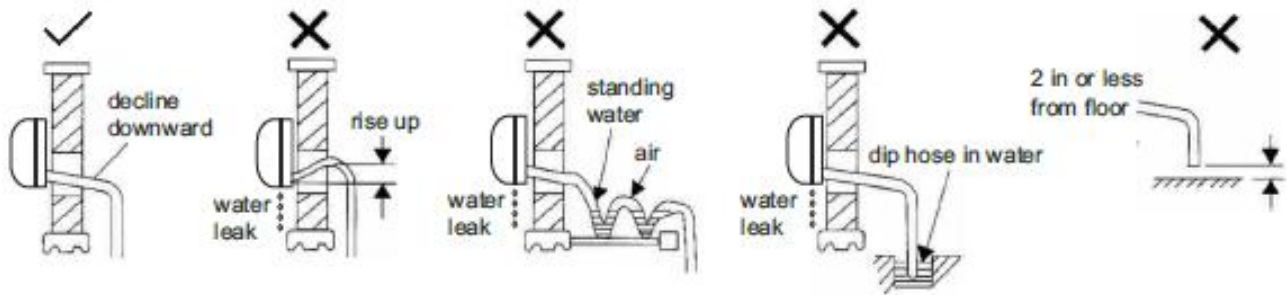
Run copper set/wire cables/drain hose through the wall hole and hang the indoor unit onto the mounting plate (place the hook on the mounting plate into the hanging rib at rear side of plastic casing).

- Snap the plastic casing bottom into the mounting plate, gently.



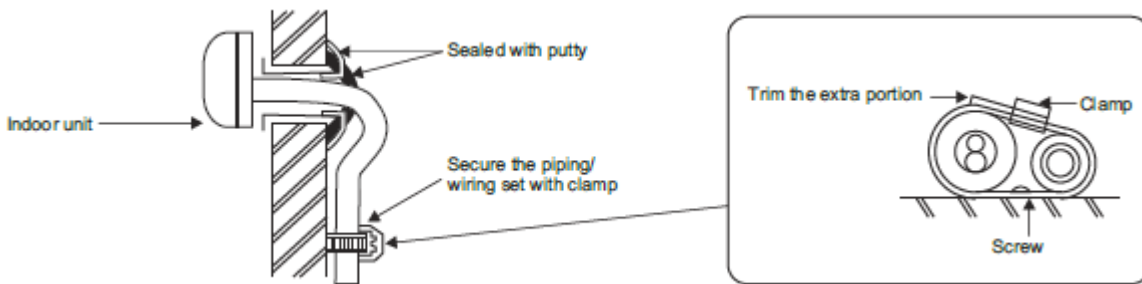
SHAPE THE DRAIN HOSE

- To drain the condensate easily, the drain hose should be angled downward (pitched towards the drain direction at 1/4" per foot).
- Figures below from the 2nd to 5th show some incorrect practices.
- The drain hose may be extended using the hose supplied with the installation list.



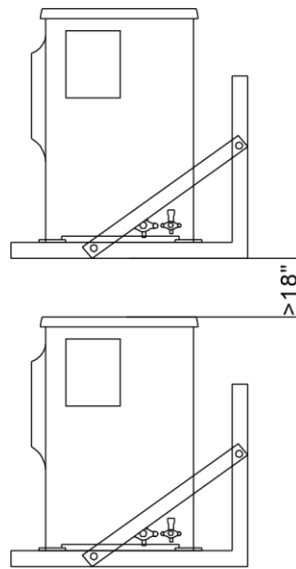
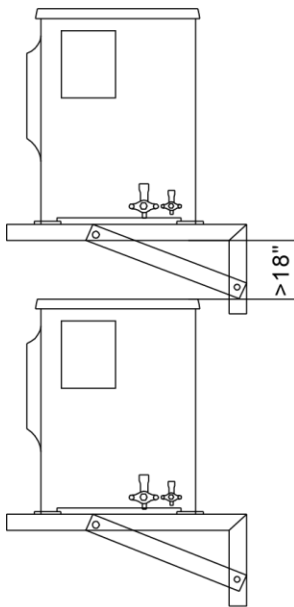
STUFF AND SEAL THE HOLE FOR COPPER LINE SET/WIRE and CABLE/DRAIN HOSE

- Use putty to seal the wall hole.
- Use a clamp (pipe fastener) to secure the pipe at the specified location.



INSTALLATION: OUTDOOR UNIT

It is strongly suggested to install the outdoor unit above the ground, either on a platform or brackets as shown below. Heat pump unit must be lifted up from ground level, allowing any condensate to drain out of the drain pan in condensing unit. Otherwise, condensate may ice up causing damage to the unit. We suggest using YMGI brackets and condensate drainage fitting accessories.



Stainless Steel Brackets with Accessories



Heavy-Duty PVC Riser for Ground Mounting



Coated Brackets with Accessories

*Actual unit/parts look/installation may vary from illustrations

INSTALLATION & PICTURES-WALL MOUNT BRACKET FOR OUTDOOR UNIT(S) (PART VARIES UPON MODELS/AVAILABILITY)

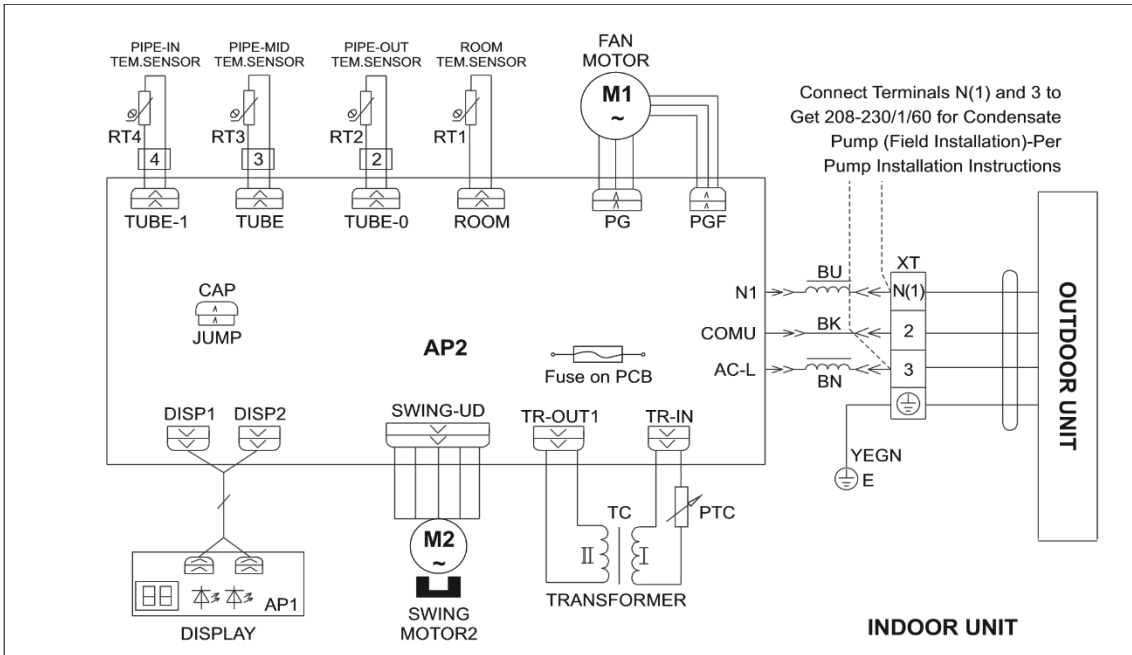
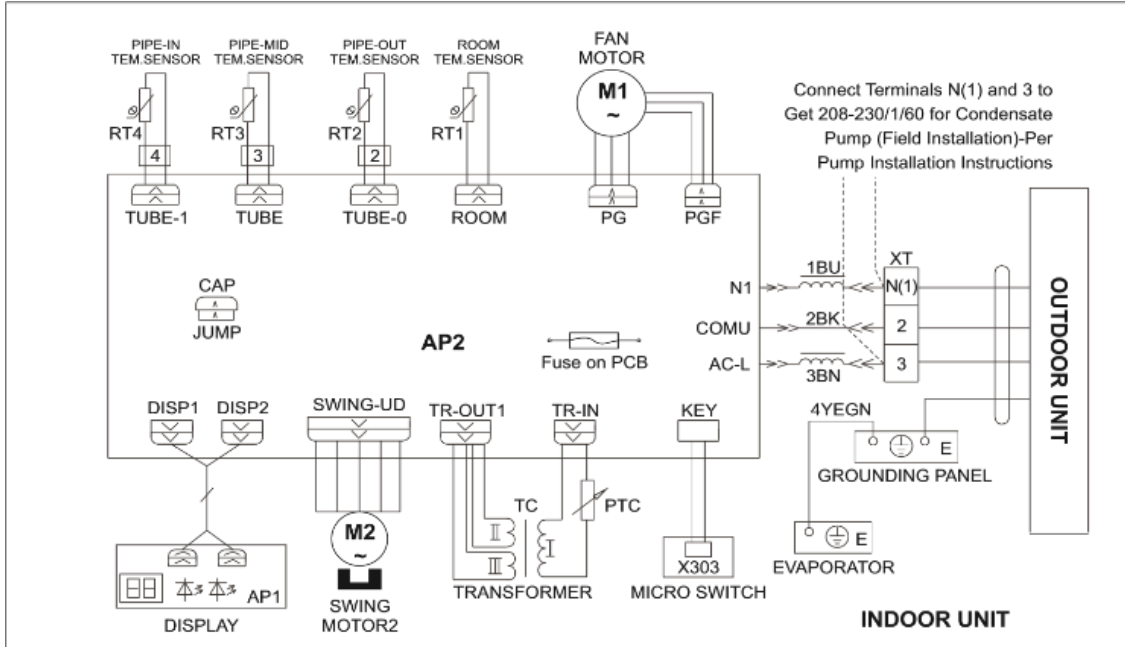
- Select a secured location where the outdoor unit can be installed properly.
- Orient the unit rear side (intake grill) towards wall and front side (discharge grill) away from wall.
- For ground installation, use factory-provided riser and accessories. Not to bolt unit feet directly onto ground.
- Riser or brackets should be levelled at outdoor unit foot surfaces. Secure unit foot by tightening bolts, nuts and anti-vibration pads.
- For ground installation, it is recommended to use YMGI optional accessories like risers.

