YMGI Group, POB 1559
O'Fallon, MO 63366, USA
Tel:(866)833-3138 Fax:(866)377-3355
Web Site: www.ymgigroup.com
Email: info@ymgigroup.com

Literature Part No: LIT-WMMS-(57)-DC IVTR-1 to 1-C8-II-20150323
Subject to Continuous Engineering Change and Product Improvement without Prior Notice.

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

INSTALLATION INSTRUCTION

Wall Mount Mini Split Systems

DC INVERTER R410A-SYMPHONY SOLO

Single Zone (57)

Cooling and Heat Pump

09~24k

16 SEER

⚠ WARNING

This product is designed and manufactured free from defects in material and workmanship for normal use and maintenance. Installation, operation, maintenance and service shall follow professional practices for regular cooling and heating equipment, NEC, State, City or Local Codes and related manuals from YMGI. Otherwise, damage to equipment or property and even injury to people may occur.

Installer: Currently licensed HVAC technician only. Read manual before installation. Fully fill in warranty registration card.

User: Keep this manual for future maintenance and service use.

Servicer: Use this manual for service reference.

CONTENTS

⚠ CAUTION **All Units Shall Be Installed by Experienced or Licensed Contractor Or Technician. Read Manuals before Installation.**

⚠ CAUTION **Following NEC, State and Local Codes and Installation Instructions of All Units, Otherwise Unit Warranty Will Be Void and Serious Damage To People Or Property May Be Caused.**

⚠ WARNING **YMGI Group Will NOT Take Any Responsibilities for Any Damage or Loss Due to Do-It-Yourself(DIY) self-installation and other Improper Installation or Operation or Natural Disaster.**

⚠ WARNING **Don't Supply Power until All Wiring and Tubing and Checking is Completed. Ground the Unit Following Instructions and NEC, State and Local Codes.**

⚠ DANGER **Connect All Wiring Securely. Loose Wire or Other Bad Contact May Cause Arc or Overheating and Fire Hazard.**

Installation or Service Technician to Contact Manufacturer Technical Support
Toll Free Number: 1-866-833-3138 x 703
Email: techsp@ymgigroup.com

(For any abnormal or unit issues, end user needs to contact installation or service contractor to check the unit, before having them contact manufacturer technical support for technical diagnosis or trouble shooting help.)

MUST READ-ATTENTIONS AND WARNINGS

ATTENTIONS

1. Be sure to hire only one certified, licensed HVAC Company to complete 100% of the installation so that all details of the installation are clear, complete and well taken care of.
2. Be sure to have ONLY the licensed HVAC professional perform all parts of the installation. Factory Warranty will be lost if any portion of the installation is not performed by licensed HVAC contractor. DIY or partial DIY will void ALL factory warranties. One example of partial DIY would be calling the HVAC technician to release refrigerant or the sort while other installation has or is to be conducted by non-HVAC technician.
3. With hiring a technician that is offering their services as a "side job" and not through their licensed HVAC company may pose a possible risk of an incomplete or unsatisfactory installation of no guaranteed workmanship and lack of further service, if needed.
4. Have the installing technician read in full the installation manual of the product model you have. Some details may vary and some may be the key to determine the success and quality of the installation. Experience with certain manufacturer may not be applied fully to another manufacturer. For example, wiring, refrigerant adjustment and trial testing procedures may differ from manufacturer to manufacturer and model to model. Any ignoring or negligence may cause unit failure or damage which could be irrevocable and permanent.
5. All of YMGI's products are fully tested and have passed rigorous safety and performance standards and others related to the industry, before being packed and shipped. YMGI only uses famous brands as suppliers for their parts that are also known for their high quality and performance. The quality of the installation plays a key role as much as up to 90% importance in your unit's overall performance and lifetime. A poor installation can result in unit failure and inefficiency either immediately or over a period of time.
6. Some licensed contractor/technician may make mistake some time. YMGI doesn't supervise nor be able to control their installation. It is a key whether your unit will work properly that the installing technicians take each variable into account in each installation and well take care of all the details, from very beginning to end, during the initial installation, completely and professionally.

⚠ WARNING

The following will cause damage to the unit and key components and the loss of your unit's factory warranty. Below are details that may be missed at the time installation but will eventually over time cause unit failure:

1. Any foreign substances introduced into the system as a result of failure of not sealing the ends of the refrigeration piping before pulling through structures at time of installation.
2. Not installing an oil P-trap in the suction copper line where indoor unit is located 18' or more below the outdoor unit.
3. Cross piping and/or cross wiring on 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 soap bubble testing.
5. Not conducting a negative leak check by evacuating the copper lines for 30 minutes. Vacuum must be held at 500 micron or better for at least 5 minutes, starting from 5 minutes after the vacuum pump is shut off.
6. Not conducting a positive leak check prior to the negative leak check.
7. Not selecting the correct size of wire or circuit breaker.
8. Not answering ALL questions in the technician's checklist inside the warranty registration form.

The following may be overlooked or ignored as not a problem but actually will cause your unit to underperform or even cause unit failure eventually.

1. Any kinks or improper bending of the copper piping.
2. Any improper flaring or not centering of the flare with the nut, or not tightening any connection.
3. Not trial testing each indoor unit individually.
4. Not reading technical data (temp/time/pressure/current) after the system is stabilized (normally compressor needs to work at least 10 minutes). Data read too early may lead to inaccurate or false judgment or even a false sense of security.

In an effort to protect our customers from any possible faulty installation which can lead to premature unit failure, we like to provide the above information to you in addition to the technician. You can the judge by yourself and observe while your system is being installed, though your observation may not be treated as any guarantee or witness whether your system would be installed properly and professionally. If at any time you feel that there may be an installation issue, please have your technician contact YMGI at (866)833-3138 x 703 to clear your questions.

DEAR CUSTOMER(S)/END USER(S)/UNIT PURCHASER(S)/INSTALLER(S)/ CONTRACTOR(S)

Thanks for choosing YMGI products.
The YMGI equipment you purchased is either a split-type or a self-contained cooling/heating system which requires an installer's license, certification, knowledge, experience, carefulness and details for a successful and good installation. This equipment is different from those window or portable air conditioners you can normally purchase from local retail stores such as Home Depot, Lowe's, Sears, etc. which the manufacturer may not require licensed personnel to install.

Reading and following the YMGI Group recommendations, suggestions, and requirements, written in the following pages and other documents, is the first step in our hope and effort to help ensure a smooth installation & proper operation of your products for many years.

WHY DOES YMGI GROUP REQUIRE INSTALLATION AND SERVICE TO BE PERFORMED BY LICENSED OR CERTIFIED HVAC TECHNICIAN/ CONTRACTOR?

1) They have the training and experience to accurately and safely install and service your equipment.
The equipment runs with high-pressure refrigerant and oil and line-voltage. 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 problems occur on the unit that is fully installed by the licensed or certified contractor, they have the training and experience to correct the problem more efficiently. A technician(s) may be unwilling to repair an issue on a unit that they did not install. If you do find a technician willing to perform the service, there is an increased possibility of higher service fees than normal, 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., requiring only licensed or certified professionals can install and service high pressure HVAC equipment.

SUGGESTIONS, TO AID YOU IN HIRING AN HVAC CONTRACTOR:

1) Hire a currently, practicing, licensed/ certified HVAC technician/ contractor. Technicians, who are no longer practicing (retired, etc.) in this field, may not have the updated knowledge or may lack experience on the equipment you have purchased.
2) Hire a technician/ contractor who services customers in your local area and you are familiar with. Local contractors have a faster response time and will be easier for you to determine if they are reputable.
3) Use only reputable licensed/ certified HVAC installation contractors/ technicians to prevent any unexpected charges as a result from unethical business practices.
4) Check their references, to verify they are a good service provider to the general customers. N.A.T.E or A.C.C.A certified technicians are strongly recommended.
5) Some contractors/ technicians may not feel comfortable about installing the equipment that you purchased for them to install, and they prefer to purchase and install the equipment. You can contact YMGI directly to check and see if there have been any contractors in your area who have installed our products or similar.
6) Ask for a detailed quote for the whole installation project. A flat rate quote is the safest contract for both you and the contractor
7) Your local HVAC technicians may charge you on a project basis or on an hourly basis. To our general knowledge and experience, **a full single head installation may normally cost anywhere from $800 to $1500**. These costs are estimates and your actual costs may differ due to job nature and location.
8) Number of hours can vary depending upon each individual situation, some factors are, but not limited to:
9) How difficult or complex the indoor unit is to be securely installed.
10) How difficult or how long the inter-connecting pipes and wires are to be installed.
11) If all the suggestions have been taken and all the necessary steps are followed.

12) If the contractor(s)/technician(s) are experienced with the systems/brands you purchase.
You might spend less. But remember, many times you get what you pay for.
13) Sign a contract with them. The contract should list all the detailed work they will conduct and the standards they will follow. Some contractors are willing to include a 1-year installation/service warranty at no extra charge. Check with them to see if that is available. If available, include that in the contract.
14) Verify and confirm the installation is done completely and all the unit functions have been checked and are working properly, all the items in the checklist have been checked and marked well in the warranty registration card/form, prior to paying the contractor in full.

The cost of not having your unit installed properly can be more expensive than spending the little extra money that hiring the right contractor will cost. Protect your investment and warranty eligibility by doing it right the first time.

THE FOLLOWING LISTS THE JOBS AND RESPONSIBILITIES OF THE TECHNICIAN/ CONTRACTOR:

* Performing a load calculation for the room(s) you would like to air condition. Cooling requirements will be different from the heating requirements. They will consider cooling hours, heating hours and your special needs or requirements. Supplemental heating such as baseboard heater or portable heater may help you save money by not over-sizing or under-sizing the heating equipment.
* Selecting the right type, size or model of cooling and/or heating equipment.
* Determining the best location to install the unit. (Positioning indoor unit, outdoor unit and running the inter-connecting pipes/wires.)
* Selecting the correct electrical components (HVAC circuit breaker or fuse and disconnect switch for the electric power to the outdoor unit, types and sizes of the connecting wires between circuit breaker/disconnect switch and outdoor unit, and the wires between outdoor unit and indoor unit).
* Keeping the indoor unit away from the ceiling and the outdoor unit away from the wall, bushes and other obstacles at a proper and safe distance to allow for the proper airflow through the unit's.
* Placing the units on a secured level structure.
* Taping and sealing both ends of the inter-connecting pipes, before running them through structures, to prevent dust or other debris from getting into the pipes otherwise they will contaminate and damage the refrigeration system. Failure to follow this practice will make your factory warranty void.
* Connecting the inter-connecting pipes between the outdoor and indoor units. Checking for leaks through pressurization with nitrogen. After releasing nitrogen, evacuate the piping and indoor unit, for removal of system contaminants. Finally refrigerant introduction and adjustment, if necessary, from the outdoor unit.
* Back-seating the stopping valves at outdoor condensing unit to release pre-charged refrigerant from outdoor unit to indoor unit.
* Measuring and recording the electrical voltages at different terminals and the refrigerant pressures at stopping valves of outdoor condensing unit.
* Verifying and ensuring the unit is connected to the proper electrical power supply.
* Adjusting refrigerant levels (if necessary) following the installation instructions or chart on the unit.
* Checking for any unusual noises and other abnormalities that might be present.
* Operating the unit and check all functions, one by one, and explain to the owner how to operate and maintain the unit.
* Completing all fields in detail on the installer checklist, signing and dating the **Warranty Registration Card/Form.**

LIMITED PRODUCT WARRANTY

If the installation is successfully and fully done by a qualified licensed/ certified HVAC technician/contractor, the registration card/form is filled completely and correctly, and filed along with a valid installation invoice from the contractor company within 7 days of the original installation, the following standard **Limited Product Warranty** is qualified:
5-year on compressor and 1-year other PARTS ONLY. There is **no labor coverage**.

MUST READ

LIMITED PRODUCT WARRANTY POLICIES

The YMGI products are designed and manufactured free from defects in workmanship, and materials for normal use. However, for any reason, including many handlings and occasions between the YMGI factories/warehouses and where you receive the products, the unit doesn't work, YMGI Group will help to remedy the occurrence in the following warranting ways:

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

Parts: YMGI will warrant parts of YMGI-validated and approved warranty filing, for one year from the date of successful installation at original 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 the YMGI Group warrant labor cost of any type. Warranty will start from the date of successful installation at initial location, or 90 days as of original shipping date from YMGI Group, whichever comes first.

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

* Any damage or repairs to properties, or persons as an incident or consequence of improper or faulty transportation, installation, operation, maintenance or service.
* Damage caused by frozen or broken water hoses or refrigeration pipes in the event of equipment failure.
* Any damage as a result of 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 the 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 the following conditions must all be fulfilled:

1. The unit was fully (100%) and successfully installed by licensed or certified HVAC technicians.
2. The unit was installed following all NEC, state and local codes.
3. The unit was installed following all instructions and manuals made 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 had 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 5 conditions is not met.
Product registration doesn't guarantee the validity of this limited warranty statement.

Steps to follow for warranty part replacement:

1. Installing or service technician contacts YMGI tech support at 1-866-833-3138 ext 703 from the jobsite, to double-check and confirm with YMGI Technical support the exact part(s) needed to fix all the problems.
2. YMGI will check the customer's warranty filing. Parts for validated and approved warranty will not be charged. Parts of invalid warranty filing or unapproved warranty requesting, will be charged accordingly.
3. YMGI will ground ship out the parts ASAP. Expedited shipping is available at the customer's cost.
4. Replacement parts of approved warranty registration are to be warranted for the remainder of the 1 year parts and 5 year compressor warranty. Purchasing of replacement parts of invalid warranty filing or unapproved warranty requesting, will be as they are and bear no warranty.

YMGI keeps on improving products with various engineering changes without prior notice. Such improvements or changes include but not limited to product specification, appearance, functions, sizes, packaging and others. These improvements or changes will not void the limited warranty stated herein. YMGI keeps the final explanation of this warranty policy.

MUST READ

LIMITED PRODUCT WARRANTY REGISTRATION CARD

YMGI GROUP
Innovative, Competitive, Efficient & Convenient

LIMITED PRODUCT WARRANTY REGISTRATION CARD / FORM

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

For YMGI Use Only

The Company the Unit Was Sold Though: _____ Shipping Packing List Number: _____ Registration Card Serial No. _____

Did the Company Pay to YMGI: _____ HVAC Contractor/ Technician–Name _____ Date the Filled Registration Card YMGI Received: _____

Installation Invoice Attached to the Registration Card _____ Hired YMGI-Recommended HVAC Contractor/Technician? _____ Unit(s) Work Successfully (Yes/No): _____ Warranty Approved Warranty Denied

Outdoor Serial Number (One Outdoor Unit, One Registration Card/Form): Indoor Serial Number: For Multi Zone Units

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

Contact Where the Units are Installed:
Name: _____ Phone: _____ Fax: _____
Address: _____ Email: _____
City: _____ State (Province): _____ Country: _____

Contact of the Installing HVAC Contractor/Technician:
Technician Full Name (Print): _____
HVAC Technician's Company Name: _____
Address: _____

YMGI-Recommended Contractor/Technician:
Phone:Fax: _____
Email: _____
City:State (Province): _____

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

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

1) Are you the only one to install whole system? If not, % of installation done by you (HVAC technician).
2) What had been done, prior to your arrival?
3) Did you read the User Manual and Installation Instruction, before you started the installation?
4) Who unpacked the unit and accessory boxes to check for damage?
5) Supply electrical power V/Ph/Hz measured at wiring terminal block of Indoor unit: outdoor unit:
6) Incoming electrical power V/Ph/Hz measured at terminal blocks of indoor unit: outdoor unit:
7) Wire gauge, length and terminal colors between circuit breaker/ disconnect switch to outdoor unit:
8) Wire gauge, length and terminal colors between each indoor and outdoor unit: Unit A Unit B Unit C Unit D...
9) The size of HVAC circuit breaker/fuse or disconnect switch to the outdoor unit:
10) Are the inter-connecting wires and copper lines between indoor and outdoor units installed/covered/protected by line set covers, or anything else?
11) What is the refrigerant pipe length between each indoor unit and the outdoor unit? Unit A Unit B Unit C Unit D...
12) Where is/are the indoor unit(s) located? Unit A Unit B Unit C Unit D...
13) What is the elevation difference between each indoor unit and the outdoor unit? Unit A Unit B Unit C Unit D... (indoor unit above outdoor unit +, below -)
14) Did you check the indoor unit for condensate leakage and refrigerant leakage, before and after connecting them?
15) Where is the outdoor unit located? Ground wall balcony roof other location or pad Is the outdoor unit anchored to ground or secured onto wall bracket?
16) Have you checked to make sure there is no cross-piping and no cross-wiring between any two indoor units (zones)? How did you do it, who was with you?
17) Were the refrigerant pipe ends capped or taped seal, prior to running them through structures to keep debris from entering the copper lines?
18) Have you checked and run cooling or heating, one unit by one unit, all working fine?
19) Did you charge the inter-connection copper pipes and indoor unit with nitrogen to check for positive leakage (pressures 150-200PSI), before conducting vacuuming leakage check?
20) Did you vacuum correctly to check the connecting pipes and indoor unit for leakage, what was the micron gauge reading, for how many minutes?
21) Did you check if the compressor can be started and stopped in a correct (design) manner?
22) If copper length were not made to the supplied or recommended refrigerant pipe length, how much refrigerant added or deducted?
23) Measured refrigerant pressures at outdoor service suction valve, when unit was st. Heat pump (PSI): Cooling (PSI): Outdoor Ambient Temp. (°F):
24) What were the measured temperatures (probe not touching any metal): At cooling: indoor return air °F, discharge air °F, and outdoor °F At heating: indoor return air °F, discharge air °F, and outdoor °F
25) Have you checked all unit functions, with customer's witness, and all functions are correct?
26) Did you show the user how to operate the unit? Did he/she understand you?
27) Do you provide regular one-year free technical service for this installation?
28) Do you list the working details in the invoice and leave a copy to the customer?

