



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

INSTALLER'S INSTRUCTION & USER'S MANUAL

Ceiling Cassette VRF Systems
VRF (55) EC
7k-48k, 18-23 SEER Cooling and Heat Pump

Model Numbers:

VRFI-07EC4-D2B(55)5
VRFI-09EC4-D2B(55)5
VRFI-12EC4-D2B(55)5
VRFI-15EC4-D2B(55)5
VRFI-18EC4-D2B(55)5
VRFI-24EC4-D2B(55)5
VRFI-30EC4-D2B(55)5
VRFI-36EC4-D2B(55)5
VRFI-42EC4-D2B(55)5
VRFI-48EC4-D2B(55)5



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

NOTICE

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

Installer: Currently licensed/certified HVAC technicians only. Must Read the manual and all provided documents prior to installation.

Complete and fill out all required information on the warranty registration card.

User: Retain this manual and all supplied documents for your records and future reference.

Service: Use this manual for information concerning servicing and maintenance of this product.

SAFETY WARNING

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



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Introduction

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

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

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

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

Important Environmental Concerns

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

Responsible Refrigerant Practices

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

Disposal Notice

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

⚠ WARNING

Proper Field Wiring and Grounding Required!

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

⚠ WARNING

Personal Protective Equipment (PPE) Required!

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

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

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



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This document and the information contained therein are the sole property of YMGI Group and shall not be used or reproduced in whole or in part, without the written permission of YMGI Group. YMGI Group reserves the right to revise this manual at any time and to make changes to its content without obligation to notify anyone about any modifications, revisions or changes.

⚠ WARNING

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

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

Basic Cautions and Warnings

⚠ CAUTION

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

⚠ CAUTION

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

⚠ WARNING

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

⚠ WARNING

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

⚠ WARNING

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





Note From YMGI – Must Read

Dear Customers, Purchasers, Installers, and Contractors

Thank you for choosing an YMGI product.

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

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

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

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

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

⚠WARNING

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

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

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

IMPORTANT: YMGI Group is the MEDIA AUTHORITY:

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





NOTICE

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

⚠WARNING

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

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

⚠WARNING

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

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

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





INSTALLING TECHNICIAN/CONTRACTOR'S RESPONSIBILITIES

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

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





LIMITED PRODUCT WARRANTY

Once the installation and successful testing of the system has been completely performed by a qualified licensed/certified HVAC technician/contractor, the registration card/form is filled out completely and correctly, and filed along with a valid installation invoice from the contractor within 7 days of the original installation, the following standard **Limited Product Warranty** is qualified: **7-years** on the **compressor** and **2-year** on **PARTS ONLY**. There is **no labor coverage**.

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

Compressor: YMGI will warrant the compressor of an YMGI-validated and approved warranty filing, for a period of 7 years from the date of successful installation at its original installation location.

Parts: YMGI will warrant parts of an YMGI-validated and approved warranty filing, for two years from the date of successful installation at original installation location.

All warranty compressors and parts replaced will become the sole property of YMGI Group and must be returned to YMGI Group upon request. Warranty parts may be new or refurbished. All parts are tested and approved before shipping.

At no time does YMGI Group warrant labor cost of any type. Warranty will start from the date of successful installation at original installation location, or 90 days as of original shipping date from YMGI Group, whichever comes first.

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

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

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

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

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





Steps to follow for warranty part replacement:

1. The installing or service technician must contact YMGI tech support at 1-866-833-3138 ext. 703 from the installation location to check and confirm with YMGI Technical support the exact part(s) needed to fix the problem(s).
2. YMGI will check the customer's warranty filing. There will be no charge for Parts with a validated and approved warranty. Any Parts that have not been validated and approved or have an invalid warranty filing resulting in an unapproved warranty request, will be charged accordingly.
3. ***YMGI will ground ship out the parts ASAP. Expedited shipping is available at the customer's expense.***
4. Replacement parts that have an approved warranty registration are to be warranted for the remainder of the 2-year on parts and a 7-year compressor warranty. Purchasing of replacement parts without a valid warranty filing or unapproved warranty request, will be sold as is and are not covered by any warranty.