WIRING OUTDOOR UNIT

CONNECT WIRING BETWEEN OUTDOOR UNIT AND INDOOR UNIT

- Check the nameplate for rated electrical data. Connect unit to the correct electrical power source.
- Select power wire of proper type and size. Suggest to use UL approved 105°C/221°F multi-strand copper wire for outdoor use. Refer to the following tables, for proper selection of wire gauge, size and circuit breaker.

Electrical Installation



OUTDOOR WIRING: OUTDOOR-INDOOR UNIT & DISCONNECT SWITCH BOX/CIRCUIT BREAKER/FUSE

- Remove the wiring diagram cover where also the handle for moving unit is located.
- Following the wiring diagrams on the unit or the wiring diagram manual that comes with the indoor unit to get familiar with the wiring and make sure everything is correct. If there is any discrepancy, always use the diagram that is attached to the units.
- Connect wires between indoor unit and outdoor unit- power wire from outdoor to Indoor, control wires from Indoor unit to outdoor unit. Pass wire through certified wire pipes, harnesses and knockouts. Enough length shall be left for future service. Only copper wire is allowed.
- Strictly follow NEC or state or local codes to select wires, circuit breaker, conduits while performing installation work
- Bring in line-voltage power input wires from circuit breaker to line-voltage wire terminal block at outdoor unit. Pass through certified wire pipes, harnesses and knockouts. Enough length shall be left for future service. Only copper wire is allowed.



Disconnect switch box for outdoor unit



Non-Metallic Power Whip for Outdoor Use
(Field-Supplied, Not Spliced and Not Knotted,
Water-Proof Sealed Tight, UL Approved)

PIPING AND WIRING SIZES

Model	Liquid / Gas Line	Min/Max Length/ +/-Elevation	Power Wire Min. Disconnect Switch Box to Outdoor Unit	Power/ Control Wire Min. Outdoor to Indoor Unit	Recommended HVAC Circuit Breaker/Fuse AMP (to Outdoor Unit)
09K	1/4" & 3/8"	15/70 /35/45	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208-230/1/60, 16AWG	15
12K	1/4" & 3/8"	15/75 /35/45	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208-230/1/60, 16AWG	15
18K	1/4" & 1/2"	15/100/50/60	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208-230/1/60, 16AWG	20
24K	1/4" & 5/8"	15/100/50/60	L1/L2/G, 208-230/1/60, 10AWG	N(1)/2/3/G, 208-230/1/60, 16AWG	30
30K	1/4" & 5/8"	15/125/50/60	L1/L2/G, 208-230/1/60, 8AWG	N(1)/2/3/G, 208-230/1/60, 16AWG	30
36K	1/4" & 5/8"	15/125/50/60	L1/L2/G, 208-230/1/60, 8AWG	N(1)/2/3/G, 208-230/1/60, 16AWG	40

CONNECT REFRIGERANT PIPES BETWEEN THE INDOOR AND OUTDOOR UNITS

First, connect the copper tubes at indoor unit. Bend the pipes accordingly using pipe bending tools. Do Not hand bend the pipes as this could kink the pipe. Extra length is required for future service.

REFRIGERANT PIPES

For a distance other than 25' between indoor and horizontal venting condensing units, refer to the following table for copper sizes.

Refrigerant Valve and Pipe Size/Length

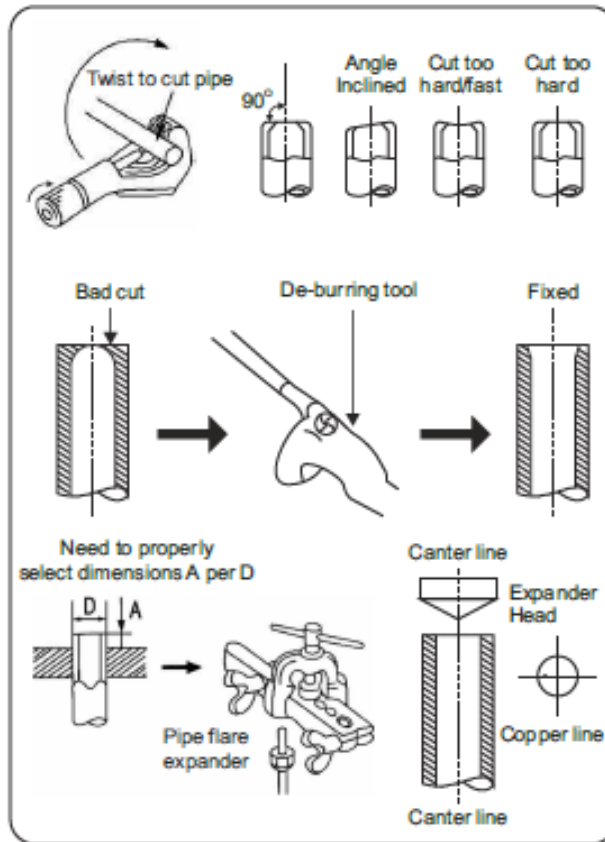
Btu/h	Valve Size	Line Sizes at Different Lengths	
	Liquid Gas	15 – 30 ft.	31 – 60 ft.
09K	1/4", 3/8"	1/4", 3/8"	1/4", 3/8"
12K	1/4", 3/8"	1/4", 3/8"	1/4", 3/8"
18K	1/4", 1/2"	1/4", 1/2"	1/4", 1/2"
24K	1/4", 5/8"	1/4", 5/8"	3/8", 5/8"

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.

CUT 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.

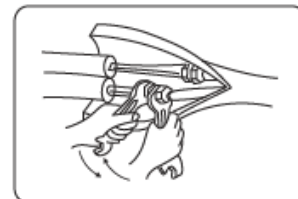


Connect Copper Pipes-Flare/Nut Connection at Indoor and Outdoor Units

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.

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)

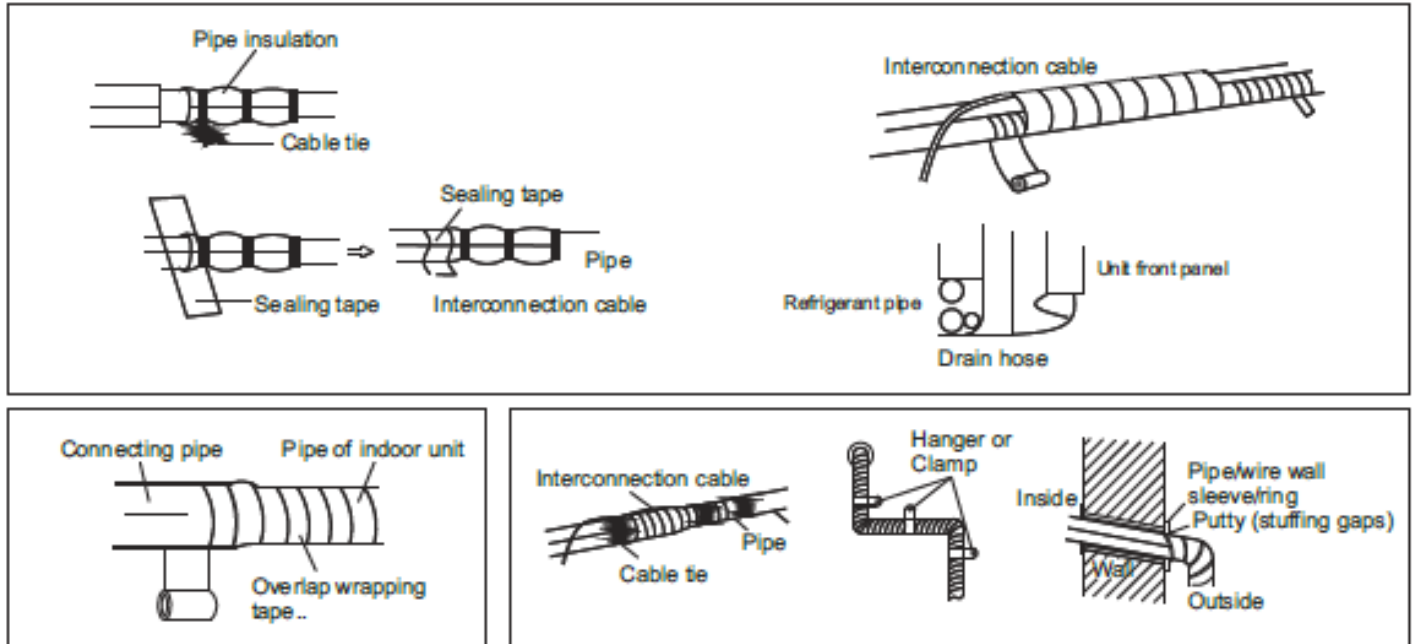


Connect Copper Pipes-Sweat Connection

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 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.