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

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

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

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

PRIOR TO OPENING THE BOX OF, OR INSTALLING / SERVICING THE PRODUCT (HVAC & R)

Upon the purchasing, unpacking, installation and/or service of this product, you and all other parties hired to install or service your products, have read all YMGI Group (we) has written hereafter and all agree:

1) You understand all that is written hereafter in this and other documents that we publish.
2) You will follow what is written hereafter in this and other documents that we publish.
3) You will be bound by and completely follow all policies, guidelines, instructions, warnings, attentions and other materials, as published by YMGI Group, its subsidiaries or sister companies, in writing.
4) Only a successful installation, fully (100%) conducted by a qualified HVAC technician(s), as detailed in the checklist of the **Limited Product Warranty Policy** and **Limited Product Warranty Registration Card/Form**, along with a properly detailed installation invoice, is eligible for the **Limited Product Warranty**.
5) Failure to follow what is written hereafter may cause various equipment issues that you will take full responsibility and liability for, including, but not limited to, losing manufacturer's warranty, unit not working properly, unit malfunctions, under-performance, decreased safety, increased potential of various damages to your property, body, home and/or business, etc.
6) YMGI documents and policies supersede those made or provided by the sales distributors or installing contractors. YMGI Group maintains the final authority in explaining and resolving any and all discrepancies that might exist between distributors/contractors' documents and ours.

YMGI STRONGLY RECOMMENDS:

* Customer hires a currently licensed/ certified HVAC technician(s) (N.A.T.E. or A.C.C.A certification is strongly recommended) to conduct 100% of the installation, inspection of all unit functions and repair service.
* Customer signs an installation/service contract with the installation/service technician's company who has good service references and you trust. Installation and service is very important to the life of your investment and provide you a lifetime of comfort and peace of mind.
* Customer requests the installer to put down a1-year labor warranty coverage in the installation contract.
* Have the technician check against all the items in the checklist of the **Limited Product Warranty Registration Card/Form**, sign and date it, to help ensure a proper and professional installation.
* Customer pays in full, only after all the unit functions are inspected, the unit works properly, warranty checklist is fully filled out and signed and you are fully satisfied.
* If any unit abnormality is found, have your technician check the unit first. Have them call for manufacturer technical assistance, if necessary, from your job site, not his office, so that we can more accurately assist him in diagnosing the cause of the malfunction.

CUSTOMER AND TECHNICIAN MUST READ

MUST READ

ATTENTION

1) The YMGI **Limited Product Warranty Policy**, details the eligibilities, coverage's and other explanations of the warranty terms between YMGI group and the unit owner.
2) The YMGI **Limited Product Warranty Policy** and the **Warranty Registration Card/Form** are either included inside the user's manual and/or installation instruction manual, or come separately in the unit packaging box/envelope. If for any reason they are not included with your shipment, contact our sales or customer service to request a copy (electronic or printed), prior to installation.
3) The checklist, in the **Warranty Registration Card/Form**, is for the currently licensed/ certified HVAC technician to fill out completely, while verifying all unit functions are operating correctly. This checklist is for the technician to test and check all details of your unit, to verify and ensure its proper operation.
4) The technician must complete all fields in the **Warranty Registration Card/Form**, especially the unit model and serial numbers and distributor information, and most importantly, the technician checklist.
5) **Warranty Registration Card/Form** shall be mailed, **along with the original copy of the currently licensed HVAC contractor's full installation invoice**, to YMGI Group, within 7-days after original installation, in order for YMGI to review and process your warranty registration.
6) Keep a copy of **Warranty Registration Card/Form** for your own use in the future, to aid in any possible future warranty claiming, any request of parts, customer service, and/or technical support.
7) YMGI reserves the right to approve or deny the warranty status based on the information reviewed.

Mailing address of the **Warranty Registration Card/Form:** Warranty Department, YMGI Group, POB 1559, O'Fallon, MO 63366, USA.

Following these requirements will aid in ensuring the units will be installed to the general HVAC practicing standards and are necessary factory requirements, to find problems early, prevent possible damage to the unit and help ensure the unit will work properly for its life time.

QUESTIONS ABOUT SELF-INSTALLATION VS HIRING LICENSED HVAC TECHNICIANS

Does YMGI allow to do-it-yourself installations (DIY) partially or fully? NO.
Unfortunately no brand or manufacturer can take the responsibility of the equipment if it is not professionally installed by a currently licensed HVAC technician/ contractor.
If unit is installed by non-licensed people, in part or fully, will the factory warranty be void? YES.
Some DIY installations have been successful, but these are exceptions. Most have resulted in equipment failure, due to lack of knowledge and experience. A few of the problems result from DIY's lack of knowledge in the following areas:

* Sizing and selecting correct type, size and model of cooling and/or heating equipment.
* Sizing and installing correct electric circuit breakers and wires.
* Wiring the units correctly and properly.
* Taping the ends, connecting to indoor and outdoor units correctly and properly.
* Vacuuming the inter-connecting refrigerant lines.
* Checking and/or fixing the refrigerant leaks.
* Checking and/or fixing the condensate drain leaks.
* Releasing the refrigerant from outdoor unit to indoor unit.
* Running the unit to check all the unit functions.
* Conducting the installation or trouble-shooting with correct tools, experience or professional knowledge to correct the problem.

RECEIVING AND FREIGHT DAMAGE

* Freight (package/unit) shall be checked thoroughly for damage at receiving before accepting by signing on the carrier's delivery paperwork.
* Upon shipment being signed for acceptance, it becomes a binding document as to the condition of the products on delivery. We cannot process any shipping damage claim, if you accept the delivery.
* If damage is found at delivery, both you and the delivery driver must make notes on the delivery receipt or other freight paperwork detailing the damage found by marking position/parts on unit, description of damage, time/ date, your name, contact phone, etc. on the delivery documents. Make a copy of the marked delivery receipt.

* If the damage is minor or partial, that you choose to accept, you can contact the distributor or YMGI to discuss the possible replacement of the damaged part.
* If refusal of the shipment is needed due to severe freight damage, **DO NOT** sign the carrier's delivery receipt document indicating that you accept the products. Mark receipt "REFUSED DUE TO FREIGHT DAMAGE." Sign and date along with the delivery driver's signature and date.
* Take pictures showing the damage, before the delivery driver leaves.
* If you accept the delivery or fail to note damage on the driver's delivery receipt, the ability to claim freight damage is lost and YMGI will not replace the unit on this basis.
* Contact the distributor or YMGI, report the damage by forwarding the marked delivery receipt copy and pictures.
* Only after YMGI verifies with the carrier the necessary detailed notes of received freight damage, will the damaged products be eligible for replacement.
* If the returned products are found not damaged, YMGI will treat it as a return and will charge you 25% of product value plus added shipping cost.

RETURN-YMGI GROUP POLICIES & RETURN GOODS AUTHORIZATION (RGA)

All sales are final. If the customer wishes to return a product, the following **Return Policies** apply.

A. Only those products (units, parts or accessories) under the following conditions, are eligible for return:
1) Products are returned within 30 days of their original shipment date from YMGI
2) Products have not been installed.
3) No damage exists on the products being returned.
4) No missing products.
5) Products and packages are clean.
6) No duct tape or marking on the product or box.
7) Products are still their original package, in good shape and in re-sellable condition, as YMGI determines.

B. Preapproval steps for your return request:
1) Contact your distributor or YMGI to request a return.
2) Photograph your product and box to show details
3) YMGI will review your request, along with the pictures and any other details pertaining to your request.
4) If YMGI agrees to process your return request, a form called **Return Goods Authorization (RGA), along with an assigned RGA #** will be forwarded to your distributor or you.
5) Any return without YMGI Group approved RGA #, will not be accepted.

C. YMGI must verify the following before you can pack your products:
1) No products (units, parts, accessories) are missing.
2) No damage is found.
3) The products are in the original packaging.
4) No duct tape on any product or box.
5) Pictures have been taken and sent to YMGI to verify the product and boxes are not damaged.
6) The RGA has been completed and a copy has been returned to YMGI, via email or fax.
7) YMGI has approved the request in writing.

D. Shipping Preparation:
1) Package all products in a manner in which no damage can occur to the product and secure to a pallet.
2) Take and forward pictures of packed pallets for YMGI to verify proper packaging and no existing damage.
3) Include the YMGI approved RGA# in the shipping documents.
4) YMGI reserves the right to approve or deny any shipments.
5) YMGI can arrange shipping for you, but not at YMGI's cost. If this option is chosen, a packing list and BOL will be issued to you through YMGI.
6) If the above option is not chosen, you will be responsible for all freight charges. YMGI will not accept any returned items COD.
7) Place the package in an area which is accessible to the shipping company for pickup and limits the possibility of damage to the product. Customer must be present at the time of freight pick up.

After shipping, fax the BOL to YMGI Group at 1-866-377-3355 or email to customerservice@ymgigroup.com, detailing the information of the freight company and their tracking number.

E.Freight Damage:
1) YMGI Group will inspect returned items
2) Claiming of freight damage from a customer hired carrier will be the customer's responsibility.
3) Claiming of freight damage from a YMGI hired carrier will be YMGI's responsibility.

F. Charges for your return:
1)A restocking charge of 25% creditable invoice value.
2)All return shipping fees.
3)Additional fees will be charged, if products are found to be damaged, missing or used.
4)YMGI will notify the distributor of the charges only after the inspection and assessment of the returned products has been completed.

Attention:
1) Returned products must be shipped within 7 days of YMGI's releasing of **RGA #**.
2) **All RGA** shipping shall be prepaid by the customer. **YMGI will not accept any COD freight**.

YMGI GROUP DISCLAIMING-1:
YMGI Group will NOT accept any return, or may not honor 100% credit for any return of Product(s)/Part(s)/ Accessories, in any of the following cases:
* Return requests made 30 or more days after the date of original sales shipping from YMGI Group warehouse.
* Return shipment is initiated 8 days or more after the RGA is approved.
* Returned products received not displaying an YMGI-approved valid **RGA #**.
* Returned products received C.O.D.
* Returned products not received in the original packaging.
* Returned products received with non-repairable packaging, including duct tape or marks on units or carton boxes.
* Returned products received with missing units/parts/accessories.
* Returned products received, are found to be non-functional or damaged.

YMGI GROUP DISCLAIMING-2:
* YMGI Group will not be responsible for any losses of returned unit(s)/part(s)/accessories in transition to YMGI Group warehouse.
* YMGI Group RGA is valid for seven (7) days from the original issuing date. Returns will not be accepted, if shipping is made 8 or more days after the YMGI Group RGA is issued.

DEFECTIVE UNITS / PARTS / ACCESSORIES-REPAIR OR REPLACEMENT

Out of thousands of units sold every year, there may be an occasional instance your product does not operate properly. Reasons of but are not limited to: **manufacturing, installation, operation, maintenance and knowledge of operator**.

Equipment failure does not automatically denote a product defect from the factory assembly line. The defects can be caused, during production, transportation, installation, operation, maintenance, or service. Defects may NOT be the responsibility of the manufacturer. Nobody willfully or intentionally produces a defective product. No determination shall be made until the technical issue(s) or the causes of the defect(s) are identified.

The defects might be found before/ during installation or in the operation of the unit. Defects can be in the form of blown fuse(s), defective control board(s), damaged remote control, loose or missing screws, etc. These defective parts can be replaced easily.

Some functions of our units are different from what are typical in traditional split type air conditioning and heat pump systems and similar systems made by other manufacturers. These are not defects. Take some time to learn the functions of your unit. We will be happy to assist you with any questions you may have concerning the functions of your new unit.

If a defect is found, whether at the original installation, or during normal operation, we will gladly help you in the following steps in sequence from 1 to 3:

1. **Part repair or replacement after trouble-shooting:** This is the most common and generally the easiest and most economical way for all parties, since the problem and all part needs can be accurately and completely identified.

* Your technician calls our technical support line, from your job site, after checking your units and getting all the information ready.
* Our technical support will go through several steps, over the phone or through email, with your technician, in order to help identify and resolve the problems. Normally wiring correction, piping correction, part repair/ replacement will resolve the problems.

CUSTOMER AND TECHNICIAN MUST READ

* Your technician will then need to verify and confirm the problem(s) before YMGI can ship out the replacement part(s). Inaccurate or incomplete troubleshooting or part replacement will delay the repair. YMGI technical support will only speak with a licensed/certified technician in regards to the repair of your unit. In our experience this saves time and money for all parties involved.

Your technician is the only person to perform any physical checking, trouble-shooting and replacing of any defective part(s) for your units. Our factory technical support is just a help. **YMGI provided no labor warranty on the products.**

2. Unit/part repair at our workshop(s): Due to the limitations of our technical support not being at your job site, or your technician's experience with our product, the problem may not be resolved as quickly as would be desired. If the problem is still not resolved after attempts between your technician and our technical support, you can elect to have the unit repaired at our facility. If this step is chosen:

1) YMGI will send to you the ***Customer Request to Ship Products to YMGI Service Center for Inspection and Repair, and Authorization to Charge*** form.
2) You will review the form and fill all fields appropriately, sign and send back to the YMGI Group.
3) Once the form has been completed and sent back to YMGI, remove the units and ship back to YMGI.

Please make a note describing the problem and communication history, if possible. Our technicians will check the units and find the problem(s), repair the issue(s), and ship the unit back to you following the conditions set forth in the signed repair agreement. All unit removal and re-installation is done at your cost and must be done by a currently valid licensed HVAC technician.

3. Unit replacement: Only applies to those defects reported within 30 days of original purchase date and if all necessary warranty paperwork had been received and approved. This option applies only if the above steps cannot resolve the problem(s). Either indoor or outdoor unit replacement is available, based on the actual need, at YMGI's determination. ***This option shall be the last resort***, due to refrigerant and wiring considerations. All unit removal, re-installation and shipping cost are the responsibility of the customer. YMGI maintains the final authority as to unit replacement. Replacement will be made with the same model only. Alternate units will be treated as a new order.