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





YMGI: Your Modern Green Idea



LIMITED PRODUCT WARRANTY REGISTRATION FORM

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

For YMGI Use Only	Date:	Shipping Packing List Number:	Registration Card Serial No.
	Did the Company Pay YMGI:	Unit(s) Work Successfully:	Yes/No
	Installation Invoice Attached to the Registration Card	Hired YMGI Recommended HVAC Contractor/Technician?	Warranty Approved
Outdoor Unit Serial Number :	Indoor Unit Serial Numbers:	Unit 1	Unit 6
		Unit 2	Unit 7
		Unit 3	Unit 8
		Unit 4	Unit 9
		Unit 5	Unit 10

Contact at Installation Location:

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

Contact of the Installing HVAC Contractor/Technician:

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

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

1) Did you install the whole system? If not, please note below.	15) Where is the outdoor unit located?	Is the outdoor unit anchored to ground or secured onto wall bracket?
Yes No % of installation done by you (HVAC technician).	Ground wall balcony roof other location or pad	Yes No
2) What had been done, prior to your arrival?	16) Have you checked to make sure there is no cross-piping and/or cross-wiring between any two indoor units (zones)? What was your procedure?	
3) Did you read the User Manual and Installation Instructions before starting the installation?	17) Were the refrigerant pipe ends capped or sealed, prior to running them through structures to keep debris from entering the copper lines?	
Yes No	18) Have you checked both cooling and heating on all indoor units individually to ensure proper function?	
4) Who unpacked the unit and accessory boxes to check for damage?	Yes No	
5) Supply electrical power V/Ph/Hz measured at wiring terminal block of	19) Did you charge the inter-connecting copper pipes and indoor unit with nitrogen to check for positive leakage (pressures 150-200PSI), before conducting a vacuum leak check?	
Indoor unit: Outdoor unit:	Yes No	
6) Incoming electrical power V/Ph/Hz measured at terminal blocks of	20) Did you vacuum correctly to check the connecting pipes and indoor unit for leakage? What was the micron gauge reading, for how many minutes?	
Indoor unit: Outdoor unit:	21) Did you check the compressor's start and stop sequences to determine proper functionality?	
7) Wire gauge, length and terminal colors between circuit breaker/disconnect switch to outdoor unit.	Yes No	
8) Wire gauge, length and terminal colors between each indoor and outdoor unit:	22) If copper length were not made to the supplied or recommended refrigerant pipe length, how much refrigerant added or deducted?	
Unit A Unit B Unit C Unit D	23) Measured refrigerant pressures at outdoor service suction valve, when unit was stabilized.	
9) The size of HVAC circuit breaker/fuse or disconnect switch to the outdoor unit.	Heat pump (PSI): Cooling (PSI): Outdoor Ambient Temp. (°F):	
10) Are the inter-connecting wires and copper lines between indoor and outdoor units installed/covered/protected by line set covers, or anything else?	24) What were the measured temperatures (probe not touching any metal):	
11) What is the refrigerant pipe length between each indoor unit and the outdoor unit?	At cooling: indoor return air °F Discharge air °F and outdoor °F	
Unit A Unit B Unit C Unit D	At heating: indoor return air °F Discharge air °F and outdoor °F	
12) Where is/are the indoor unit(s) located? (Bedroom, kitchen, etc.)	25) Have you checked all unit functions with customer present, and all functions are working correctly?	
Unit A Unit B Unit C Unit D	Yes No	
13) What is the elevation difference between each indoor unit and the outdoor unit?	26) Did you show the user how to operate the unit? Did he/she understand you?	
Unit A Unit B Unit C Unit D	Yes No Yes No	
14) Did you check the indoor unit for condensate leakage and refrigerant leakage, before and after connecting them?	27) Do you provide regular one-year free technical service for this installation?	
Yes No	Yes No	
Installation Finished and Unit Works Successfully.	28) Do you list the working details in the invoice and leave a copy to the customer?	
Print Name of Installation HVAC Technician:	Yes No	
Signature:	Installation Finished and Unit Works Successfully.	
Date and time:	Print Name of Owner:	
	Signature:	
	Date and time:	

By signing above, I acknowledge the liability and responsibility for any false statement or omission of facts, and I authorize YMGI to verify the details provided above, and make its decision on warranty. I understand our filing or filling out of the warranty card/form DOES NOT imply automatic warranty approval, because warranty is approved only to qualified and successful installations by a qualified HVAC technician. I understand that the warranty (if approved) is a standard 5 year compressor and 1 year parts only, and does not include any labor coverage. I agree to and will follow all the contents contained in the Limited Product Warranty Policy of YMGI, and no other entity, stated in public, including but not limited to manuals, web site, email, etc.

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





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

1. Expertise and Safety:

They have the training and experience to accurately and safely install and service your equipment. The equipment runs with high-pressure refrigerant, oil and electrical current. The copper lines must be installed properly to prevent leakage and foreign substances from contaminating the refrigerant system.