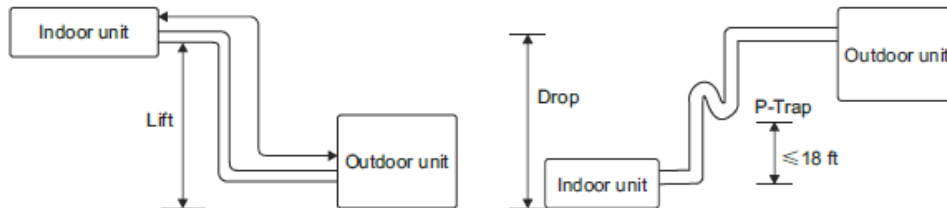
PIPING GUIDE

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

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



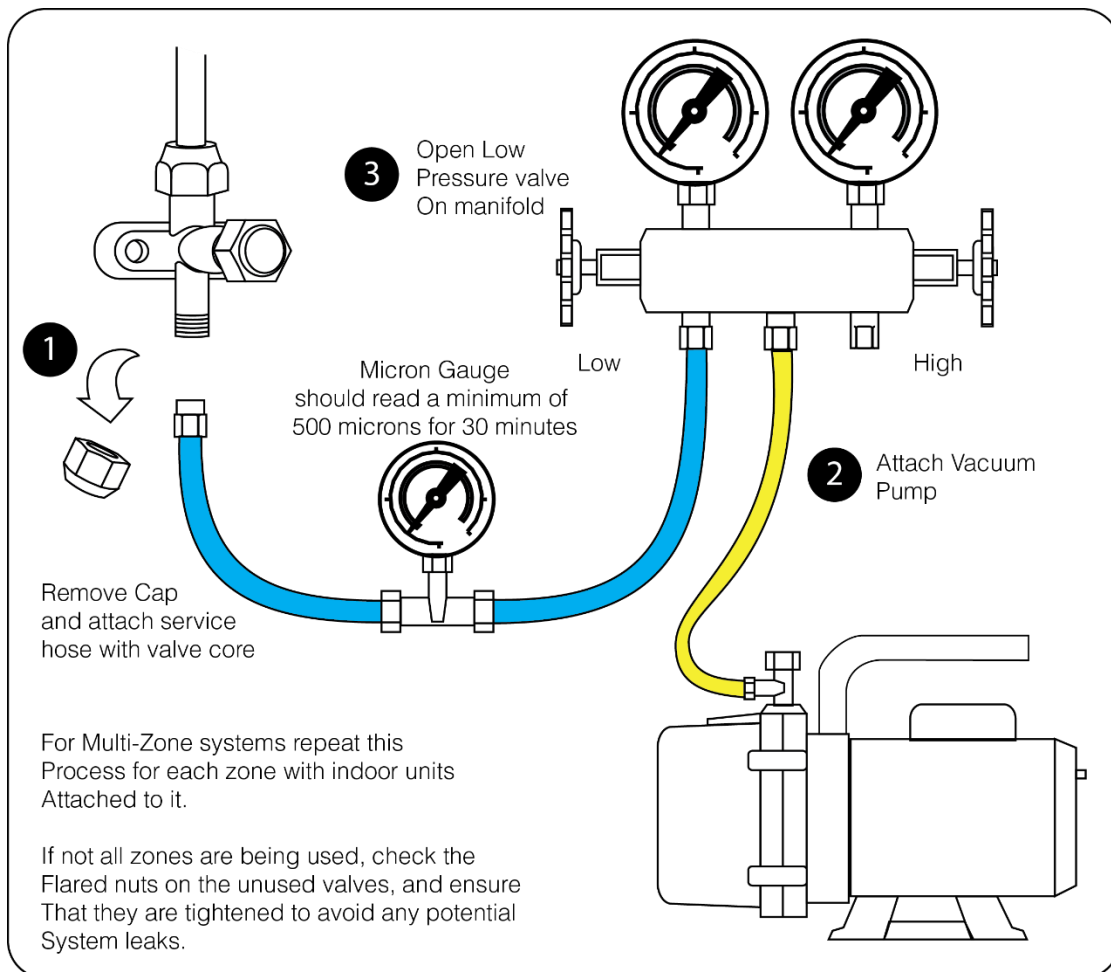
VACUUM TESTING AND CHARGING

VACUUM AND LEAKAGE CHECK

VACUUM REFRIGERANT PIPES

Evacuate the pipes between indoor and outdoor units, using vacuum pump and manifold/gauge set, to a minimum of 500 microns (service valves remain front seated). Hold for 30 minutes to check if the vacuum level is maintained. Using dry nitrogen or other leakage detection tool for leak checking. Be certain there is no pressure in the system when repairing a leak.

Vacuum and Check Leakage before Releasing Refrigerant from Outdoor Unit to Indoor Unit



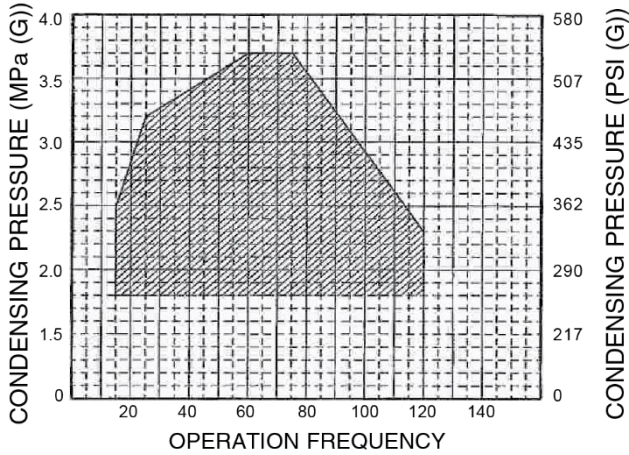
SYSTEM INSPECTION AND TRIAL RUNNING

CHECK SYSTEM THOROUGHLY

Check system thoroughly to make sure the unit is ready for trial running: check wires and pipes and air intake and discharge and power and thermostat and others necessary components.

ADJUST REFRIGERANT GUIDELINE

Right amount of refrigerant is very important. It is one of the basics to ensure a safe operation over time.



Normally single zone outdoor unit is pre-charged with refrigerant for 25ft inter-connecting copper (liquid) line.

Multiple zone outdoor unit is pre-charged for various length of copper (liquid) lines of allowed quantity of indoor units, following specs or engineering submittal.

For single zone unit or multiple zone multiple compressor unit, normally the outdoor unit is pre-charged for 25ft line sets. If the copper line is longer or shorter than 25ft, need to add or deduct refrigerant, following general rule of thumb for rough adjustment: 1/4" liquid line unit: 0.3 Oz/ft; 3/8" liquid line unit: 0.4 OZ/ft.; 1/2" liquid line unit: 1.2 OZ/ft.

For multiple zone one compressor unit, if the copper line is longer or shorter than the length at which pre-charged refrigerant is good for, as listed in the engineering submittal or related labels or tables, need to add or deduct refrigerant, following 0.23 OZ/ft. rule of thumb for rough adjustment.

In all situations, the minimum copper line (liquid or gas) length for each indoor unit is 15ft.

For a better adjustment, may combine above guideline with the indoor or outdoor (ambient) temperature-refrigerant pressure chart, or generally 8-12F super-heat method.

PRESSURE CHECKING

System pressure checking should be a must-do job during trial running of initial installation, and compressor/refrigerant-related troubleshooting. It is a more accurate refrigerant adjusting method than rough refrigerant addition or deduction guideline shown above.

In some cases, if the service valve on unit is 5/16" and your service valve connection is 1/4", need to use a 5/16" -1/4" adaptor so that you can connect to your manifold. Need to pay attention to use the right manifold that is rated for the refrigerant in the unit, and pay attention to connect to the right hose (blue hose for low pressure, red hose for high pressure, yellow hose for vacuum or charging or deduction). Not recommended to put hose onto service valve while compressor is running. Remove hose quickly and carefully to avoid air suck-in, refrigerant leakage, or any refrigerant-freezing burn.