Returning Replaced Defective Units/Parts/Accessories After Unit Repair: (Only applies to steps 1&3 above)

1) Repack the replaced unit/ part /accessory in the box which contained the replacement part.
2) Parts can be boxed for UPS, FedEx or equivalent ground service. Units shall be secured onto the skid on which the replacement was shipped after placing into the package from the replacement product.
3) Ship **all** replaced products, to YMGI-designated location. You will be charged if YMGI does not receive the replaced parts.

Standard factory warranty does not cover the cost of materials and labor that are incurred at your site.
There will be no cost for the replacement unit, if YMGI determines the defect is manufacturer related.
Replacement will be made with the same model, only. Alternate units will be treated as a new order.

CUSTOMER SERVICE / TECHNICAL SUPPORT FROM YMGI GROUP

For questions or help with your unit, contact the original installer or service provider.
YMGI Group does not install nor physically service your unit. Your installer or service provider must check the unit prior to contacting YMGI Group from your jobsite, in order to be helped in an efficient and timely manner.

* Factory customer service at customerservice@ymgigroup.com Tel: 1-866-833-3138x704
* Factory technical support at techsp@ymgigroup.com Tel: 866-833-3138x703
* Fax: 1-866-377-3355

An **"YMGI Group Customer Service/Technical Support Daily Log Sheet"** will be filed in writing at our office, for effective communication between you and YMGI Group customer service, your technician and YMGI Group technical support. Before contacting the YMGI Group locate the IP# written at the top of your warranty registration form. Use this IP# whenever you contact the YMGI Group.

DISTRIBUTOR AND MANUFACTURER POLICIES

* All questions concerning sales or money will be directed to the sales distributor from which you purchased the units.
* Read and follow all policies set forth from the distributor from which you purchased your unit.
* Upon purchase and installation of the unit(s), you agree to be bounded by all policies published by both distributors and YMGI.
* MGI Group has the final authority and supersedes other related parties (distributors, etc.) concerning all policies regarding YMGI products.

IMPORTANT NOTES

SAFETY WARNINGS

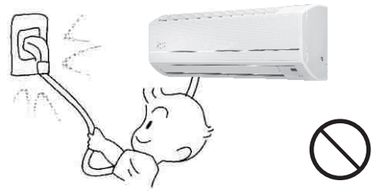
READ THESE SAFETY WARNINGS COMPLETELY PRIOR TO ANY USE

	Ground connection
	Disconnect the plug

	Forbidden
	Imperative

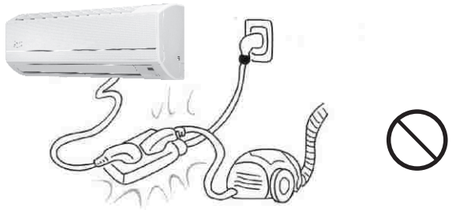
These precautions are essential and must be strictly observed.

DO NOT draw on the power cord or refrigeration lines. Install them in secured positions. PVC line set cover is recommended to protect against rain and sunlight and other potential damage.



DO NOT blow the cold air directly towards people for prolonged period. Otherwise, people may get cold.

DO NOT undersize wires. Do not connect several circuits to one breaker. Don't undersize or oversize circuit breaker, otherwise power failure or fire may be caused.



DO NOT wire or open unit while unit is running. Make sure to shut off all circuits prior to inspecting or servicing the unit. Sparks or fire may occur. It may cause a shock to people.

DO NOT pull on the power cord or refrigeration lines. Install them in a secured position. A line set PVC cover is recommended.

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

DO NOT use wire or circuit breakers that do not meet electrical safety standards. Several circuits shall be connected to one breaker.

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

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

DO NOT install the indoor unit close to cooking surfaces or ventilation systems. Poor placement could decrease efficiency and waste energy.

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

DO NOT continue to operate the unit if there is any abnormal odor, burning, scorching, or smoke. Stop unit operation and disconnect electrical power to the unit immediately, and call your technician.

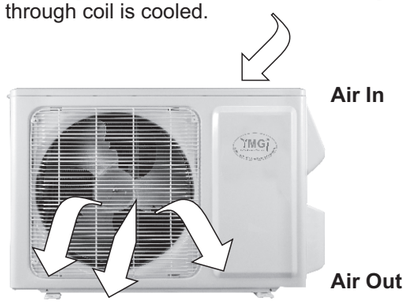
DO NOT use the system for anything other than what it was designed for or any non-HVAC purposes. Do not store or install them near food, paint, or other chemicals.

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

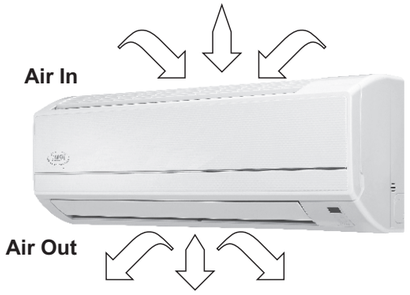
BRIEF INTRODUCTION TO MINI SPLIT WALL MOUNT SYSTEM

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

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



Outdoor unit



Indoor unit

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

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

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

Apartments

Hotels

Homes

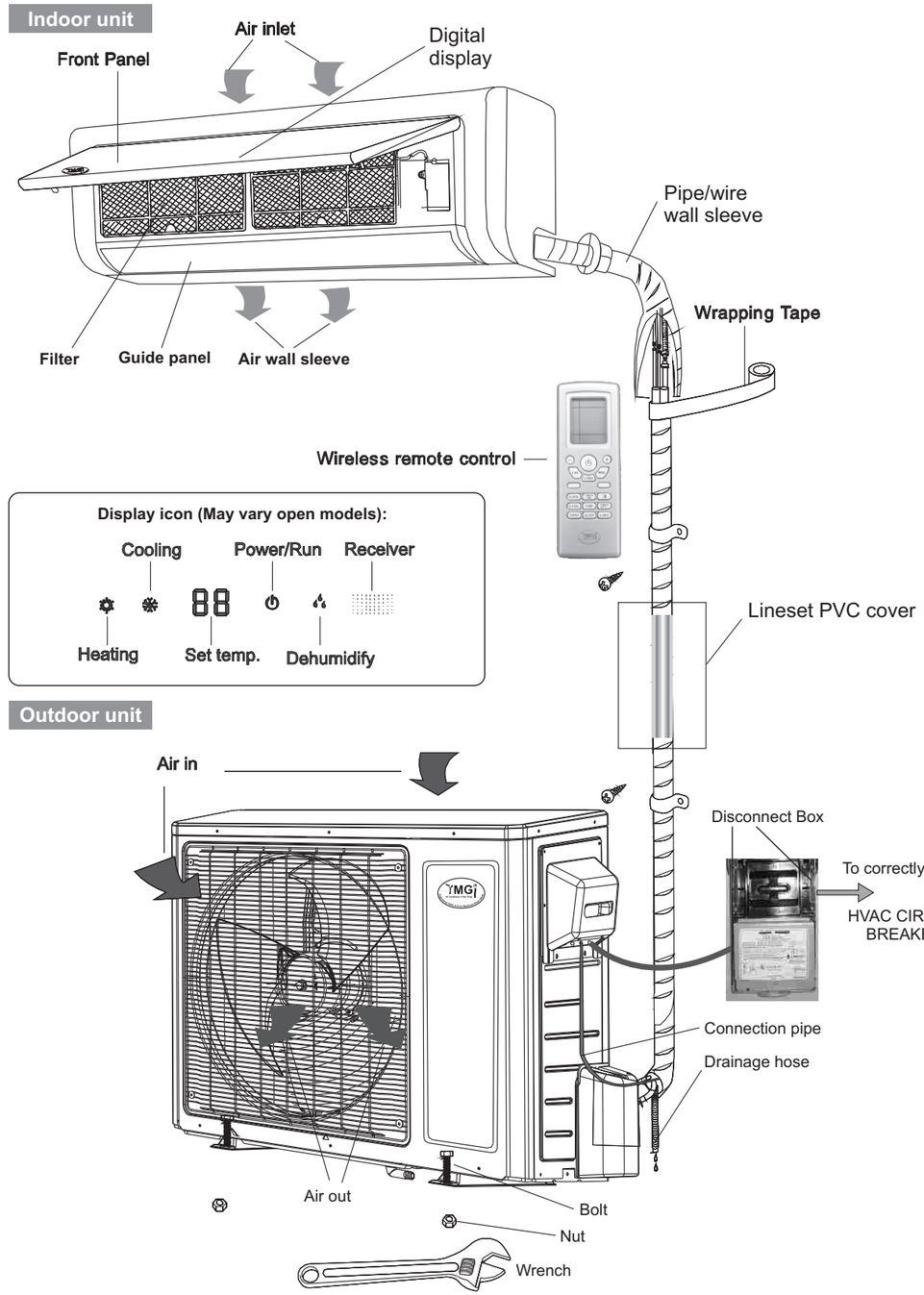
Application Samples of Wall Mount Mini Split Systems

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

These units are designed for applications at:

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

ILLUSTRATION OF INSTALLED SYSTEM SAMPLE



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

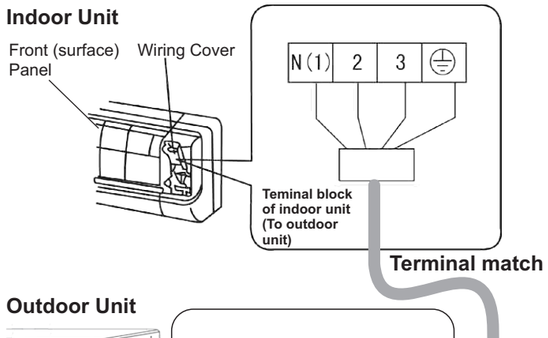
CONNECTION OF WIRES

WIRING AT INDOOR UNIT AND OUTDOOR UNITS

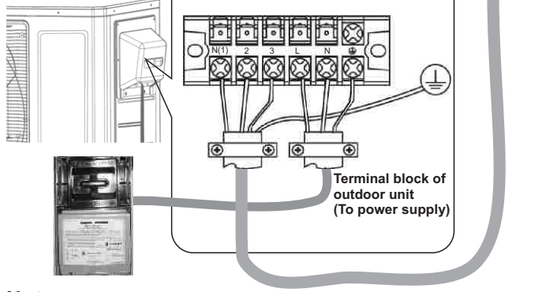
* Open the front cover panel.
* Remove screws from electrical box cover and put screws in secured position.
* Remove screws from fastener and put screws in secured position.
* Prepare wires of right size and grade.
* Recommend to use factory-provided wire/cables.
* Connected to the terminals following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

09K/12K Models (115/1/60)

Indoor Unit

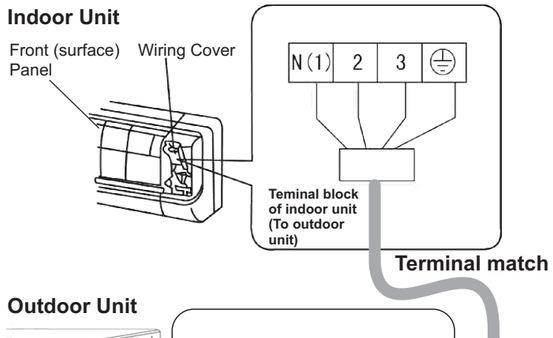


Outdoor Unit

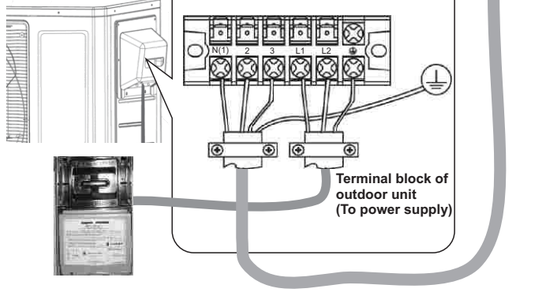


18K/24/30K/36K Models (208~230/1/60)

Indoor Unit



Outdoor Unit



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	L/N/G, 115/1/60, 12AWG	N(1)/2/3/G, 115/1/60, 16AWG	20/30
12K	1/4" & 3/8"	15/75 /35/45	L/N/G, 115/1/60, 12AWG	N(1)/2/3/G, 115/1/60, 16AWG	20/30
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" & 1/2"	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