2. You will save money in the long run:

If any problem occurs with the unit that has been fully installed by a currently licensed or certified technician/contractor, contact the original licensed or certified HVAC technician to evaluate the unit as they have the training and experience to correct the problem quickly and efficiently. A technician may be unwilling to repair an issue on a unit that they did not install. If you do find a technician willing to perform this service, there is an increased possibility of higher service fees, increased service visits, or delayed service from that technician.

3. It's the law!

The federal, state and/or local government and authorities have various governing laws or regulations, guidelines, ordinances, etc. These laws may require only licensed or certified professionals can install and service this type of high pressure HVAC equipment.

SUGGESTIONS TO AID YOU IN HIRING AN HVAC CONTRACTOR:

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

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





⚠ WARNING

Safety Precautions

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

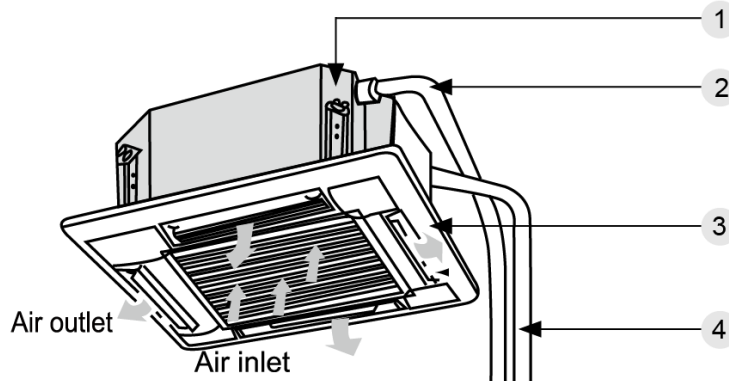
NOTICE

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

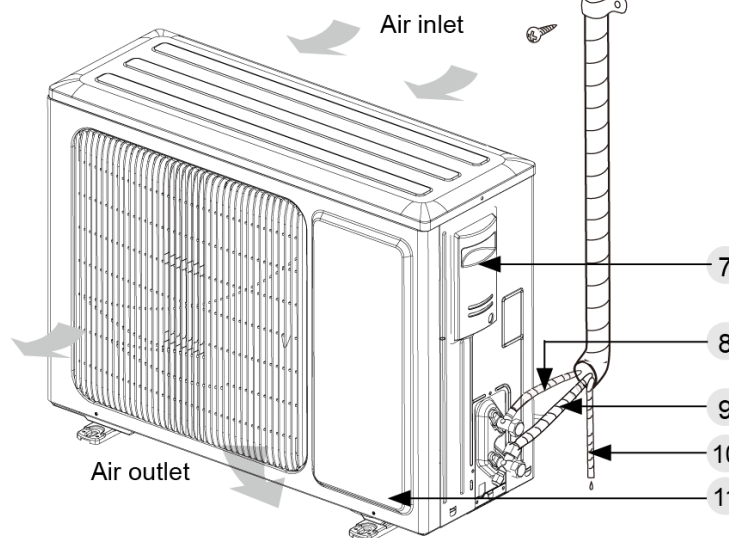


SAMPLE DIAGRAM OF INSTALLED SYSTEM

Indoor






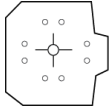


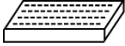


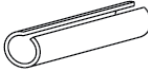
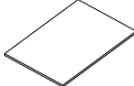



Outdoor



- 1. Drainage device
- 2. Drainage pipe
- 3. Air flow flap
- 4. Connection pipe
- 5. Wired Controller
- 6. Wireless Controller
- 7. Big handle
- 8. Liquid Pipe
- 9. Gas pipe
- 10. Drainage pipe
- 11. Front Board

CAUTION
 The refrigerant pipe, drain pipe and electrical wiring for this unit should be installed by a qualified HVAC professional only.

Indoor Unit Accessories (Field Supplied)

No.	Name	Appearance	Qty	Usage
1	Drain Hose		1	Connects with field supplied drain pipe
2	Screw with Washer		4	Secures the hook on the cabinet of the unit
3	Washer Installation		10	Used together with the hanger bolt for installing the unit
4	Installation Template		1	Used for ceiling drilling
5	Template Mounting Board		4	Prevents gasket from falling off
6	Remote Controller and Batteries		1	Remotely controls the indoor unit
7	Sealing Plaster		1	
8	Fastener		4	To fasten sponge
9	Pipe Insulation		1	Insulates the gas pipe
10	Pipe Insulation		1	Insulates the liquid pipe
11	Insulation		4	Insulates the drain pipe
12	Flare Nut		1	Connects the gas pipe
13	Flare Nut		1	Connects the liquid pipe
14	Service Valve Cap		2	Protects service port