The following curves are only reference for system pressure checking. Actual pressures may vary upon many factors such as inter-connecting pipe length, refrigerant charge / leakage level, elevation difference between indoor unit and outdoor unit, tool calibration, reading error, and so on.



SYSTEM INSPECTION AND TRIAL RUNNING

Reference Temperature-Pressure Table (Split Condensing Unit-R410A AC)

Product Series: YMGI Group-Mini Split Version: 01/11/2010

Outdoor Dry-Bulb (F)	15	25	35	50	55	60	67	75	82	90	95	100	105	110	115
Outdoor Dry-Bulb (C)	-9.4	-3.9	1.7	10.0	12.8	15.6	19.4	23.9	27.8	32.2	35.0	37.	40.6	43.3	46.1
Outdoor Wet-Bulb (F)	13.6	23.0	30.2	42.8	46.9	51.1	59.5	66.6	64.9	71.2	75.0	79.0	82.9	86.9	90.7
Outdoor Wet-Bulb (C)	-10.2	-5	-1.0	6.0	8.3	10.6	15.3	19.2	18.3	21.8	23.9	26.1	28.3	30.5	32.6
Indoor Dry-Bulb	80F (26.7C)														
Indoor Wet-Bulb	67F (19.4C)														
Discharge-PSI/F	74/21.2	84/27.1	105/35.1	115/38.5	125/42.8	130/45.5	140/48.2	146/51.2	156/54.3	166/57.5	175/61.2	180/62.5	186/63.7	189/64.5	191/64.9
Suction-PSI/F	60/46.2	70/53.5	85/55.2	92/55.7	98/56.1	103/56.7	110/56.9	115/57.1	120/57.5	128/57.8	135/57.9	136/58.6	137/59.1	139/59.3	140/59.5
	Suggest to Add on Low Ambient Control. If Still in Need of AC for Long Time in Cold Weather. Closely Check/Watch Refrigerant Charge Level							Warning: R410A refrigerant bears higher pressures than R22. Only handled by Licensed HVAC technician.							

Reference Temperature-Pressure Table (Split Condensing Unit, R410A-Heat Pump)

Product Series: YMGI Group-Mini Split System Version: 01/11/2010

Outdoor Dry-Bulb (F)	0	5	10	17	25	30	35	40	45	47	55	62
Outdoor Dry-Bulb (C)	-17.8	-15	-12.2	-8.3	-3.9	-1.1	1.7	4.4	7.2	8.3	12.8	16.7
Outdoor Wet-Bulb (F)	-0.8	4.1	8.8	15	22.8	27.5	28.9	36.3	41.0	43.0	50.4	56.5
Outdoor Wet-Bulb (C)	-18.2	-15.5	-12.9	-9.4	-5.1	-2.5	-1.7	2.4	5	6.1	10.2	13.6
Indoor Dry-Bulb	70F (21.1C)											
Indoor Wet-Bulb	60F (15.6C)											
Discharge-PSI/F	260/84	269/90	284.5/95	290/102	296/111	304/128	304/133	330/138	345/142	354/149	400/149	440/176
Suction-PSI/F	246/72	255/78	270/86	278/89	285/92	290/95	310/98	318/100	330/102	340/104	380/107	425/113

CHECK AFTER INSTALLATION AND TEST OPERATION

Items to be checked	Possible Problems or Consequences
Has the unit been positioned firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating), or compressor overheating, or other unit malfunctions.
Is heat insulation sufficient?	It may cause unexpected condensate and dripping.
Is drainage pipe tested?	It may cause leakage or unexpected dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause unit malfunction or damage to the part/unit.
Is the electrical wires and pipes connection installed correctly and securely?	It may cause unit malfunction or damage to the part/unit.
Has the unit been connected to a secure ground connection?	It may cause electric leakage.
Is the power cord specified properly per NEC codes?	It may cause wire overheat or even fire.
Is the air inlet and outlet been cleared?	It may cause insufficient cooling/heating capacity, and unexpected noise.
Has the refrigerant pressure been checked or refrigerant been adjusted accordingly?	It may generate unexpected noise, freezing pipe, capacity issues, compressor or system damage or even worse.
Has the installing technician filled all the fields in the checklist inside the warranty registration card?	If not filed or not filled completely or correctly, your factory warranty may not be qualified.



TEST OPERATION

Before test operation

1. Do not turn on power before installation is finished completely.
2. Electric wires must be connected correctly and securely.
3. Cut-off valves of the connection pipes should be back seated/turned on.
4. All the left over installation material scraps must be cleared away from the unit before initial start-up.

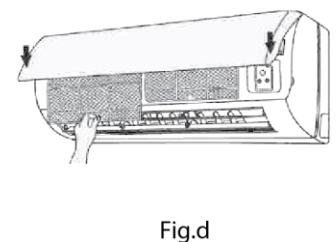
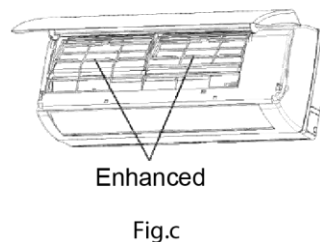
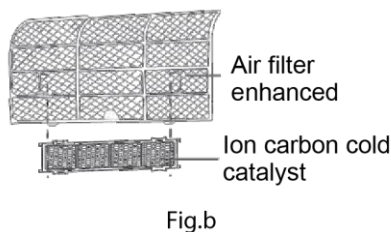
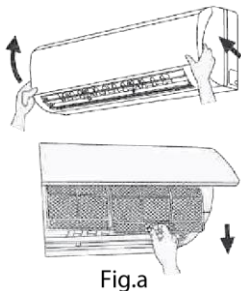
Test operation method

1. Switch on power, press "ON/OFF" button on the wireless remote control to start the operation.
2. Press MODE button, to select the COOL, HEAT (not available for cooling only unit's), FAN and so on to check :
 - All the functions (to make sure the unit functions correctly and properly).
 - Refrigerant (pressures/temperatures at service values/pipes should be good).
 - Drainage (condensate/water flow should be dripping out of drainage pipe ONLY).
 - Noise (there should be not any abnormal sound).

INSTALLATION AND MAINTENANCE OF ENHANCED FILTER

INSTALLATION INSTRUCTIONS

1. Forcibly lift up the panel at a specific angle from the two ends of the front panel following the arrow direction. Then pull the air filter downwards to remove it. (Figure a)
2. Mount the healthy filter onto the air filter, (Figure b). If the air filter cannot be installed, please mount the healthy filter on the front case. (Figure c)
3. Mount the air filter properly along the arrow direction in Figure d, and then close the panel cover.



CLEANING AND MAINTENANCE (Regular Filter and/or Other Enhanced Filters)

Take out the (enhanced) filter before cleaning according to the installation instruction. Pay special attention that the silver ion filter can't be cleaned with water, while active carbon, photo catalyst, low temperature conversion (LTC) catalyst, formaldehyde eliminator, ca-techin or mite killing filter can (but can't be cleaned with brush or hard/sharp tools). Dry and reinstall it after cleaning. Make sure to replace securely and properly.

FILTER LIFETIME

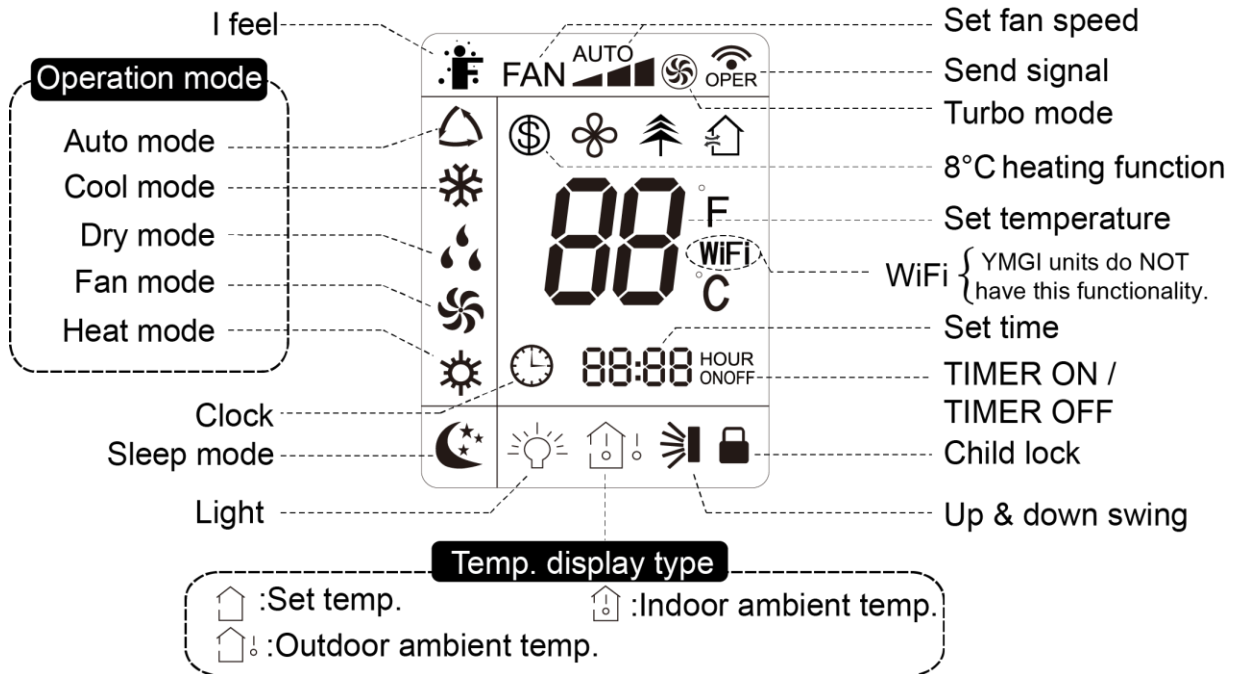
The washable filter will last a long time. But some (enhanced) filters may only have a lifetime of about one year under normal conditions. As far as the silver ion filter, it will become invalid when its surface becomes black (green).