MINI WALL MOUNT SYSTEMS - SPECIFICATION BRIEFS

Product Specifications

1	**System Model (Indoor Unit and Outdoor Unit)**		--	**WMMS-09K-V2A(57)2**	**WMMS-12K-V2A(57)2**	**WMMS-18K-V2B(57)3**	**WMMS-24K-V2B(57)3**
2	Power Supply		V/Ph/Hz	115/1/60	115/1/60	208-230/1/60	208-230/1/60
3			Connection	Circuit Breaker-Disconnect Switch-Outdoor-Indoor Unit			
4	Standard/ Min. /Max. Cooling Capacities		Btu/h	9000 /3,500 /11,000	11800 /3,300 /12,500	18000 /4,500 /21,000	22000 /6,400 /24,000
5	Standard/ Min. /Max. Heating Capacities		Btu/h	9800 /2,500/11,000	13000 /3,400/ 13,500	19200 /4,000 /23,000	26600 /4,100 /26,600
6	Standard/ Min. /Max. Cooling Power Input		W	750 /220/1, 100	1260 /260 /1,340	1620 /200 /2,400	2,200 /300/ 2,550
7	Standard/ Min. /Max. Heating Power Input		W	830 /230 /1,230	1,320 /250 /1,360	2,600 /300 /2,600	2,800 /320 /2,800
8	Cooling /Heating Current		Amp.	9 /9.5	15 /15.5	7.85 / 7.10 11.77 / 10.65	11.50 / 10.50 13.00 / 12.80
9	Rated Power Input		W	1230	1360	2600	2800
10	Min. Current（MCA）		Amp.	12.2	19.2	14.3	16.6
11	Max. Over Current Protection		Amp.	20	25/ 30	20	25/ 30
12	EER /COP /SEER /HSPF		Btu/h. W	12/12/16/8.6	9.4/9.8/16/8.6	11.1/8.0/16.0/8.0	10.0/10.0/16.0/9.5
13	Air Flow Volume-Indoor Unit		CFM	330 / 277 / 224 / 188	341 / 288 / 235 / 200	471 / 400 / 330 / 271	589 / 441 / 306 / 206
14	Dehumidifying Capacity		Pints /Day	1.69	2.96	3.8	4.5
15		**Indoor Unit Model**	--	**WMMS-09E-V2A(57)2**	**WMMS-12E-V2A(57)2**	**WMMS-18E-V2B(57)3**	**WMMS-24E-V2B(57)3**
16		Fan Type	--	Cross-flow	Cross-flow	Cross-flow	Cross-flow
17		Fan Wheel Diameter x Length (D×L)	Inch	φ3 3/5 × 23 2/5	φ 3 3/5 × 23 2/5	φ 3 6/7 × 25 3/5	φ 3 6/7 x 30 1/8
18		Cooling Speed SH/H/M/L	RPM	1300 /1100 /900 /700 /-	1350 /1150 /950 /750 /-	1400 /1150 /1000 /850	1350 /1150 /1000 /850
19		Heating Speed SH/H/M/L	RPM	1300 /1140 /980 /820 /-	1350 /1190 /1020 /850 /-	1450 /1250 /1100 /950	1350 /1150 /1000 /900
20		Fan Motor Power Output	W	10	10	20	35
21		Fan Motor RLA	Amp.	0.38	0.38	0.32	0.31
22		Fan Motor Capacitor	μF	4	4	1.5	2.5
23		Ele. Heater	W	NA	NA	NA	NA
24		Evaporator Type	--	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
25	**Indoor Unit**	Evaporator Pipe Diameter	Inch	φ 3/10	φ 3/10	φ 3/10	φ 3/10
26		Evaporator Row-fin Gap	Inch	2-3/50	2-3/50	2-7/127	2-7/127
27		Evaporator Coil W × H x D	Inch	24×11 3/5×1	24×11 3/5×1	25 13/15×12×1	512/17x27X1
28		Swing Motor Model	--	MP24BA	MP24BA	MP28VB	MP35XX
29		Swing Motor Power Output	W	2	2	2	2
30		Fuse Location-Size	Amp.	PCB 3.15 Transformer 0.2	PCB 3.15 Transformer 0.2	PCB 3.15 Transformer 0.2	PCB 3.15 Transformer 0.2
31		Set Temperature Range	°F	60.8～86	60.8～86	60.8～86	60.8～86
32		Sound Pressure Level	dB (A)	41 /37 /35 /32	43 /39 /35 /32	48 /43 /38 /34	49 /43 /39 /34
33		Sound Power Level	dB (A)	51 /47 /45 /42	53 /49 /45 /42	58 /53 /48 /43	59 /53 /49 /44
34		Dimension of Unit (W × H × D)	Inch	30.3 × 11.1 × 7.9	30.3 × 11.1 × 7.9	34.1 × 12.0 × 8.5	39.7 x 12.4 × 8.7
35		Dimension of Carton Box (W × H × D)	Inch	33.2 ×13.5 ×10.3	33.2 ×13.5 ×10.3	37.2 × 15.0 × 11.6	42.2 × 15.6 × 12.3
36		Net /Gross Weight	LBs	18.7 /25.4	18.7 /25.4	27.0 /35.3	33.1 /44.1
37		**Outdoor Unit Model**	--	**WMMS-09C-V2A(57)2**	**WMMS-12C-V2A(57)2**	**WMMS-18C-V2B(57)3**	**WMMS-24C-V2B(57)3**
38		Compressor Trademark		LD	LD	MITSUBISHI	SANYO
39		Compressor Model	--	QXA-A091ZE190	QXA-A091ZE190	SNB130FGYMC	C-6RZ146H1A
40		Compressor Oil	--	FVC68D	FVC68D	FV50S	FV50S
41		Compressor Type	--	Rotary	Rotary	Rotary	Rotary
42		Compressor LRA	Amp.	18.60	18.60	27.00	41
43		Compressor RLA	Amp.	6	6	10.86	8.38
44		HVAC Type Circuit Breaker	Amp.	20	20	30	30
45		Compressor Power Input	W	980	980	2500	1630
46		Compressor Overload Protector	--	1NT11L-6233	1NT11L-6233	1NT11L-6578	1NT11L-3979
47		Fan Type	--	Axial-flow	Axial-flow	Axial-flow	Axial-flow
48		Fan Blade Diameter	Inch	φ15 3/4	φ15 3/4	φ 20 1/2	φ 20 1/2
49		Fan Motor Speed	RPM	900 / 850	900 / 850	690	690
50		Fan Motor Power Output	W	30	30	60	60
51		Fan Motor RLA	Amp.	0.18	0.18	0.62	0.59
52		Fan Motor Capacitor	μF	NA (DC)	NA (DC)	3.5	3.5
53		Condenser Form	--	Aluminum Fin-Copper Tube	Aluminum Fin-Copper Tube	Aluminum Fin-Copper Tube	Aluminum Fin-Copper Tube
54	**Outdoor Unit**	Condenser Pipe Diameter	Inch	φ 2/7	φ 2/7	φ 2/7	φ 2/7
55		Condenser Rows-Fin Gap	Inch	2-3/50	2-3/50	2-7/127	2-7/127
56		Condenser Coil L×D×W	Inch	29 5/7 × 1 × 19 1/2	29 5/7 × 1 × 19 1/2	32 20/21 × 1 1/2 × 26	32 20/21 × 1 1/2 × 26
57		Max. Pressure for the Discharge Side	PSIG	623.5	623.5	623.5	623.5
58		Max. Pressure for the Suction Side	PSIG	362.5	362.5	362.5	362.5
59		Cooling Operation Outdoor Ambient Temperature Ranges	°F	64.4～113	64.4～113	55～118	55～114.8
60		Heating Operation Outdoor Ambient Temperature Ranges	°F	5～75	5～75	5～75	5～75.2
61		Throttling Method	--	Electron Expansion Valve	Electron Expansion Valve	Capillary	Electron Expansion Valve
62		Defrosting Method	--	Automatic Defrosting	Automatic Defrosting	Automatic Defrosting	Automatic Defrosting
63		Climate Type /Zone	--	T1 /Sub-Tropical Zone	T1 /Sub-Tropical Zone	T1 /Sub-Tropical Zone	T1 /Sub-Tropical Zone
64		Isolation /Moisture Protection	--	I /IP24	I /IP24	I /IP24	I /IP24
65		Sound Pressure / Power Level	dB (A)	53 /63	55 /65	56 /66	53 /63
66		Dimensions of Unit (W × H × D)	Inch	33.4 × 12.6 x 21.3	33.4 × 12.6 x 21.3	37.6 × 15.6 × 27.6	37.6 × 15.6 × 27.6
67		Dimensions of Carton Box (W × H × D)	Inch	34.6 × 14.2 × 22.9	34.6 × 14.2 × 22.9	40.4 × 17.9 × 28.9	40.4 × 17.9 × 28.9
68		Net /Gross Weight	LBs	68.4 /77.2	68.4 /77.2	106 /117	115 /126
69		Refrigerant Name	--	R410A	R410A	R410A	R410A
70		Refrigerant Factory Charge	OZs	35.30	35.3	45.86	54.7
71		Length without Adjusting Refrigerant	Ft.	25	25	25	25
72		Additional Refrigerant Charge	OZs/Ft	0.2	0.2	0.2	0.215
73		Outer Diameter of Liquid Pipe	Inch	1/4"	1/4"	1/4"	1/4"
74	**Connection Pipes**	Outer Diameter of Gas Pipe	Inch	3/8"	3/8"	1/2"	1/2"
75		Max. Allowed ID-OD Elevation Difference	Ft.	32.8	32.8	33	32.8
76		Max. Allowed ID-OD Distance/Length	Ft.	65.6	65.6	82	82
77	**Loading Qty.**	Loading Quantity (20' / 40'GP / 40'HQ)	Systems	101 / 218 / 252	101 / 218 / 252	62 / 131 / 149	59 / 123 / 142

1. Performance rated for matched system at standard conditions-cooling ID 80/67F, OD 95F; heating ID 70/60F, OD 47/43F. 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 temperatine ranges.

IMPORTANT NOTES FOR UNIT OPERATION ABMIENT & 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.

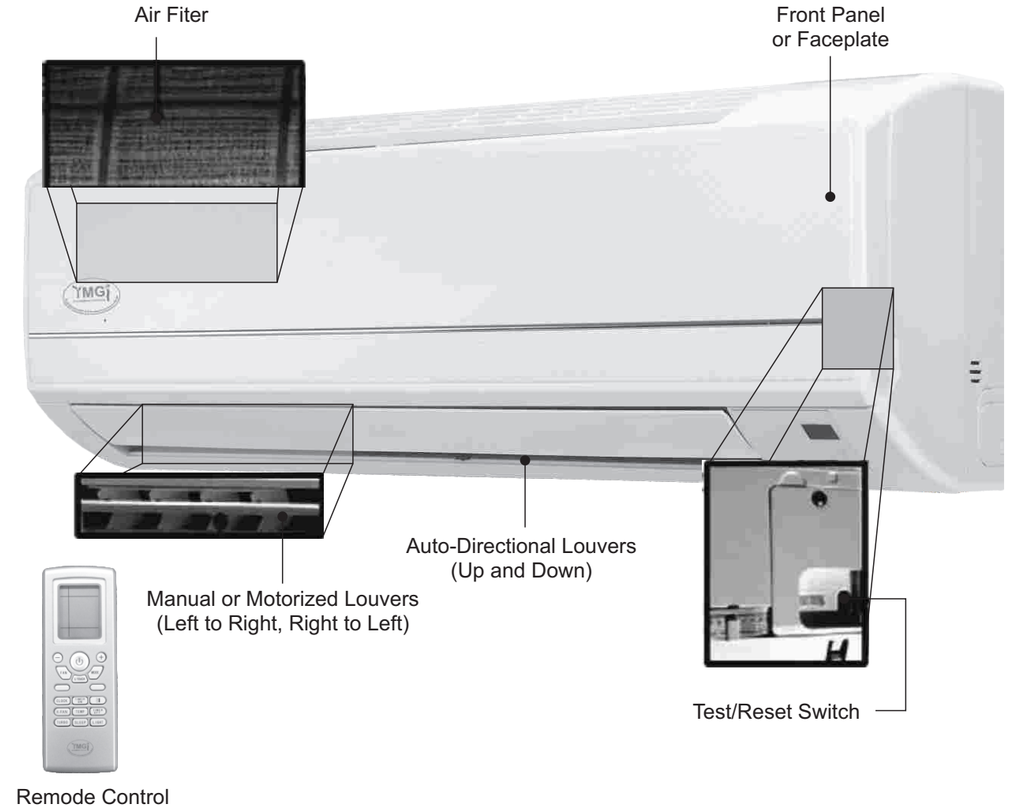
Mini Split Wall Mount Systems come with three types: cooling only and heat pump and heat pump with electric heater. These units can be easily wired. Either indoor unit or outdoor unit can be used with any matched comparable outdoor unit or indoor unit as long as they have matched size and control. Must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

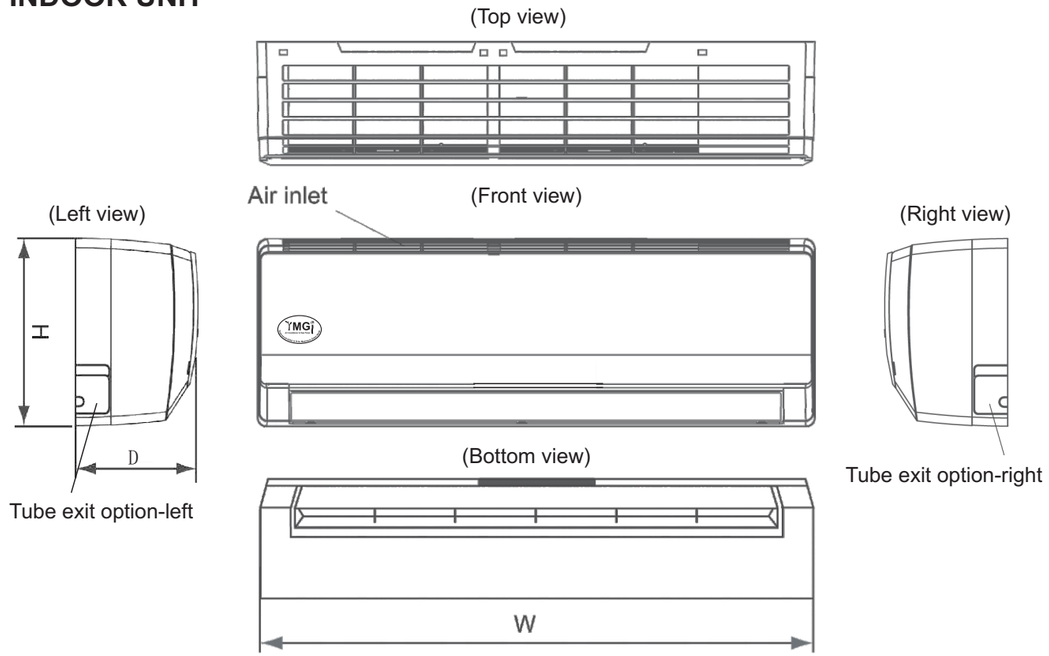
Find the cooling/heating load capacity of the space where the unit will be in service. Select matched WMMS units for the space. Under sizing or over sizing equipment is NOT recommended.

UNIT ENGINEERING SUBMITTALS-MECHANIAL

INDOOR UNIT-MAJOR COMPONENTS



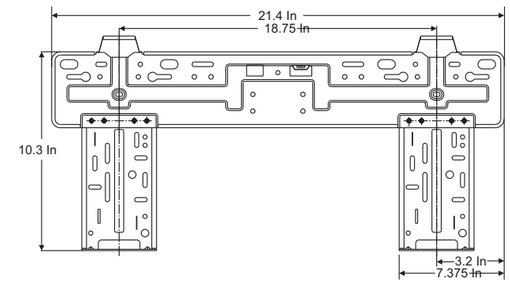
INDOOR UNIT



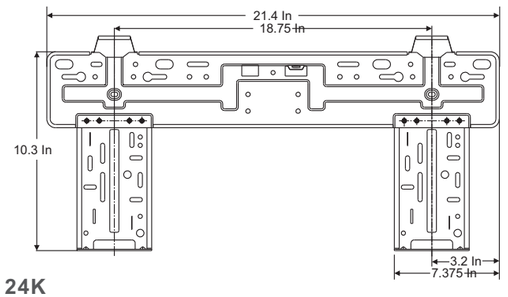
Unit Model	Dimensions (In)			Weight (Lbs)	
	W	H	D	Net	Operation
09K	30.3	11.1	7.9	18.7	25.4
12K	30.3	11.1	7.9	18.7	25.4
18K	34.1	12.0	8.25	27.0	35.3

Unit Model	Dimensions (In)			Weight (Lbs)	
	W	H	D	Net	Operation
24K	39.7	12.4	8.7	33.1	44.1