Buttons on Remote Controller



- 1 ON/OFF button
- 2 MODE button
- 3 FAN button
- 4 SWING button
- 5 TURBO button
- 6 ▲ / ▼ button
- 7 SLEEP button
- 8 TEMP button
- 9 I FEEL button
- 10 LIGHT button
- 11 CLOCK button
- 12 TIMER ON / TIMER OFF button

Introduction for icons on display screen



Introduction for buttons on remote controller

Note:

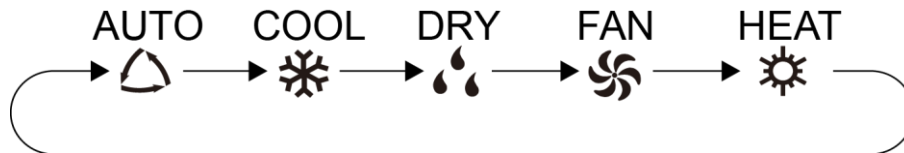
- This is a general use remote controller, it is used on multiple air conditioner models with multiple functions. If you press a button on the remote, for a function not available on your model, the unit will continue to run in its original settings.
- The air conditioner will make a sound when the power is turned on. Power indicator "⏻" is ON (red icon). After that, you can adjust settings for the air conditioner by using remote controller.
- When the system is turned on, pressing a button on the remote controller, the signal icon "📶" will appear on the remote controller display. When a command is sent, the icon will blink once and the air conditioner will give out a "de" sound, which indicates the command has been sent to the air conditioner.
- Under off status, set temperature and clock icon will appear on the remote controller display. (If timer on, timer off and light functions are set, the corresponding icons will be displayed on the display of remote controller at the same time.) When turned on, the display will show the corresponding function icons.

ON/OFF button

This button turns on or turn off the air conditioner. After turning on the air conditioner, the operation indicator "⏻" on the indoor unit's display is ON (green indicator. The color may be different for different models), and indoor unit will make a sound.

MODE button

Press this button to select your required operation mode.



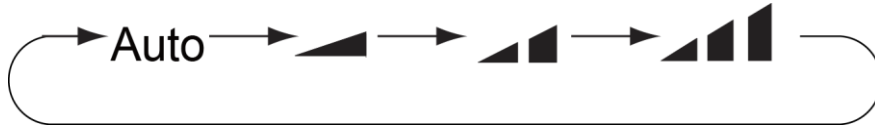
- When selecting auto mode, the air conditioner will operate to factory settings. The set temperature can't be adjusted and will not appear on the display. Pressing the "FAN" button can adjust fan speed. Pressing the "SWING" button can adjust fan blowing angle.
- After selecting COOL mode, the air conditioner will operate in cool mode. The cool icon "❄️" on indoor unit will be ON. Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.
- After selecting dry mode, the air conditioner will operate at low speed. The dry icon "💧" on indoor unit will be ON. Under dry mode, fan speed cannot be adjusted. Press "SWING" button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only run the fan, with no cooling or heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator "☀️" on indoor unit will be ON. Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle. (Cooling only units will not respond to heating mode signal. If you set the heat mode with the remote control, pressing ON/OFF button will start up the unit).

Note:

- To prevent cold air from blowing, after starting up heating mode, indoor unit will delay 1~5 minutes before blowing air (actual delay time is depend on indoor ambient temperature).
- Set temperature range available on the remote controller is 61~86 °F.

FAN button

Pressing this button can set fan speed cycle: auto (AUTO), low (▲), medium (▲▲), high (▲▲▲). Auto

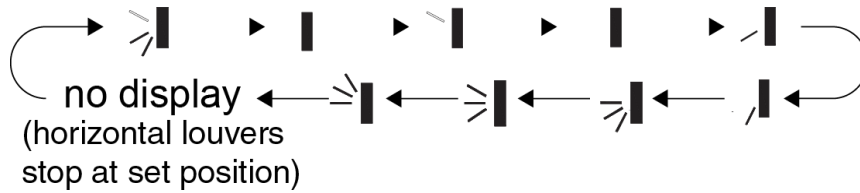


Note:

- Under AUTO speed, air conditioner will select proper fan speed automatically according to factory settings.
- Fan speed under dry mode is low speed.

SWING button

Press this button can select up & down swing angle. Fan blowing angle can be selected cycled through as below:



When selecting "no display", the air conditioner is blowing fan automatically. The horizontal louver will automatically swing up & down at maximum angle.

- When selecting "▲, ▲, ▲, ▲, ▲", the air conditioner is blowing the fan at a fixed position. Horizontal louver will stop at a fixed position.
- When selecting "▲, ▲, ▲", the air conditioner is blowing the fan at a fixed position. Horizontal louver will blow air at a fixed position.
- Hold "no display" button above 2s to set your required swing angle. When it reaches your desired angle, release the button.

Note:

▲, ▲, ▲ may not be available. When air conditioner receives this signal, the air conditioner will turn on the fan automatically.

TURBO button

Under COOL or HEAT mode, press this button to turn for quick COOL or quick HEAT mode. "🌀" icon is displayed on remote controller. Press this button again to exit turbo function and "🌀" icon will disappear.

▲/▼ button

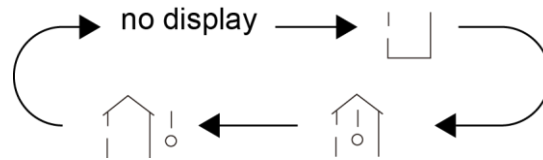
- Press "▲" or "▼" button once increase or decrease set temperature 1 °C (1°F). Holding "▲" or "▼" button, 2s later, set temperature on remote controller will change quickly. Release the button after finished adjusting the setting, the temperature indicator on indoor unit will change accordingly. (Temperature cannot be adjusted under auto mode)
- When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons) When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

SLEEP button

Under COOL, HEAT or DRY mode, press this button to start up sleep function. "☾" icon is displayed on remote controller. Press this button again to cancel sleep function and "☾" icon will disappear.

TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:



- When selecting "🏠" or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting "🏠" with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting "🏠" with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives "🏠" signal, while it displays indoor set temperature.
- It's defaulted to display set temperature when turning on the unit. There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting the display of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically returns to display set temperature after three or five seconds.

I FEEL button

- Press this button to start I FEEL function and "👤" will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to close I FEEL function and "👤" will disappear.
- Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature.

LIGHT button

Press this button to turn off display light on indoor unit. "💡" icon on remote controller disappears. Press this button again to turn on display light. "💡" icon is displayed.

CLOCK button

Press this button to set clock time. "🕒" icon on remote controller will blink. Press "▲" or "▼" button within 5s to set clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2s later, time will change quickly. Release this button when reaching your required time.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operations cannot exceeds 5s. Otherwise, remote controller will quit setting status. Operation for TIMER ON/TIMER OFF is the same.

TIMER ON / TIMER OFF button

TIMER ON button

- "TIMER ON" button can set the time for timer on. After pressing Timer On button, the "🕒" icon disappears and the word "ON" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER ON setting. After each pressing "▲" or "▼" button, TIMER ON setting will increase or decrease 1min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "TIMER ON" to confirm it. The word "ON" will stop blinking. The "🕒" icon resumes displaying.
- Cancel TIMER ON: Under the condition that TIMER ON is started up, press "TIMER ON" button to cancel it.

TIMER OFF button

- "TIMER OFF" button can set the time for timer off. After pressing the Timer Off button, the "🕒" icon disappears and the word "OFF" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER OFF setting. After each pressing "▲" or "▼" button, TIMER OFF setting will increase or decrease 1 min. Hold "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "TIMER OFF" word "OFF" will stop blinking. The "🕒" icon resumes displaying.
- Cancel TIMER OFF. Under the condition that TIMER OFF is started up, press "TIMER OFF" button to cancel it.

Note:

- Under on and off status, you can set TIMER OFF or TIMER ON simultaneously.
- Before setting TIMER ON or TIMER OFF, please adjust the clock time.
- After starting up TIMER ON or TIMER OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. The ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

Function introduction for combination buttons

Energy-saving function

Under cooling mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be displayed on the remote controller, and air conditioner will adjust the set temperature automatically according to factory settings to reach to the best energy-saving effect. Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

Note:

- Under energy-saving function, fan speed is defaulted to auto speed and it cannot be adjusted.
- Under energy-saving function, set temperature cannot be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

8°C heating function

Under heating mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8°C heating function. When this function is started up, "🕒" and "8°C" will be shown on remote controller, and the air conditioner keep the heating status at 8°C. Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8°C heating function.

Note:

- Under 8°C heating function, fan speed is defaulted to auto speed and it cannot be adjusted.
- Under 8°C heating function, set temperature cannot be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and 8°C heating function can't operate at the same time. If 8°C heating function has been set under cooling mode, pressing the sleep button will cancel 8°C heating function. If sleep function has been set under cooling mode, start up the 8°C heating function will cancel sleep function.
- Under °F temperature display, the remote controller will display 46 °F heating.

Child lock function

- Press "▲" or "▼" simultaneously to turn on or turn off child lock function. When child lock function is on, "🔒" icon is displayed on remote controller. If you operate the remote controller, the "🔒" icon will blink three times without sending signal to the unit.

Temperature display switchover function

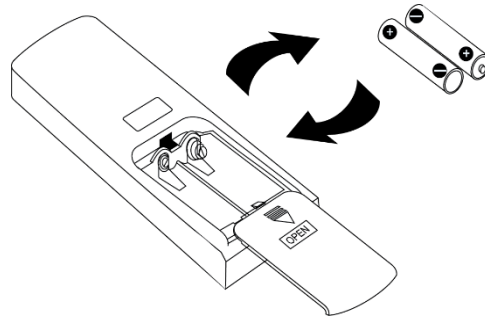
Under OFF status, press "▼" and "MODE" buttons simultaneously to switch temperature display between °C and °F.

Operation Guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.
2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.
3. Press "▲" or "▼" button to set your required temperature. (Temperature can't be adjusted under auto mode).
4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.
5. Press "SWING" button to select fan blowing angle

CHANGING BATTERIES AND NOTICES

- 1) Press slightly along the arrowhead direction to push the back cover open on the remote control.
- 2) Take out the old batteries. (As show in figure)
- 3) Insert two new AAA1.5V dry batteries, and pay attention to the polarity. (As show in figure)
- 4) Attach the back cover of wireless remote control. (As show in figure)



NOTICE:

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.

NOTE:

When changing the batteries, do not use the old or different batteries, otherwise, it can cause the remote control to malfunction. The operation should be in its receiving range. It should be placed 36 inches away from a TV set or stereo. If the wireless remote control cannot operate normally, please take the batteries out, wait 30 seconds and reinsert them. If the remote still doesn't operate normally, please change the batteries. If the wireless remote control will not be used for an extended period, it is recommended to remove the batteries. Leaving the batteries in could cause them to leak. This will cause damage to the remote control.

ABOUT MODE CLASH/CONFLICT BETWEEN INDOOR UNITS

If any two indoor units are controlled to run in the following modes, the indoor unit will run into mode clash or conflict. All indoor units will stop to run and show **Protection/Error code E7**, unless the unit is turned-off and then turned back on:

Some on **HEAT** Mode, while others on **COOL** Mode and/or **DRY** (Dehumidify) Mode and/or **FAN** Mode.

NOTE:

COOL mode is compatible with **DRY** and **FAN** mode. In other words, there will be no problem for some indoor units to run **COOL**, while others may run either one or few of modes **COOL**, **DRY** (Dehumidifying) and **FAN**. No **Protection/Error** code will show up.

OPERATION AT EMERGENCY

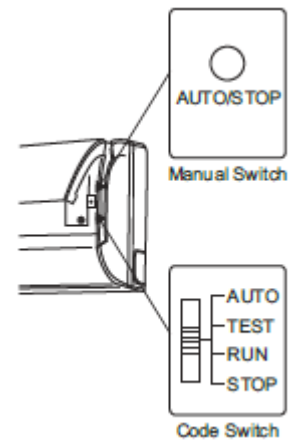
If at any time the remote control becomes damaged or lost, you can switch to **Manual** mode on the indoor unit. This will allow the unit to run in **AUTO** mode only. While in **AUTO** mode the unit temperature cannot be switched. Contact your local service provider for instructions on replacing the remote control.

The manual switch can be operated as follow:

- **Operation:** When the unit has stopped running, press **ON/OFF** button, unit will enter **AUTO RUN** mode. The microcomputer will acquire the room temperature to select the (**COOL, HEAT, FAN**) mode automatically, to obtain the correct setting.
- **Stopping:** When the unit is running, press the **ON/OFF** button of the manual switch, the unit will stop working.

The code switch can be operated as follow:

- **Operation:** When the unit has stopped running, adjust the code switch to **AUTO**, the unit will enter **AUTO RUN** mode. The microcomputer will acquire the room temperature to select the (**COOL, HEAT, FAN**) mode automatically, to obtain the correct setting.
- **Stopping:** When the unit is running, adjust the code switch to the **STOP** position, the unit will stop working.



CLEANING AND CARE

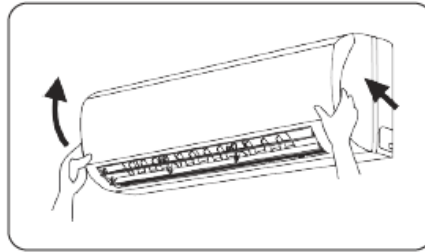
⚠ CAUTION

- 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.



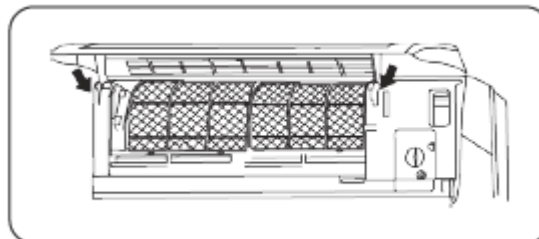
Washing

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.)



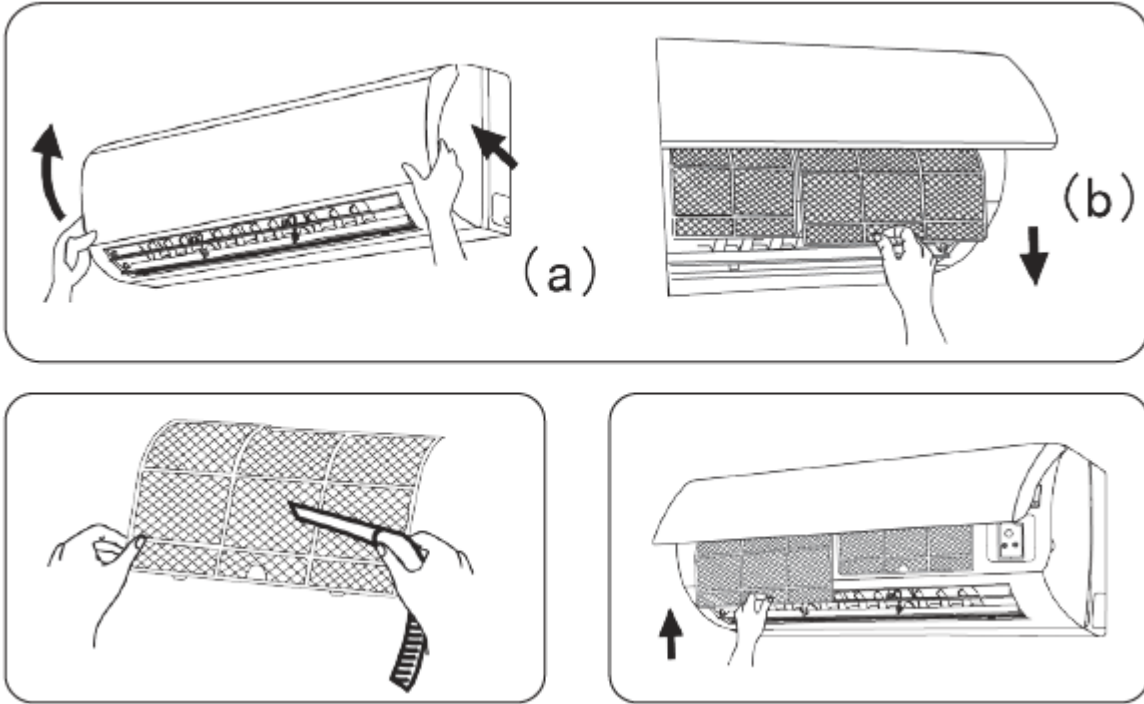
Install front panel

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 frequently. After removing the filter, be sure not to touch the fins on the indoor unit as this may 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.



IF THE SYSTEM IS GOING TO BE UNUSED FOR A PROLONGED PERIOD

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.