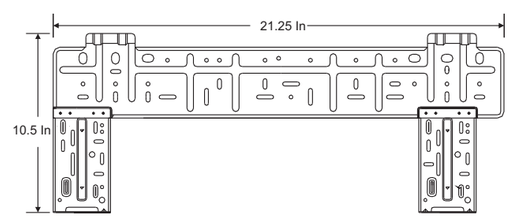
09K



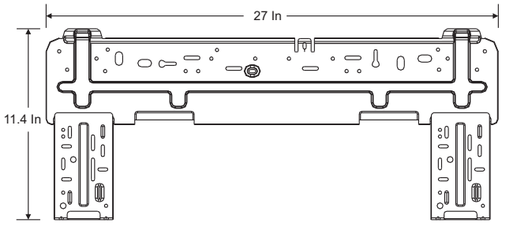
12K



18K

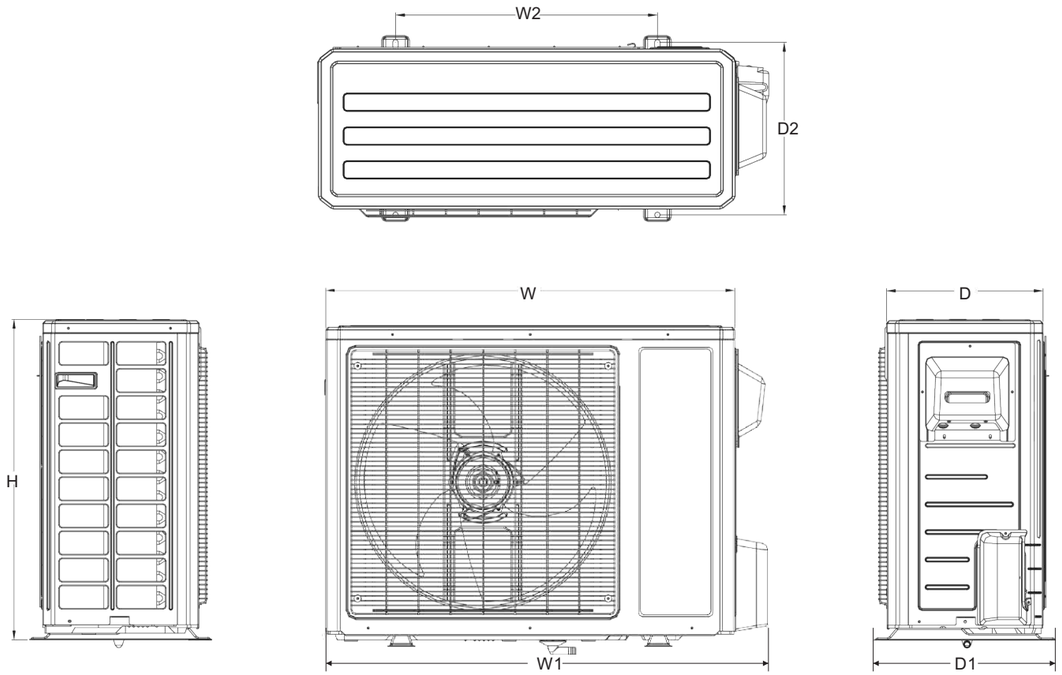


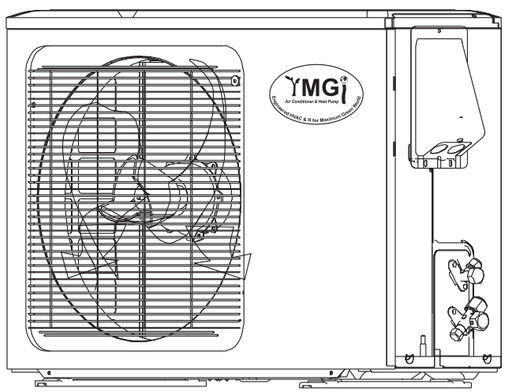
24K



UNIT ENGINEERING SUBMITTALS - MECHANICAL

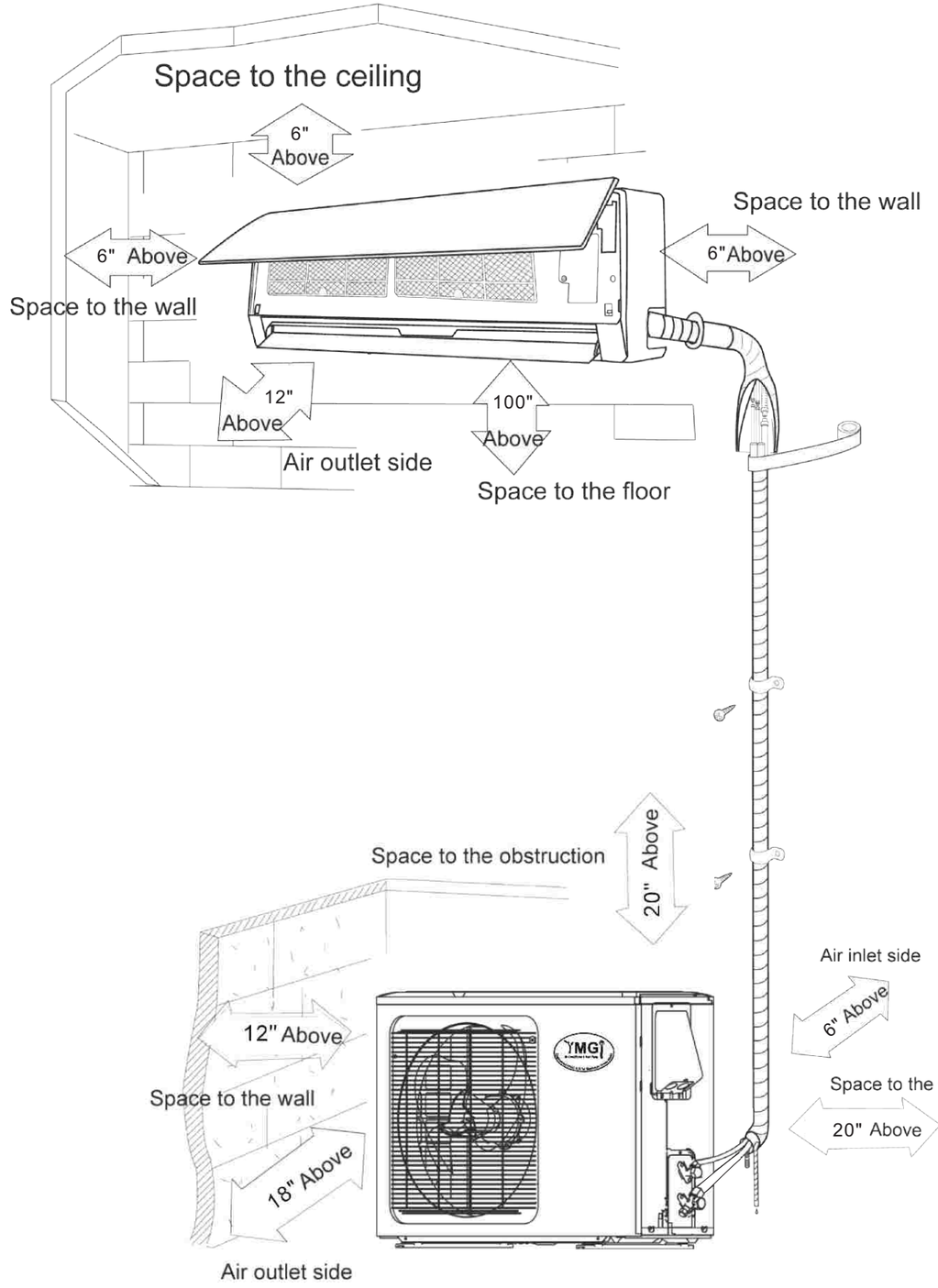
OUTDOOR UNIT





Unit	Dimensions (In)							Weight (Lbs)	
Model	W	W1	W2	H	D	D1	D2	Net	Operation
09K	30	33.4	21.3	21.9	10.1	12.6	11.3	68.4	77.2
12K	30	33.4	21.3	21.9	10.1	12.6	11.3	68.4	77.2
18K	35.0	37.9	22.0	27.6	13.4	15.6	14.3	106	117
24K	35.0	37.9	22.0	37.6	13.4	15.6	14.3	115	126

INSTALLATION CLEARANCE REQUIREMENTS GENERAL

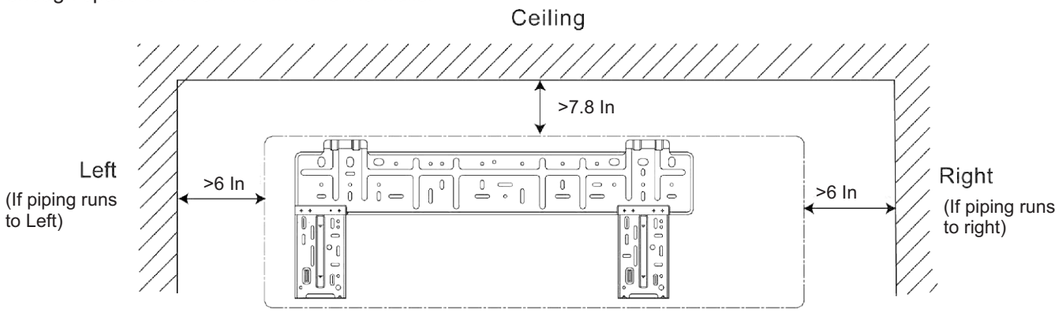


BRIEF UNIT INFO

INSTALLATION CLEARANCE REQUIREMENTS-INDOOR UNIT

MAKE SURE OF ENOUGH SPACE FOR INSTALLATION AND MAINTENANCE

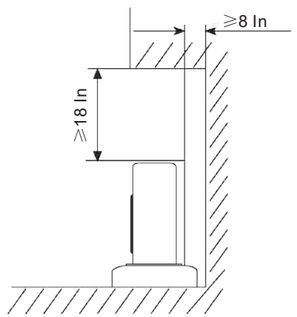
To take into consideration the operational convenience and safety in installation, it is recommended to ensure enough space between the unit and the walls.



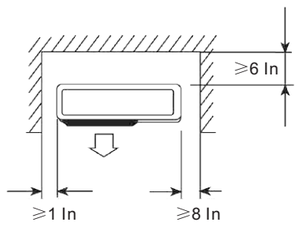
Attention: If there are some additional function devices to install on the unit, be sure add to the installation space for the function devices.

INSTALLATION CLEARANCE REQUIREMENTS-OUTDOOR UNIT

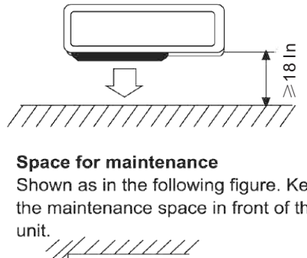
1. When there are obstacles above the unit



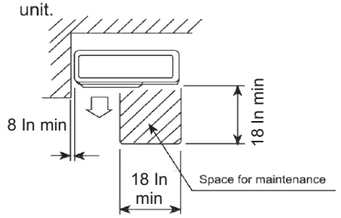
2. When the front (air outlet) is open



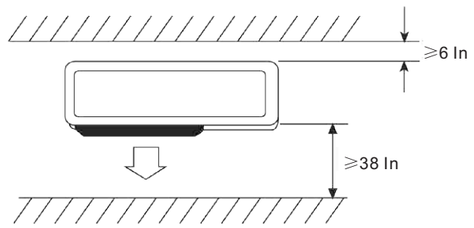
3. When there are obstacles only in the front (air outlet)



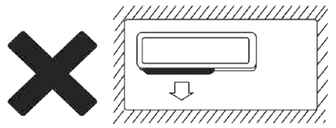
Space for maintenance
Shown as in the following figure. Keep the maintenance space in front of the unit.



4. When there are obstacles at the front and rear sides.



5. When there are obstacles all around the unit on four sides.
Although the top side is open, the installation is not to be done if there are obstacles all around.



● At least two sides should be kept open.

RECOMMENDED TOOLS FOR INSTALLATION

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 (Phillps 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 Wrentch 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)

INSTALLATION LOCATIONS & CAUTIONS

⚠ CAUTION **All Units Shall Be Installed by Licensed Contractor or Technician.**

⚠ CAUTION **Read Manuals before Installation.**

* The location and structure shall also be convenient for both installation and service.
* The location shall NOT be where discharge air and noise could bother your neighbor.
* The location shall NOT be somewhere drain may cause any damage to property or bother the neighbor.
* The location shall NOT be somewhere soldering or torching work may cause fire or smoke to the materials around.
* The location shall NOT be somewhere near flammable gases.
* The location shall NOT be in or close to corrosive gases.
* The location shall NOT be somewhere children can access.

⚠ CAUTION & SUGGESTIONS TO FOLLOW PRIOR TO INSTALLATION

Check the unit for damage and missed parts or accessories. If damage is found or parts are found missing, call the distributor right away.

Spin fan wheels and blades to check and make sure they can rotate freely. If fan wheel scratches with housing, call the distributor right away and do not to proceed with the installation before it is fixed.

Check the unit to make sure no foreign materials have been left in the unit.

Check all the parts and accessories that are needed other than those provided with the unit.
It is strongly recommended to only use YMGI supplied or recommended parts and accessories.

Be sure a properly sized circuit breaker is for the electric power to the units.

Pre-build the support platform on the ground or bracket for the wall before or during construction and before installation. Refer to the table below for footprint dimensions.

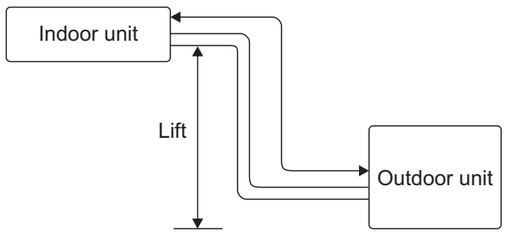
Read installation instructions of all units thoroughly.

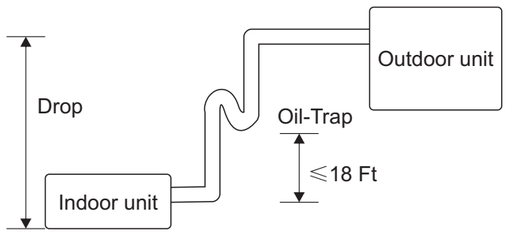
Ask rep./distributor/us anything you are not sure about.

Get your tools and parts ready for installation.

INSTALLATION POSITIONS FOR OUTDOOR UNIT

* To be installed at the position where the air delivered from the unit can reach every comer of the room.
* To avoid being affected by the outdoor air.
* To avoid blockage to the air inlet or outlet of the unit.
* To avoid too much oil, smoke or steam.
* To avoid possible generation, inflow, lingering or leakage of flammable gases.
* To avoid high-frequency facilities (such as high frequency arc welders, etc.).
* To avoid the places where acid solutions are frequently used.
* To avoid the places where some special sprayers (sulfides) are frequently used.
* Not to install on top of the musical instruments, TV, computer etc. valuable appliance.
* Not to install a fire alarming device near the air outlet of the unit (during operation, the fire alarm device might be erroneously triggered by the warm air from the unit).
* Either the indoor unit or the outdoor unit can be higher, but the height difference must comply the stated requirements.
* Try to reduce the bending of the piping line as much as possible so as to avoid possible negative impacts upon the performances of the units.
* Make P-trap if elevation drop difference is more than 25", as illustrated below.





INSTALLATION-INDOOR UNIT

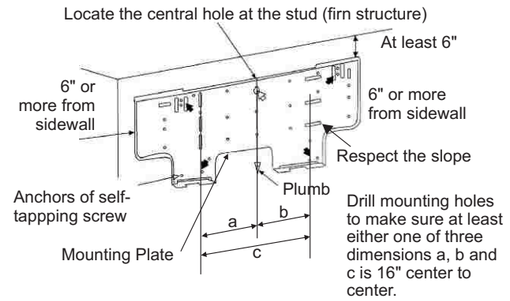
INSTALL WALL MOUNT PLATE

* Check unit to make sure the unit is in good shape and ready to install.
* Check unit to make sure the installation location is firm enough to hold the weight of the whole unit and is convenient to install, maintain, and service.
* Install Indoor unit. Enough anchor bolts/nuts shall be used to secure mounting plates for indoor units. Brackets should be at level position.

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 above, to secure the mounting plate firmly and to hold the weight of indoor unit. If more screws/anchors are to be used, make sure to keep the two holes close to each other, at least 2 inches apart.

Mounting plate should be attached to the structural part of the wall. Minimum clearance, as shown below, is required in order to ensure proper airflow and enough service room.

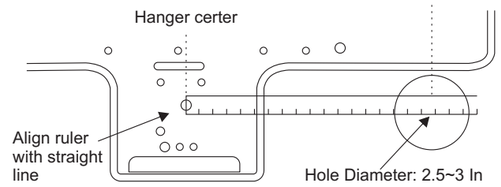


STEPS TO MOUNT PLATE:

- Mark drill positions. At least 4 anchor holes, one at each perimeter corner of the plate 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 proper positions.
- Pre-drill guiding holes where are marked for anchors or screws on the wall
- Confirm the position of the holes and finish drill to the depth needed for anchors (NOT for screws)
- Align mounting plate holes with those holes drilled on the wall and put anchors or screws into the holes to secure mounting plate.

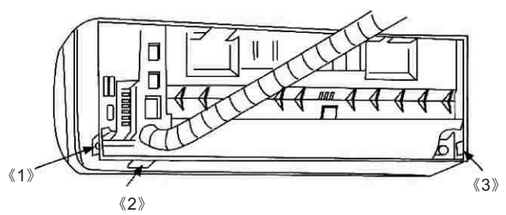
DRILL 3IN HOLE FOR PIPING/WIRING/DRAIN

- Locate the center where the hole will need to drilled.
- Drill the holes of 2.5-3Inch diameter. A down pitch about 1/4" per foot, as illustrated below, is needed for the hole, in order 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.



PREPARE INDOOR UNIT- COPPER LINE SET/DRAIN HOSE

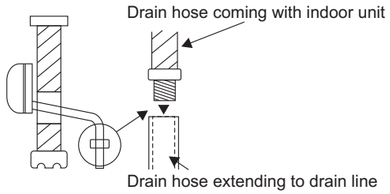
* If pipes need to be rerouted to a different direction from the one preset at factory (towards left side, if facing the front cover of indoor unit), lay down the indoor unit on soft cushion or foam. Don't rub the plastic casing.
* In order to keep from pipe damage, need to bend the copper tubing set gently and slowly (finish bending no less than 10 seconds/90 degree), by holding at the root of the original 90 degree bend nicely and firmly. Don't rub two copper lines during bending. Better to cut off the insulation and bend the two pipes one by one, not two together.
* If pipes need to come out of the rear side (facing the front of indoor unit) of the indoor unit, no need to snap off anything.

Slice the insulation before bending.

Hold the 90 degree bend root, bend one tube one time, slowly, no quicker than 10 seconds/ 90 degree bend.