PROTECTION AND ERROR CODES

Check before Contacting Service Center

Please check the following items before contacting the maintenance serviceman.

Conditions	Causes	Corrective Actions
The unit does not run	Broken fuse or opened breaker	Change the fuse or close the breaker
	Power off	Restart the unit when power on
	Power supply plug is loose.	Plug the power supply properly.
	Insufficient batteries voltage of the remote controller	Change new batteries
	Remoter controller out of the control scope	Keep the control distance within 8 meters.
The unit stops soon after it starts	Clogged inlet/outlet of the indoor/outdoor unit	Clear the obstacle
Cooling/Heating is abnormal	Clogged inlet/outlet of the indoor/outdoor unit	Clear the obstacle
	Improperly set temperature	Adjust the setting of the remote or wired controller.
	Too low set fan speed	Adjust the setting of the remote or wired controller.
	Improper airflow direction	Adjust the setting of the remote or wired controller.
	Opened door and window	Close the door and window
	Direct sunlight	Hang a curtain or blinds over the window.
	Too much people in the room	
	Too much heat sources in the room	Reduce the heat sources
	Dirty filter screen	Clean the filter screen

Note: If the air conditioner still runs abnormally after the above check and handling, please contact the maintenance serviceman at the local appointed service center and also give a description of the error occurred as well as the model of the unit.

Problem Handling

The conditions listed below are not classified into errors.

Conditions	Causes
The unit does not run	When restart the unit soon after it is stopped.
	As soon as power is on.
The unit blows out mist	When the cooling operation starts.
The unit generates noise	The unit "clatters" as soon as it starts running.
	The unit "swishes" during the cooling operation.
	The unit "swishes" when it is started or stopped.
	The unit "swishes" when it is in and after the running.
	The unit "squeaks" when it is in and after the running.
The unit blows out dust.	When the unit restarts after it is not used for a long time.
The unit emits odors.	When the unit is running.

Error Description

If some error occurs when the unit is running, the error code will be displayed on the wired controller and the main board of the outdoor unit. Check for more details about the meaning of each error

Error & Status Display List						Indoor Unit (Floor/Ceiling) 88 Display	Wired Controller Display	Indoor and/or Outdoor Unit Error
Errors of Residential Air Conditioners	Errors of Commercial Air Conditioners	Outdoor Unit 88 Display	Indicating LED Flashing Times					
			Running LED	Cooling LED	Heating LED			
/	Defrosting Mode 1	08	/	/	/	/	/	Outdoor
/	Defrosting Mode 2	0A	/	/	/	/	/	Outdoor
/	Whole Unit Running Normally	ON	/	/	/	/	/	Outdoor
Short/open circuit of the liquid valve temperature sensor	(Liquid Valve) Inlet Tube Temp Sensor Error	See Table 16	/	Flash 19 times	/	b5	b5	Outdoor
Short/open circuit of the gas valve temperature sensor	(Air Valve) Outlet Tube Temp Sensor Error	See Table 16	/	Flash 22 times	/	b7	b7	Outdoor
Refrigerant insufficiency or blockage protection (available for the residential outdoor unit)	/	F0	/	Flash 10 times	/	F0	F0	Outdoor
Short/open circuit of the indoor ambient temperature sensor	Indoor Ambient Temp. Sensor Short/Open-Circuit	See Table 16	/	Flash once	/	F1	F1	Indoor
Short/open circuit of the indoor evaporator	Indoor Evaporator Temp Sensor Short/Open-Circuit	See Table 16	/	Flash twice	/	F2	F2	Indoor
Short/open circuit of the of the outdoor ambient temperature sensor	Outdoor Ambient Temp Sensor Error	F3	/	Flash 3 times	/	F3	F3	Outdoor
Short/open circuit of the temperature sensor at the midway of the condenser coil (for the commercial unit)	Outdoor Mid-Coil Temp Sensor Error	F4	/	Flash 4 times	/	F4	F4	Outdoor
Short/open circuit of the outdoor discharge temperature sensor	Outdoor Discharge Air Temp Sensor Error	F5	/	Flash 5 times	/	F5	F5	Outdoor
Oil returning in cooling	Oil Return for Cooling	F7	/	/	/	/	/	Outdoor
System high pressure protection	High Pressure Protection	E1	Flash once	/	/	E1	E1	Outdoor
Anti-freezing protection	Shutdown for Whole Unit Anti-Freeze Protection	E2	Flash twice	/	/	E2	E2	Indoor
System low pressure protection (reserved)	Low Pressure Protection	E3	Flash 3 times	/	/	E3	E3	Outdoor
Compressor discharge high temperature protection	High Discharge Temp Protection	E4	Flash 4 times	/	/	E4	E4	Outdoor
Communication error between the indoor and outdoor units	Communication Error	See Table 16	Flash 6 times	/	/	E6	E6	Outdoor & Indoor
Mode conflict	Mode Conflict	See Table 16	Flash 7 times	/	/	E7	E7	Indoor
Overload protection	Overload Protection	E8	Flash 8 times	/	/	E8	E8	Outdoor
Anti cold blow protection	/	E9	/	/	/	/	/	Indoor
	Indoor Unit Water Full Error		/	Flashing	Flashing	E9	E9	Indoor
Trial run/trial operation	Trial Run	dd	Quick Flashing	Quick Flashing	Quick Flashing	dd	dd	Outdoor
Refrigerant recovery mode	Refrigerant Recovery Mode	Fo	Quick Flashing	Quick Flashing	/	Fo	Fo	Outdoor
Drive module resetting(for the commercial unit)	IPM Reset	Lc	Flash 3 times	Flash 3 times	Flash 3 times	Lc	Lc	Outdoor

Phase over-current protection	Compressor Current Protection	P5	/	/	Flash 15 times	P5	P5	Outdoor
Drive board communication error(for the commercial unit)	Communication Error between the Inverter Drive and the Main Controller	P6	Flash 16 times	/	/	P6	P6	Outdoor
Short/open circuit of the of the module temperature sensor	Radiator Temp Sensor Error	P7	/	/	Flash 18 times	P7	P7	Outdoor
Module temperature protection	Radiator Overheat Protection	P8	/	/	Flash 19 times	P8	P8	Outdoor
AC contact protection (for the commercial unit)	AC Contactor Protection	P9	Flash 3 times	Flash 3 times	Flash 3 times	P9	P9	Outdoor
Circuit sensor error	Current Sensor Error	Pc	Flash 3 times	Flash 3 times	Flash 3 times	Pc	Pc	Outdoor
Transducer connection protection (for the commercial unit)	Sensor Connection Protection	Pd	Flash 3 times	Flash 3 times	Flash 3 times	Pd	Pd	Outdoor
AC current protection(input side)	AC Current Protection (Input Side)	E5	Flash 3 times	Flash 3 times	Flash 3 times	E5	E5	Outdoor
Temperature drift protection (for the commercial unit)	Temp Drift Protection	PE	Flash 3 times	Flash 3 times	Flash 3 times	PE	PE	Outdoor
Drive board ambient temperature sensor error (for the commercial unit)	Drive Board Ambient Temp Sensor Error	PF	Flash 3 times	Flash 3 times	Flash 3 times	PF	PF	Outdoor
DC link high voltage protection	Low Voltage Protection	PL	Flash 3 times	Flash 3 times	Flash 3 times	PL	PL	Outdoor
DC link low voltage protection	Over Voltage Protection	PH	Flash 3 times	Flash 3 times	Flash 3 times	PH	PH	Outdoor
/	AC Input Voltage Anomaly	PP	Flash 3 times	Flash 3 times	Flash 3 times	PP	PP	Outdoor
Capacitor charging error	Charging Circuit Error	PU	/	/	Flash 17 times	PU	PU	Outdoor
Defrosting or oil returning in heating	Oil Return for Heating or Defrosting	H1	/	/	Flash once	H1		Outdoor
/	Forced Defrosting	H1	Quick Flashing	/	/	H1	H1	Outdoor
Compressor thermal overload protection.	Compressor Overheat Protection	H3	/	/	Flash 3 times	H3	H3	Outdoor
Module current protection (namely IPM protection)	<small>IPM Module protection, can be caused by over-charged refrigerant/ high pressure, restricted refrigerant flow or kinks on refrigerant pipes.</small>	H5	/	/	Flash 5 times	H5	H5	Outdoor
Compressor desynchronizing	Motor Desynchronizing	H7	/	/	Flash 7 times	H7	H7	Outdoor
PFC Protection	PFC Error	Hc	/	/	Flash 6 times	Hc	Hc	Outdoor
Too high power protection (available for the residential outdoor unit)	/	L9	Flash 20 times	/	/	L9	L9	Outdoor
Compressor startup failure	Startup Failure	Lc	/	/	Flash 11 times	Lc	Lc	Outdoor
Compressor phase failure/ reverse protection	Phase Loss	Ld	Flash 3 times	Flash 3 times	Flash 3 times	Ld	Ld	Outdoor
Compressor rotation failure(for the commercial unit)	Compressor Stalling	LE	Flash 3 times	Flash 3 times	Flash 3 times	LE	LE	Outdoor
Over speed (for the commercial unit)	Over-Speed	LF	Flash 3 times	Flash 3 times	Flash 3 times	LF	LF	Outdoor
Short/open circuit of the temperature sensor at the inlet of the condenser coil (for the commercial unit)	/	A5	Flash 3 times	Flash 3 times	Flash 3 times	oE	A5	Outdoor

Short/open circuit of the temperature sensor at the outlet of the condenser coil (for the commercial unit)	/	A7	Flash 3 times	Flash 3 times	Flash 3 times	oE	A7	Outdoor
Memory card error	/	EE	/	/	/	/	/	Outdoor
Frequency limitation/ degradation for module circuit protection (for phase circuit)	/	En	Flash 3 times	Flash 3 times	Flash 3 times	En	En	Outdoor
Frequency limitation/ degradation for module temperature protection	/	EU	/	Flash 6 times	Flash 6 times	EU	EU	Outdoor
Frequency limitation/ degradation for overload	/	F6	/	Flash 6 times	/	F6	F6	Outdoor
Frequency limitation / degradation for circuit protection of the whole unit	/	F8	/	Flash 8 times	/	F8	F8	Outdoor
Frequency limitation/ degradation for module circuit protection (for phase circuit)	/	F9	/	Flash 9 times	/	F9	F9	Outdoor
Frequency limitation/ degradation for anti-freezing protection	/	FH	/	Flash twice	Flash twice	FH	FH	Outdoor
Compressor demagnetizing protection	/	HE	/	/	Flash 14 times	HE	HE	Outdoor
Indoor and outdoor units unmatched	/	LP	Flash 19 times	/	/	LP	LP	Outdoor & Indoor
Compressor phase circuit detection error	/	U1	/	/	Flash 12 times	U1	U1	Outdoor
DC link voltage drop error	/	U3	/	/	Flash 20 times	/	/	Outdoor
Communication Line Misconnected or Expansion Valve Error	Communication Line Misconnected or Expansion Valve Error	dn	Flash 3 times	Flash 3 times	Flash 3 times	dn	dn	Outdoor

The words in gray means the corresponding function is unavailable.

Conditions		Causes
The unit does not run	When restart the unit soon after it is stopped.	The overload protection switch of the unit let the startup delayed for three minutes.
	As soon as power is on.	The unit will stand by for approximate one minute.
The unit blows out mist	When the cooling operation starts.	The hi-humidity air indoor is cooled quickly.
The unit generates noise	The unit "clatters" as soon as it starts running.	It is the sound generated during the initialization of the electronic expansion valve.
	The unit "swishes" during the cooling operation.	It is the sound when the refrigerant gas runs inside the unit.
	The unit "swishes" when it is started or stopped.	It is the sound when the refrigerant gas stops running.
	The unit "swishes" when it is in and after the running.	It is the sound when the draining system is operating.
	The unit "squeaks" when it is in and after the running.	It is the sound of frication generated by the skin plate etc which swells due to the temperature change.
The unit blows out dust.	When the unit restarts after it is not used for a long time.	The dust inside the unit is blown out again.
The unit emits odors.	When the unit is running.	The odors absorbed in are blown out again.



Error Code	Content	Error Code	Content	Error Code	Content
L0	Indoor Unit Error	L9	Quantity of Group Control Indoor Units Setting Error	d8	Water Temperature Sensor Error
L1	Indoor Fan Protection	LA	Indoor Units Incompatibility Error	d9	Jumper Cap Error
L2	E-heater Protection	LH	Low Air Quality Warning	dA	Indoor Unit Network Address Error
L3	Water Full Protection	LC	Outdoor-Indoor Incompatibility Error	dH	Wired Controller Circuit Board Error
L4	Wired Controller Power Supply Error	D1	Indoor Unit Circuit Board Error	dC	Capacity DIP Switch Setting Error
L5	Anti-freezing Protection	D3	Ambient Temperature Sensor Error	dE	Indoor Unit CO ₂ Sensor Error
L7	No Master Indoor Unit Error	D4	Inlet Pipe Temperature Sensor Error	C0	Communication Error
L8	Power Insufficiency Protection	D6	Outlet Pipe Temperature Sensor Error	AJ	Filter Cleaning Reminder
db	Special Code: Project Debugging Code	dL	Outlet Air Temperature Sensor Error		





CHECKING UNITS PRIOR TO CONTACTING YOUR TECHNICIAN

⚠WARNING

Do not repair the air conditioner yourself. An Incorrect repair may cause electric shock or fire, so please contact an authorized service center for professional repair.

Following checks prior to contacting an authorized service center may save you time and costs.

Phenomenon	Normal or Abnormal
The unit doesn't deliver cooling or heating, immediately after the unit is restarted (remote control or power resuming).	If the unit is powered off, and then restored, it will not run the compressor until 3 minutes later. This is normal 3-minutes restarting protection due to high internal refrigerant pressure.
The unit emits a smell.	For a new unit, some of the odor is normal. For any bad or abnormal odor, shut off the unit and check the unit and the area around the unit for anything visible that could cause the odor. May need to call your technician.
Hearing the sound of "water flow" inside the unit.	Normally this is due to refrigerant flowing through the coils.
Mist is blowing out of the unit.	Normally this happens during cooling startup period, when the indoor air is hot and humid.
Hearing creaking noise during unit starting or shutting off.	Normally this is caused by the expansion or contraction of components due to temperature changes.
The unit doesn't operate at all.	<ol style="list-style-type: none"> 1) Is power shut off or lost? 2) Is the TIMER set up? 3) Is the circuit breaker engaged, or tripped? 4) Is the fuse connected, or blown? 5) Is the voltage too high or low? 6) Is the flow control or other switches breaking the circuit? 7) Is the unit under the 3-minute restarting protection period? 8) Does the remote control have power?
Unit doesn't respond to remote control.	<ol style="list-style-type: none"> 1) Does the remote control have battery power? 2) Is the remote control pointing at sunshine or bright lights? 3) Is the remote control signal blocked? 4) Is the remote control too far away from indoor unit? 5) Is the fuse on indoor unit blown? 6) Is the indoor unit powered on? 7) Is the indoor unit transformer good? 8) Is the indoor unit control board good?
Cooling (heating) is weak.	<ol style="list-style-type: none"> 1) Is the set temperature too high or too low? 2) Is the filter dirty? 3) Is the air vent blocked? 4) Is the unit undersized? 5) Is there a window or door opened? 6) Is the unit refrigerant at a lower level? 7) Is the outdoor temperature too hot or cold? 8) Is fan speed set at a low speed?
Indoor unit doesn't blow air.	<ol style="list-style-type: none"> 1) Is the unit in 3-minutes restarting protection period? 2) In heating mode, the indoor fan motor will not rotate before the indoor coil is hot enough. This is a normal anti-cold air blowing function. 3) Is the outdoor unit defrosting? 4) Is the unit in fan-pausing period for dehumidification mode? 5) Is the filter dirty? 6) Is the fan motor setting screw loose? 7) Is the fan capacitor bad? 8) Is the fan motor bad?
Condensate forms at air discharge louver.	This is normal when the conditioned cool air is mixed with the warm/hot and humid indoor air. Condensate may go away gradually once the indoor air is dehumidified and cooled down.
Water drips out of the indoor unit.	<ol style="list-style-type: none"> 1. Is indoor air too warm and humid? 2. Is the condensate drain hose/connection leaking? 3. Is the condensate drain hose clogged or restricted? 4. Is the condensate drain hose insulated? 5. Is the 3" hole at exterior wall staffed or sealed?
Noise is heard at the indoor unit.	<ol style="list-style-type: none"> 1. Is the fan motor or compressor relay energized? 2. Is it due to temperature change that causes part expansion or contraction?





Must stop all unit operations, disconnect power and contact your service technician in the following situations:

1. Harsh sound is heard
2. Bad odor is detected;
3. Water is leaking out of the indoor unit;
4. Circuit breaker trips or fuse is blown a few times;
5. Wires or connections are very hot;
6. Oil or refrigerant leakage is found;
7. Unit vibrates abnormally;
8. Any other abnormal situations.





USER NOTES

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

No.	Date	Installation 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
- **Symphony SOLO DC Inverter**
(57)2,3 Single Zone 16 SEER, 09-24K Btu/h
(58)2-Single Zone 16-22 SEER, 09-36K Btu/h
(58)4, (78)1-Single Zone 18-23 SEER, 09-36K Btu/h
- **Symphony CHOIR DC Inverter**
(59)2 DC Inverter Multiple Zone 16 SEER, 2x09K to 5x12K Btu/h
(59)2S-DC Inverter Multiple Zone 16 SEER 6x09K to 9x09K Btu/h
(59)4-DC Inverter Multiple Zone 21 SEER 5x09K to 5x12K Btu/h
- **Symphony VRF - DC Inverter HP or Heat Recovery up to 64 zones.**
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42"x16" PTAC/PTHP Electric Heater or Hot Water Coil, and 26" TTWA
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