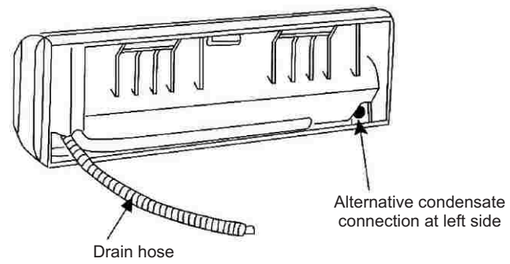
INSTALL DRAIN PIPE AT INDOOR

- The drain hose must be placed beneath the copper pipes and MUST NOT be hunched or bended sharply.
- Do not pull the drain hose too hard, otherwise it may get broken.
- Before passing drain hose through the hold, wrap with insulation to keep from possible damage.
- The copper pipe and the drain hose must be wrapped by piping wrap.
- Insulation pad should be used where the pipe contacts the wall.



REFIT DRAIN HOSE FROM THE RIGHT TO THE LEFT SIDE

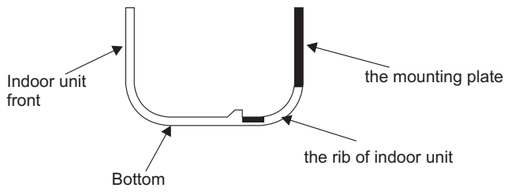
- If drain hose needs to be refitted from the original position (right side) to left side of the indoor unit, careful handling is very necessary.
- Refitting method: remove the drain hose from original position, without breaking hose. Unplug the plug at the left side. Apply water-resistant glue to fit 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: May use some sort of clamp to double secure connections.

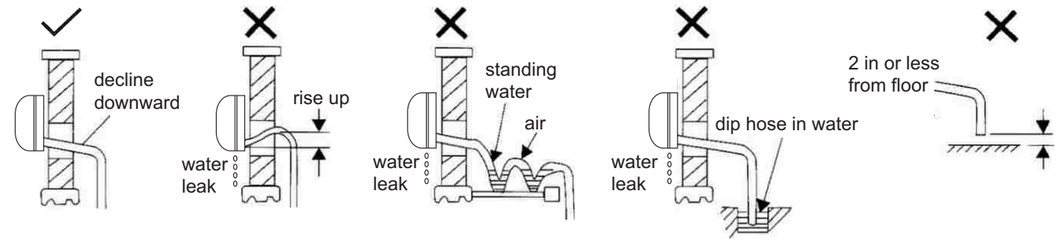
HANG INDOOR UNIT

- 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 .



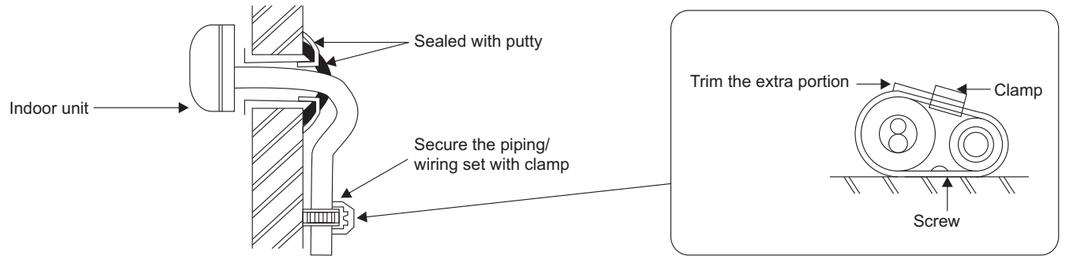
SHAPE THE DRAIN HOSE

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



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

* Use putty to seal the wall hole.
* Use clamp (pipe fastener) to secure the pipe at specified position.

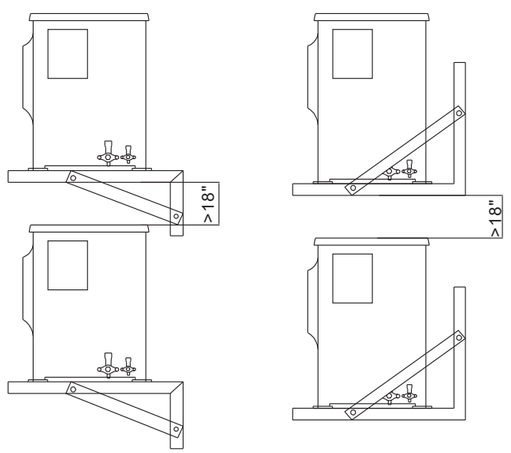


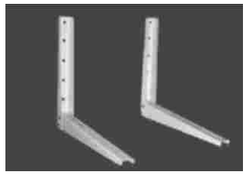
INSTALLATION-OUTDOOR UNIT

Strongly suggest to install the outdoor unit above the ground either on platform or brackets as shown below.

Heat pump unit must be lift up from ground level, since condensate must be drained out of the drain pan in condensing unit; othewise, condensate may ice up causing damage to the condensing unit.

Suggest to use YMGI-provided brackets and condensate drainage fitting accessories.

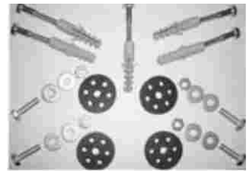




Other Brackets

Heavy-Duty PVC Riser for Ground Mounting

Coated Brackets with Accessories



Bracket Accessories (Optional)

INSTALLATION-OUTDOOR UNIT

(Actual unit/parts looking/installation may vary from the illustrated)

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

- Select a secured location where the outdoor unit will 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 shall 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.

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 and to perform 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-Metalic 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	L/N/G, 115/1/60, 12AWG	N(1)/2/3/G, 115/1/60, 16AWG	20/30
12K	1/4" & 3/8"	15/75 /35/45	L/N/G, 115/1/60, 12AWG	N(1)/2/3/G, 115/1/60, 16AWG	20/30
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 INDOOR AND OUTDOOR UNITS

Firstly, connect copper tubes at indoor unit. Bend pipes by tools but not by hands. Extra length is needed for future service.

REFRIGERANT PIPES:

For 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

K Btu/h	Valve Size Liq, Gas	Line Sizes at Different Length 15-30ft	31-60ft
09	1/4", 3/8"	1/4", 3/8"	1/4", 3/8"
12	1/4", 3/8"	1/4", 3/8"	1/4", 3/8"
18	1/4", 1/2"	1/4", 1/2"	1/4", 1/2"

CUT REFRIGERANT PIPE:

Make sure the pipe section where is to be cut is straight and smooth. Apply cutting blade straightly perpendicular to the pipe surface. Don't cut too fast or too hard. Turn and tighten the tube cutter slowly. Remove residual left and de-bur at the cutting edge. The cutting edge should be clear and clean and smooth.

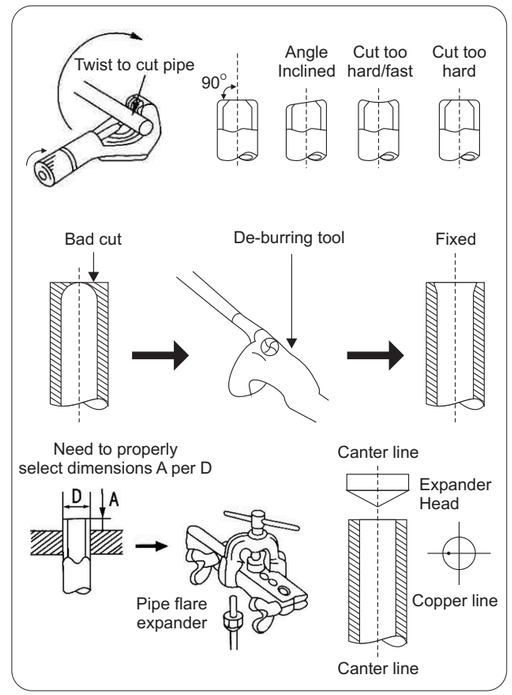
CONNECT REFRIGERANT PIPES

Refrigerant Pipe Length and Height

1,000 Btu/h	Length (Ft.)	Height (Ft.)
09	23	3.82
12	24.3	3.6
18	31.4	3.8

Running Interconnection Refrigerant Lines:

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

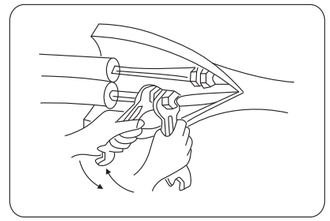


Connect Copper Pipes-Flare/nut Connection at Both Indoor and Outdoor Units

Proper torque shall be applied to make good connection at female nut, flare and male nut, as recommended in the following table. Too much torque may damage and break flare/nut seal. Too less torque may not ensure good seal. ALWAYS use a pair of wrenches.

Refrigerant Pipe Flare/Nut Connection Tightening Torque

Flare Nut	Tightening Torque
1/4-3/8"	25 Ft. LBs (350 Kgf.cm)
1/4-1/2"	40 Ft. LBs (560 Kgf.cm)
1/2-3/4"	60 Ft. LBs (840 Kgf.cm)
7/8-1 1/8"	110Ft. LBs (1540 Kgf.cm)

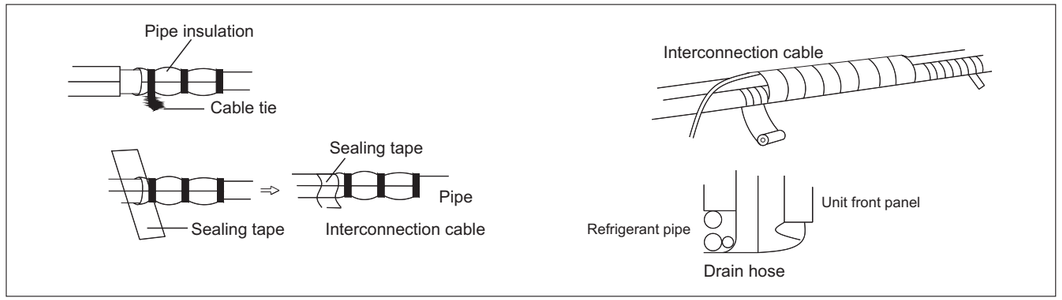


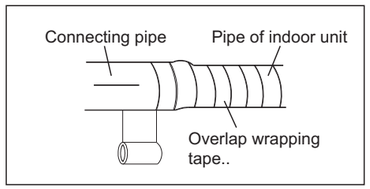
Connect Copper Pipes-Sweat Connection

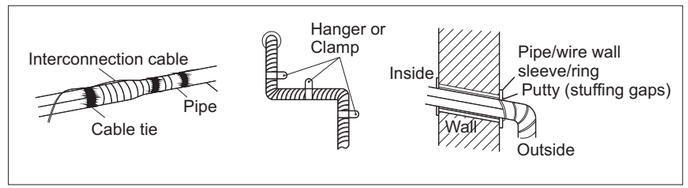
In this case, put wet rag to protect valves or other components from being overheated. When using flux, rub the tube surface using steel wool to shine and clean and dry in order to keep contamination from entering the system.

CONNECT REFRIGERANT PIPES BETWEEN INDOOR AND OUTDOOR UNITS

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

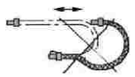






* Run cables along with the refrigerating copper line sets and secure them with tapes at 6 feet apart.
* Wrap tape closely (cover a third of the width of the wrapping tape applied early) to ensure good sealing.
* Tape and seal the end of wrapping tape.
* Shape the pipe combination gently, without causing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

PIPING GUIDE

Set the packed pipes vertically and then unwind slowly.			Don't unwind only one end of the coiled pipes.
Use pulley to keep the safe bending radius..			Don't make sharp or small radius bending.
May also use rolling wheel to reduce internal pipe tension and avoid possible deformation.			Don't bend too long of a pipe without tools.
Use elbow tool to keep bending radius.			Don't make less than 90 degree bend.
Keep minimum bending radius..			Do not make to sharp of a bend.

INSTALLATION OF ACCESSORIES

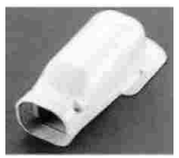
CONNECT REFRIGERANT PIPES

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 Not to damage line sets.

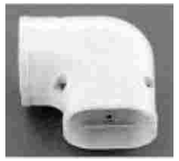

INLTS

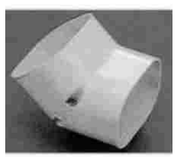

STRT


COUP


COUP-H

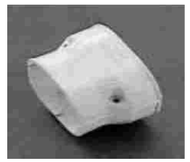

OFST


ELBF90°


ELBF45°


SOFT


TEE ENDF

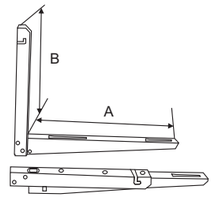

RDER

OUTDOOR UNIT FOOT RISER OR BRACKETS

BRKT-XXXX-SC1

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

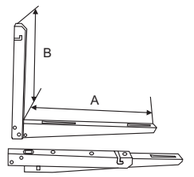
Model	Size(Inch)		Capacity	
	A	B	LBs	Btu/h
BRKT-0918-SC1	17.7	15.4	320	09K-18K
BRKT-1860-SC1	21.7	18.3	360	18K-60K



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

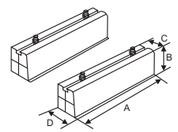


RIST-XXXX-PVC

Foot Riser
Accessories: End Caps (Optional)

* Shock-proof PVC, Weatherproof & UV resistant.
* Supplied with fastening screws and anchor bolts.
* Easy to install.
* The "honeycomb" structure acts as an anti-vibration & humming absorption for a quite 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

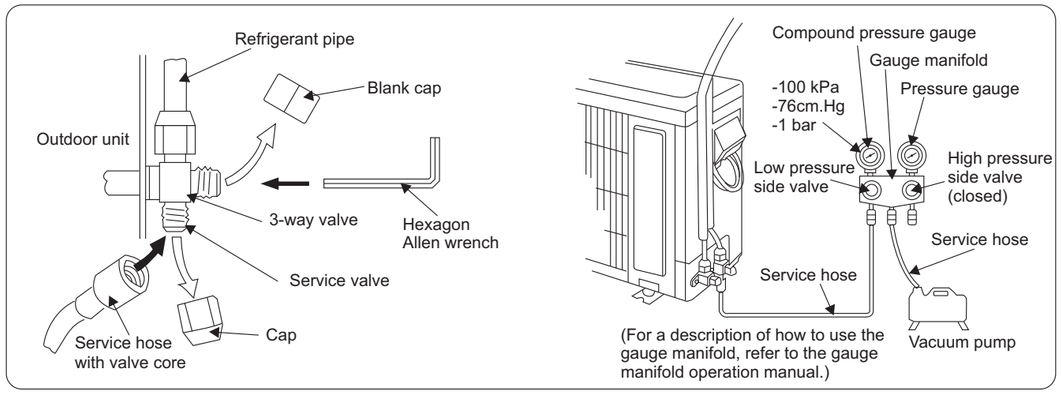


VACUUM AND LEAKAGE CHECK

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

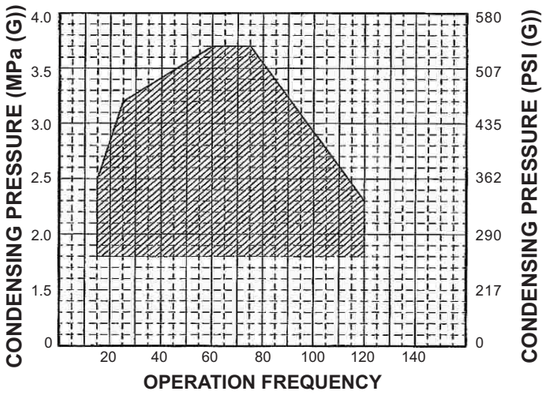


(For a description of how to use the gauge manifold, refer to the gauge manifold operation manual.)

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 trouble-shooting. 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	37.8	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

CHECK AFTER INSTALLATION

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

1) 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.

2) 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. (Fig.a)
2) Mount the healthy filter onto the air filter, (Fig.b). If the air filter cannot be installed, please mount the healthy filter on the front case. (Fig.c)
3) Mount the air filter properly along the arrow direction in Fig.d, and then close the panel cover.

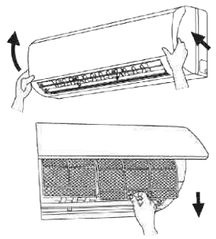


Fig.a

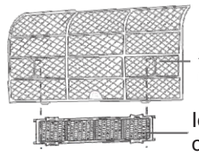


Fig.b

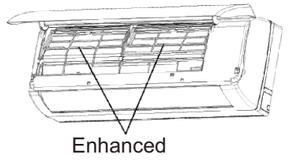


Fig.c

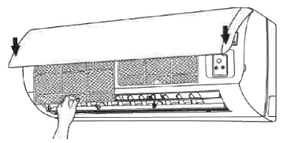


Fig.d

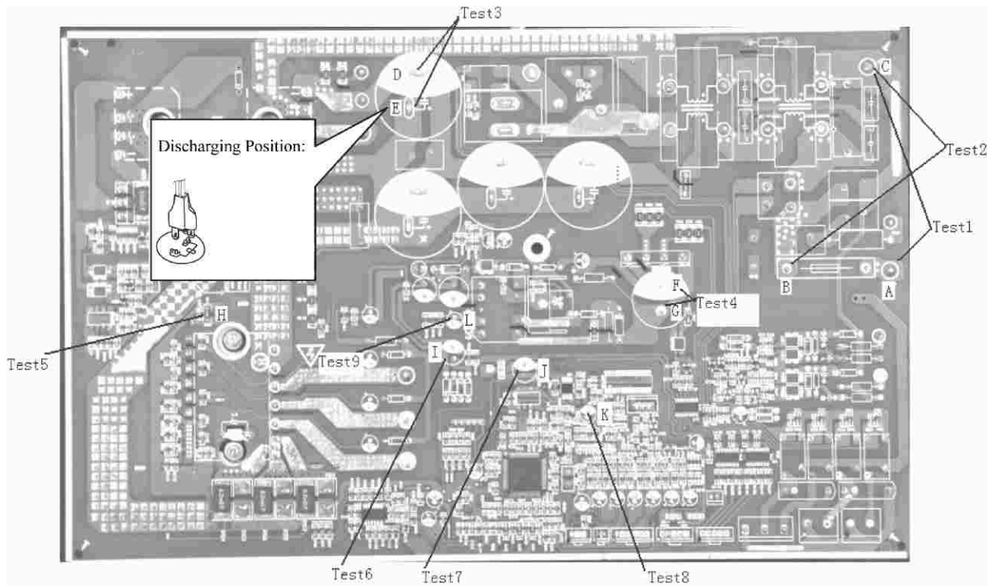
CLEANING AND MAINTENANCE (Regular Filter and/or Other Enhanced Filters)

Take out the (enhanced) filter before cleaning according to the installation instruction. Pay special attention tthat 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).

TROUBLE SHOOTING



TROUBLE SHOOTING

CONFIRMATION

1) Power Connection

Check and confirm that the power breaker of proper size is installed and can operates (ON/OFF) normally.

2) Power Voltage

Check and confirm that power voltage is AC 208-230V±10%. If power voltage is not falling in this range, the unit may not operate properly and damage may be caused.

FLASHING LED OF INDOOR/OUTDOOR UNIT AND PRIMARY JUDGEMENT

No.	Protection malfunction status	Indoor unit display				Outdoor unit display (LEDs have 3 status)				Unit actions	Possible clauses (Primary judgement)
		Double 8 display	Indicator display (LED blinks 0.5s-ON/0.5s-OFF)								
			Running LED	Cooling LED	Heating LED	D40	D41	D42	D43		
1	System high pressure protection	E1	3s off blink once			□	☆	☆	☆	Cooling, dehumidifying, except the indoor fan motor is running, others will stop running.	High pressure of system, might be: 1) Refrigerant is too much; 2) Poor heating exchanging for units (including heat exchanger is dirty and unit heating radiating ambient is poor); 3) Ambient temp. is too high.
2	Anti-freezing protection	E2	3s off blink twice			■	□	■	□	Cooling, dehumidifying: compressor, outdoor fan motor will stop running, indoor fan motor will keep running.	1) Poor indoor unit air returning; 2) indoor fan motor rotating speed abnormal; 3) Evaporator ailter is dirty.
3	Compressor air exhaust high temp. protection	E4	3s off blink four times			■	□	■	☆	Cooling, dehumidifying: compressor, outdoor fan motor will stop running, indoor fan motor works. Heating: all stop running.	Pls refer to trouble shooting (air exhaust protection, overload)
4	AC overload protection	E5	Off 3s blink 5 times			□	■	☆	□	Cooling, dehumidifying: compressor, outdoor fan motor will stop, indoor fan will work. Heating: all will stop.	1) Power supply is not stable, fluctuation is too much; 2) Power supply is too low, overload is too much.
5	Indoor and outdoor units communication malfunction	E6	Off 3s blink 6 times			□	□	□	☆	Cooling: compressor will stop, indoor fan motor works. Heating: all will stop.	Please refer to trouble shooting.
6	Anti-high tcmp. protection	E8	Off 3s blink 8 times			■	□	■	■	Cooling: compressor will stop, indoor fan motor works. Heating: all will stop.	Please refer to trouble shooting.
7	Indoor unit motor no feedback	H6	Off 3s blink 11 times							Whole unit will stop to run.	1) Poor insert for GPF; 2) Indoor control board API malfunction; 3) Indoor motor M1 malfunction.
8	Jump wire cap mal function protection	C5	Off 3s blink 15 times							Whole unit will stop to run.	Indoor control board API jump cap poor connected, please pull and then or replace the jump cap.
9	Indoor ambient sensor open circuit, short circuit	F1		Off 3s blink once						Cooling, dehumidifying: indoor fan motor is running, other overloads will stop. Heating: whole unit will stop to run.	1) Room temp. sensor is not connected with the control panel AP1; 2) Room temp. sensor is damaged.
10	Indoor evaporator sensor circuit, open, short circuit	F2		Off 3s blink twice						Cooling, dehumidifying: indoor fan motor running, other overload will stop. Heating: whole unit will stop.	1) Tube temp. sensor is not connected with the control panel AP1; 2) Tube temp. sensor is damaged.

11	Outdoor ambient sensor circuit open, circuit short	F3		Off 3s blink three times		□	□	☆	■	Cooling, dehumidifying: compressor will stop, indoor fan motor will work. Heating: all will stop.	Outdoor room temp. sensor hasn' t connected well, or damaged, please refer to the sensor resistance value for checking.
12	Outdoor condensor sensor open circuit, short circuit	F4		Off 3s blink 18 times		□	□	☆	□	Cooling, dehumidifying: compressor will stop, indoor fan motor will work. Heating: all will stop.	Outdoor temp. sensor hasn' t connected well, or damaged, please refer to the sensor resistance value for checking.
13	Outdoor air exhaust sensor open circuit, short circuit	F5		Off 3s blink 5 times		□	□	☆	☆	Cooling, dehumidifying: after running for 3mins later, the compressor will stop to run, indoor fan motor will start to run. Heating: after run 3mins later, all will stop to run.	1) Exhaust temp sensor hasn' t connected well, or damaged, please refer to the sensor ; resistance value for checking. 2) Sensor head hasn' t insert into the copper tube.
14	Overload limit/ descending frequency	F6		Off 3s blink 6 times		■	□	☆	☆	Overload normal operation, compressor is running, frequency descending.	Please refer to troubleshooting
15	Over current need frequency descending	F8		Off 3s blink 8 times		■	■	□	■	Overload normal operation, compressor is running, frequency descending.	1) Input power supply is too low; 2) System voltage is too high, overload is too much.
16	Air exhaust over high need frequency descending	F9		Off 3s blink 9 times		■	■	□	□	Overload normal operation, compressor is running, frequency descending.	1) Overload is too much, ambient temp. is too high; 2) Refrigerant is short; 3) Electric expansion malfunction.
17	DC generatrix voltage is too high	PH		Off 3s Blink 11 times		□	■	□	☆	Cooling, dehumidifying, compressor stop running fan motor works. Heating: all will stop.	1) Testing wire terminal L and N position If higher than 265VAC, please cut off the power supply and restart until back to normal; 2) If input voltage is normal, testing the voltage of electrolytic capacitor on API after turn on the unit. There may be some problem and replace the API if the electrolytic capacitor voltage range at 200-280V.
18	Whole unit's current testing malfunction	U5			Off 3s blink 13 times	□	■	☆	■	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	The circuit on API has malfunction, replace the outdoor unit API.
19	Compressor current overcorrect protection	P5			Off 3s blink 15 times	□	☆	□	□	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	Please refer to troubleshooting (IPM protection, compressor lose steps, compressor current overcorrect protection).
20	Defrosting	H1			Off 3s blink once					Under the heating mode, compressor running, indoor/outdoor fan motor stop working	It is normal function
21	Electrostatic dedust protection	H2			Off 3s blink twice						
22	Compressor overload protection	H3			Off 3s blink 3 times	□	☆	☆	□	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	1) Wire terminal OVC-COMP loosen or circuit, has problem, the resistance of SAT should be lower than I ohm. 2) Please refer to troubleshooting (exhaust/overload protection)
23	System abnormal	H4			Off 3s blink 4 times					Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Pls refer to troubleshooting
24	IPM protection	H5			Off 3s blink 5 times	■	□	■	■	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Pls refer to troubleshooting

25	PFC prtection	HC			Off 3s blink 6 times	□	■	☆	☆	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	Pls refer to troubleshooting.
26	Compressor lose steps	H7			Off 3s blink 7 times	□	☆	■	☆	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	Pls refer to troubleshooting.
27	Heating, anti-high temp. declines	H0			Off 3s blink 10 times	■	□	☆	☆	Overload normal works, compressor running, frequency declines.	Pls refer to troubleshooting.
28	Starts up fail	Lc			Off 3s blink 11 times	□	☆	□	☆	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	Pls refer to troubleshooting.
29	Compressor current testing circuit malfunction	U1			Off 3s blink 13 times	□	☆	■	□		Replace the outdoor control board API.
30	EEPROM malfunction	EE			Off 3s blink 15 times	□	□	□	■	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	Replace the outdoor control board API.
31	Capacitor charge malfunction	PU			Off 3s blink 17 times	□	■	□	■	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	Pls refer to Part 3 capacitor charging fault of troubleshooting.
32	Module sensor circuit diagram	P7			Off 3s blink 18 times	□	□	■	☆	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	Replace the outdoor control board API.
33	Module temp. over high protection	P8			Off 3s blink 19 times	■	□	☆	■	Cooling, dehumidifying: compressor stops running, indoor fan motor works. Heating: all will stop running.	To check whether the ambient Temp. of IPM is too high or the heat-sinhing of IPM is dirty else replace the outdoor baord API.
34	DC Bus voltage dips	U3			off 3s blink 20 times	□	■	■	■	cooling, dehumidifying: compressor will stop, indoor fan motor works, Heating: all will stop.	Power voltage is not staable.
35	Low DC Bus voltage protection	PL			off 3s blink 21 times	□	■	■	□	cooling, dehumidifying: compressor will stop, indoor fan motor works, Heating: all will stop.	1) Check the Input voltage if the Voltage is lower than 150VAC, restart the machine when the power supply is normal. 2) Checking the reactor L connection.
36	IPM temp. is too high limit/ decrease frequency	EU				■	■	■	☆	Overload normal works, compressor running frequency declines.	Whole unit break for 30mins and discharge, to check the outdoor control board API's IPM module coolant whether is short, the radiator is tightened. If above phenomenon is not ok, please improve or replace the control board API.
37	Four-way valve abnormal	U7				■	□	☆	□	This malfunction happened, only in heating mode, all will stop to run.	1) Power supply voltage is lower than AC175V. 2) Wire terminal 4V loosen or wire break. 3) 4V damaged, replace 4V.
38	Outdoor unit zero-cross detecting error	U9				■	■	☆	□	Cooling: compressor will stop, indoor fan motor works. Heating: all will stop.	Replace the outdoor control board API.
39	Anti-freezing limit/decrease frequency	FH				■	■	■	□	All loads work normally but the running frequency limited or decrease.	Indoor unit air return is poor or fan speed is too low.

Notes:
Subject to continuous engineering change and product improvement without notice.

Error Code	Description	Indoor Unit LED Display
C1	Current arch protection	Running LED-Off 3S, Blinks 12 times
C2	Current leakage protection	Running LED-Off 3S, Blinks 13 times
C3	Mis-wiring protection	Running LED-Off 3S, Blinks 14 times
C5	Jumper error protection	Running LED-Off 3S, Blinks 15 times
C6	No-ground	Running LED-Off 3S, Blinks 16 times
Cd	Too much CO2 protection	TBD
CF	Current short-cut protection	TBD (Buzzer will sound once every 2 sec.)
d1	WSHP: UV light error	TBD
E0	Commercial: Water pump overload/error/flow switch error	Running LED-Off 3S, Blinks 10 times
E1	System high pressure protection	Running LED-Off 3S, Blinks 1 time
E2	Anti-freezing protection (heat exchanger-ID, OD)	Running LED-Off 3S, Blinks 2 times
E3	Low pressure protection (run cooling when OD is too cold)	Running LED-Off 3S, Blinks 3 times
E4	Compressor dischage pressure too high	Running LED-Off 3S, Blinks 4 times
E5	System/compressor current too high	Running LED-Off 3S, Blinks 5 times
E6	Communication error (ID-OD)	Running LED-Off 3S, Blinks 6 times
E7	Mode clash (some ID runs cooling/fan, some runs heating	Running LED-Off 3S, Blinks 7 times
EA	VRF: Oil valve protection	TBD
Ec	Commercial & VRF: Water flow protection (lack of water flow)	TBD
Ed	System temperature too high	TBD
EE	Memory chip error (U5)	Heating LCD-Off 3S, Blinks 15 times
EF	Outdoor fan motor overload	TBD
EL	Fire alarm	TBD
EP	Shell top high temperature protection	TBD
F0	System refrigerant lack or restriction protection	Cooling LED-Off 3S, Blinks 10 times
F3	Outdoor abmient temperature sensor error	Cooling LED-Off 3S, Blinks 3 times
F8	Incoming water temperature sensor error	Cooling LED-Off 3S, Blinks 8 times
F9	Outgoing water temperature sensor error	Cooling LED-Off 3S, Blinks 9 times
FA	Oil temperature sensor error	TBD
Fd	Suction gas temperature sensor error	TBD
FE	User side water sensor error	TBD
FL	Water tank-middle sensor error	TBD
FP	CO2 checking error	TBD

Notes:
1. Some codes are not malfunctions and will not require you to do anything, since the unit will resume normal functions once the unit finishes its designated work such as defrost, oil return…
2. Some other codes denote malfunctions and the unit will not resume normal functions until your technician checks your unit and fixes the problems such as dirty coils, clogged filters, bad control boards…You can have your technician to call 866-833-3138 for help of technical support and trouble-shoot.

ERROR AND PROTECTION CODE SUMMARY

FU	Shell top temperature sensor error protection	TBD
H1	Heating-Defrosting, or oil return	TBD
H2	Static electric de-dust protection	Heating LED-Off 3S, Blinks 2 times
H3	Compressor over-temperature protection	Heating LED-Off 3S, Blinks 3 times
H4	System abnormal (many different other reasons…)	Heating LED-Off 3S, Blinks 4 times
H5	IPM abnormal / Control Module Protection	Heating LED-Off 3S, Blinks 5 times
H6	Indoor fan motor-no feedback	Running LED-Off 3S, Blinks 11 times
H7	Comopressor loses steps, not being able to check rotor position	Heating LED-Off 3S, Blinks 7 times
HC	PFC board abnormal / PFC protection	Heating LED-Off 3S, Blinks 6 times
HE	Compressor de-managet protection (rotor locked /doesn't rotate)	Heating LED-Off 3S, Blinks 14 times
L0	Airflow switch error	TBD
L1	Humidity sensor error	TBD
L2	Water level switch error / hot water tank level switch error	TBD
L3	Outdoor DC motor error (L3 for dual -mtor 1, LA for motor 2)	Running LED-Off 3S, Blinks 23 times
L4	Filter clogged	TBD
L5	Circulating water temperature sensor error	TBD
L6	System capacity insufficient	TBD
L7	Water pressure switch protection	TBD
Lc	Starting failure	Heating LED-Off 3S, Blinks 11 times
Ld	Power phase loss/lack	TBD
LE	Compressor locked	Running LED-Off 3S, Blinks 22 times
LF	Compressor over-speed protection	TBD
LH	Indoor ambient temperature too high	TBD
LL	Indoor ambient temperature too low	TBD
LP	Indoor-Outdoor units don't match or power line connection error	Running LED-Off 3S, Blinks 19 times
P0	Driving module resumed	TBD
P5	Driving board checking-compressor current too high	Heating LED-Off 3S, Blinks 15 times
P6	Driving board checking-communication error with indoor board	Heating LED-Off 3S, Blinks 16 times
P7	Radiator loose, or IPM /PFC board sensor abnormal /error	Heating LED-Off 3S, Blinks 18 times
P8	Radiator loose, or IPM /PFC board too hot	Heating LED-Off 3S, Blinks 19 times
P9	AC contactor protection	TBD
PA	AC current protection (incoming)	TBD
Pc	Current checking-circuit error or current sensor error	TBD

Notes:
1. Some codes are not malfunctions and will not require you to do anything, since the unit will resume normal functions once the unit finishes its designated work such as defrost, oil return…
2. Some other codes denote malfunctions and the unit will not resume normal functions until your technician checks your unit and fixes the problems such as dirty coils, clogged filters, bad control boards…You can have your technician to call 866-833-3138 for help of technical support and trouble-shoot.

UNIT MAINTENANCE & SERVICE GUIDE

ERROR AND PROTECTION CODE SUMMARY

Pd	Current checking-connection error (U-V-W not connected accordingly)	TBD
PE	Temperature sensor drifting protection	TBD
PF	Driving board-ambient temperature sensor error	TBD
PH	DC incoming voltage too high (program checking)	Cooling LED-Off 3S, Blinks 11 times
PL	DC incoming voltage too low (program checking)	Cooling LED-Off 3S, Blinks 21 times
PP	AC incoming power abnormal (too low or too high)	TBD
PU	Capacitor-charging circuit error	Heating LED-Off 3S, Blinks 17 times
U7	4-way switch valve abnormal	Heating LED-Off 3S, Blinks 20 times
U6	Oil temperature too high	Heating LED-Off 3S, Blinks 16 times
U4	Compressor rotation reversed	Heating LED-Off 3S, Blinks 14 times
U5	Rectifying current checking error	Heating LED-Off 3S, Blinks 13 times
U3	DC main bus voltage drop	Heating LED-Off 3S, Blinks 20 times
U1	Compressor phase current checking circuit error	Heating LED-Off 3S, Blinks 13 times
U2	Compressor phase loss protection	Heating LED-Off 3S, Blinks 12 times
UC	Filter needs to be cleaned	TBD
U8	PG motor (indoor) checking circuit error	Running LED-Off 3S, Blinks 17 times
U9	Outdoor fan motor checking circuit error	Running LED-Off 3S, Blinks 18 times
UF	De-actuate remote or control, from a long distance	TBD
C7	PTC heater sensor error	Heating LED-Off 3S, Blinks 9 times
FJ	Discharge/vent air temperature sensor error	TBD
L8	Storage tank water level switch error	TBD
d3	AC condensate: anti-freezing sensor error	TBD
d4	Domestic water: anti-freezing sensor error	TBD
d5	Return water sensor error	TBD
d6	Defrost coil sensor error	TBD
d7	Back-up hot water temperature sensor error	TBD
d8	Hot water outlet temperature sensor error	TBD
d9	Hot water inlet temperature sensor error	TBD
db	Temp. Sensor Error-after metering device (cap. Tube, or EXV)	TBD
dc	Temp. Sensor Error-suction tube	TBD
dP	Temp. Sensor Error-discharge tube	TBD
dL	Low voltage reluctance/reluctor error	TBD
L9	Compressor Protection-calculated input is too high	Running LED-Off 3S, Blinks 20 times

Notes:
1. Some codes are not malfunctions and will not require you to do anything, since the unit will resume normal functions once the unit finishes its designated work such as defrost, oil return…
2. Some other codes denote malfunctions and the unit will not resume normal functions until your technician checks your unit and fixes the problems such as dirty coils, clogged filters, bad control boards…You can have your technician to call 866-833-3138 for help of technical support and trouble-shoot.

ERROR AND PROTECTION CODE SUMMARY

dF	Temp. Sensor Error-solar water heater-water outlet	TBD
dH	Temp. Sensor Error-solar water heater-assistant ele. heater	TBD
dU	Door-lock sensor: card is not in	TBD
dJ	AC phase protection (lost or reversed)	TBD
d0	Fan motor speed communication error	TBD
Eo	Specia function board error	TBD
dn	Mulitiple zone-pipe connection doesn't match with comm. wire connection	TBD
Cn	Not for AC: Buring gas density too high	Cooling LED-Off 3S, Blinks 23 times
Fn	Not for AC: Buring gas sensor error	Running LED-Off 3S, Blinks 21 times
HP	Solar AC: solar power input voltage is higher than 180V	TBD
dA	AHU or RT: discharge air-relative humidity sensor error	TBD
dE	AHU or RT: fresh air-relative humidity sensor error	TBD
Fr	AHU or RT: fresh air-temp. sensor error	TBD
UA	DC inverter driving error 1	TBD
dr	AHU or RT: air flow pressure sensor error	TBD
Ub	DC inverter driving error 2	TBD
Ud	DC inverter driving error 3	TBD
UE	DC inverter driving error 4	TBD
LU	Compressor power input limit / decrease HZ (system power input)	Cooling LED-Off 3S, Blinks 24 times
LA	Outdoor unit fan motor protection (not rotating, or not connected). If 2 motors, motor 1-L3, motor 2-LA	Running LED-Off 3S, Blinks 24 times
A5	Condensing coil-inlet temp. sensor error (=F5 in commercial units)	TBD
A7	Condensing coil-outlet temp. sensor error (=F7 in commercial units)	TBD
e4	Compressor dischage temp. (=pressure) too high	TBD
e8	Over-load protection (outdoor coil temp. too high)	TBD
e1	Dicharge pressure sensor error	TBD
ee	DC inverter driving chip error	TBD
JF	Indoor unit-testing board comm. Error (after 3-minutes)	TBD
rF	RF module error (once powered, the MCU tries to send commands, via SPI, to RF, if RF doesn't receives it, error shows)	TBD
Uu	Solar AC: battery bank discharged too much and the output voltage is lower than 295V	TBD
no	For VRF groups: DC unit's display board can not receive any data from the fixed speed comp. unit, will show "no" after 8 seconds	TBD
E6+IDU Temp.	Communication error (ID display-OD main board) and outdoor temperature sensor error	TBD
E7+ODU Temp.	Communication error (ID unit-OD unit) and outdoor temperature sensor error	TBD
Fu	AHU or RT: dust sensor error	TBD

Notes:
1. Some codes are not malfunctions and will not require you to do anything, since the unit will resume normal functions once the unit finishes its designated work such as defrost, oil return…
2. Some other codes denote malfunctions and the unit will not resume normal functions until your technician checks your unit and fixes the problems such as dirty coils, clogged filters, bad control boards…You can have your technician to call 866-833-3138 for help of technical support and trouble-shoot.

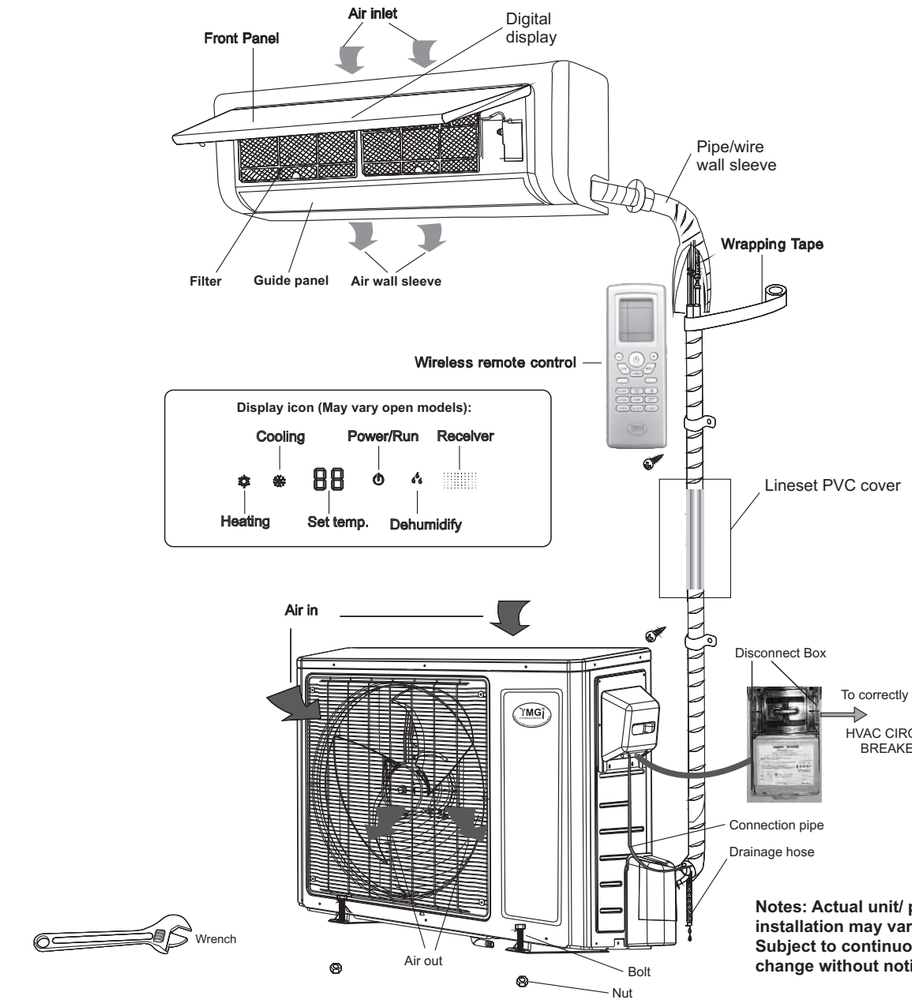
UNIT MAINTENANCE & SERVICE GUIDE

ERROR AND PROTECTION CODE SUMMARY

e2	Warning: water flow low	TBD
e3	Oil level low protection	TBD
e7	System pressure difference protection	TBD
eA	Heat exchanger-pressure transducer sensor error (similar to lower pressure transducer protection)	TBD
eC	Oil-pressure transducer sensor error (similar to lower pressure transducer protection)	TBD
e0	Economizer-discharge temp. sensor error	TBD
e9	Economizer-discharge pressure sensor error	TBD
eF	Compressor brand sensor error	TBD
bH	Water pump temp. sensor	TBD
oE	Any other error that the outdoor unit needs to stop	TBD
E8	Anti-high temperature protection	Running LED-Off 3S, Blinks 8 times
E9	Anti-cold blowing (discharging) protection	Running LED-Off 3S, Blinks 9 times
F1	Indoor air temp. sensor error/bad-broken, shorted…	Cooling LED-Off 3S, Blinks 1 time
F2	Indoor coil temp. sensor error/bad-broken, shorted…	Cooling LED-Off 3S, Blinks 2 times
F4	Outdoor coil temp. sensor error/bad-broken, shorted…	Cooling LED-Off 3S, Blinks 4 times
F5	Compressor discharge temp. sensor error/bad-broken, shorted…	Cooling LED-Off 3S, Blinks 5 times
F7	Cooling-oil return error	Cooling LED-Off 3S, Blinks 7 times
FC	Slide door error, or air louver mechanism error	TBD
FE	Over-load sensor error	TBD
H8	Water level-high /overflow protection	Heating LED-Off 3S, Blinks 8 times
H9	Ele. heater error	Heating LED-Off 3S, Blinks 9 times
b7	Outlet temp. sensor error	Cooling LED-Off 3S, Blinks 22 times
b5	Inlet temp. sensor error	Cooling LED-Off 3S, Blinks 19 times
d1	DRM running mode 1	
d2	DRM running mode 2	
d3	DRM running mode 3	

Notes:
1. Some codes are not malfunctions and will not require you to do anything, since the unit will resume normal functions once the unit finishes its designated work such as defrost, oil return…
2. Some other codes denote malfunctions and the unit will not resume normal functions until your technician checks your unit and fixes the problems such as dirty coils, clogged filters, bad control boards…You can have your technician to call 866-833-3138 for help of technical support and trouble-shoot.

SAMPLE SYSTEM LAYOUT



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

WARRANTY AND TECH. SUPPORT

YMGI warrants to the purchaser/owner(s) that YMGI products be free from defects in material and workmanship under the normal use and maintenance, with the standard Limited Product Warranty Policies that comes with the unit or sales package.

YMGI IS NOT RESPONSIBLE FOR

* Damage or repairs required as a consequence Customer do-it-yoursely(DIY) installation and/or any other faulty installation or improper application.
* Damage or repairs needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration, or improper operation.
* Damage as a result of floods, winds, fires, lightening, accidents, corrosive atmosphere, or other conditions beyond the control of YMGI.
* Any damages to person or property of whatever kind, direct or indirect, special or consequential, whether resulting from use or loss of use of the product.
* Failure to start due to voltage conditions, blown fuses, open circuit breakers, or other damages due to the inadequacy or interruption of electrical service.
* Parts not supplied or designated by YMGI.
* Products installed outside USA or Canada.
* Regular equipment maintenance or field service or field inspection.
* Any problems due to improper cooling and heating load calcuation of the room/building the air conditioner/heat pump system is to be installed. Equipment users can get the calculation schedule from your room/building architect or your installation or related service HVAC contractor, who should have knowledge and tools to do these calculation correctly.
* Any problems due to improper sizing and selecting air conditioner/heat pump system. These equipment sizing and selection work should be conducted by either your room/building architect or your installation or related service HVAC contractor, who should have knowledge and tools to do these calculation correctly, and get your approval, before your purchasing these air conditioner or heat pump equipment.
* Any problems due to improper installing of the air conditioner/heat pump system. Installation should be conducted by currently licensed HVAC technician, following manufacturer installation instructions, all governing safety codes, with care and professionalism.
* Any problems due to improper operation of the air conditioner/heat pump system. Users shall keep the manual and look up in the manuals for the correct understanding how the unit will work and how to operate the unit correctly.
* Any problems due to improper maintenance of the air conditioner/heat pump system. Like a car, regular maintenance or yearly checking is necessary for the unit to work properly for you, before the season comes. For example, air filter shall be checked for cleaness from time to time. Remote control batteries shall be checked for enough power, before judging the unit is not working...

CONTACT FOR FIELD SERVICE OR REPAIR

The following people, in a prioritized sequence, will take care of your request or issue:

1) The original installer; otherwise,
2) Your current service contractor; otherwise,
3) Authorized contractor in YMGI list that is close to you; otherwise,
4) Authorized Distributor in YMGI Distributor list; otherwise,
5) Contractor/Distributor you prefer who is close to you.

CONTACT FOR GENERAL TECHNICAL QUESTIONS OR SUPPORT, IN A SEQUENCE:

1) The original installer; otherwise,
2) The current service contractor; otherwise,

   The original licensed installer or current service contractor should be contacted first of all, since they installed the unit and/or know more details than anybody else.

   They will check the unit and find out the problems with the professional knowledge about HVAC and electric product installation by using special tools or instrument.

   They can contact YMGI technical support for technical help during unit installation or inspection.

   Product model and serial numbers needed, which can be found on unit nameplate sticker, so that our technician can quickly identify the unit, parts and wiring diagrams, among our many products and models.
3) The distributor; where the unit is purchased from otherwise,
4) YMGI Technical Support:
   Tel: (866) 833-3138*703 Email: techsp@ymgigroup.com

USER NOTES AND INSTALLATION/SERVICE/MAINTENANCE NOTES

USER NOTES

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

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

INSTALLATION NOTES

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

No.	Date	Original Installation Company Name, Technician Name, Phone & HVAC 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 & HVAC License #