CEILING CASSETTE SYSTEMS - SPECIFICATIONS

Unit Specifications and Engineering Submittal

Model		VRFI-07EC4-D2B(55)5	VRFI-09EC4-D2B(55)5	VRFI-12EC4-D2B(55)5	VRFI-15EC4-D2B(55)5	VRFI-18EC4-D2B(55)5
Cooling Capacity	Btu/h	7500	9500	12000	15000	18000
Heating Capacity	Btu/h	8500	10500	13500	17000	20000
Power Supply	V/Ø/Hz	208/230/1/60	208/230/1/60	208/230/1/60	208/230/1/60	208/230/1/60
Power Consumption	W	48	59	59	59	59
Airflow Volume	m ³ /h	750/650/550	1000/900/750	1000/900/750	1000/900/750	1000/900/750
	CFM	440/385/325	590/530/440	590/530/440	590/530/440	590/530/440
Related Current Heating/ Cooling	Amp	0.3	0.5	0.5	0.5	0.5
MCA	Amp	0.375	0.625	0.625	0.625	0.625
MOP	Amp	15	15	15	15	15
Condensate Pump Lift from base of unit	in.	19 11/16"	19 11/16"	19 11/16"	19 11/16"	19 11/16"
Sound Pressure Level (H/M/L)	dB(A)	36/34/31	37/35/32	37/35/32	37/35/32	37/35/32
Refrigerant		R410A	R410A	R410A	R410A	R410A
Connection Pipes						
Liquid Connecting Pipe Diameter	in.	Ø1/4	Ø1/4	Ø1/4	Ø1/4	Ø3/8
Gas Connecting Pipe Diameter	in.	Ø3/8	Ø1/2	Ø3/8	Ø3/8	Ø5/8
Drain Pipe External Diameter	in.	Ø1	Ø1	Ø1	Ø1	Ø1
Drain Pipe Internal Diameter	in.	Ø13/16	Ø13/16	Ø13/16	Ø13/16	Ø13/16
Dimensions & Weight Indoor Unit						
Main Body (W x D x H)	in.	33 1/16 x 33 1/16 x 8 1/4	33 1/16 x 33 1/16 x 10 1/4	33 1/16 x 33 1/16 x 10 1/4	33 1/16 x 33 1/16 x 10 1/4	33 1/16 x 33 1/16 x 10 1/4
Net/Gross Weight	lbs.	50/64	58/75	58/75	58/75	58/75
Dimensions & Weight Faceplate						
Panel (W x D x H)	in.	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2
Net/Gross Weight	lbs.	15/24	15/24	15/24	15/24	15/24





Model		VRFI-24EC4-D2B(55)5	VRFI-30EC4-D2B(55)5	VRFI-36EC4-D2B(55)5	VRFI-42EC4-D2B(55)5	VRFI-48EC4-D2B(55)5
Cooling Capacity	Btu/h	24000	30000	36000	42000	48000
Heating Capacity	Btu/h	27000	34000	40000	47000	54000
Power Supply	V/Ø/Hz	208/230/1/60	208/230/1/60	208/230/1/60	208/230/1/60	208/230/1/60
Power Consumption	W	59	98	110	110	110
Airflow Volume	m ³ /h	1180/950/850	1500/1350/1100	1700/1400/1100	1860/1500/1150	1860/1500/1150
	CFM	695/560/550	885/795/650	1000/825/650	1095/880/675	1095/880/675
Related Current Heating/ Cooling	Amp	0.5	0.8	0.9	0.9	0.9
MCA	Amp	0.625	1	1.125	1.125	1.125
MOP	Amp	15	15	15	15	15
Condensate Pump Lift from base of unit	in.	19 11/16"	19 11/16"	19 11/16"	19 11/16"	19 11/16"
Sound Pressure Level (H/M/L)	dB(A)	38/36/33	40/38/35	41/38/36	43/41/38	43/41/38
Refrigerant		R410A	R410A	R410A	R410A	R410A
Connection Pipes						
Liquid Connecting Pipe Diameter	in.	Ø3/8	Ø3/8	Ø3/8	Ø3/8	Ø3/8
Gas Connecting Pipe Diameter	in.	Ø5/8	Ø5/8	Ø5/8	Ø5/8	Ø5/8
Drain Pipe External Diameter	in.	Ø1	Ø1	Ø1	Ø1	Ø1
Drain Pipe Internal Diameter	in.	Ø13/16	Ø13/16	Ø13/16	Ø13/16	Ø13/16
Dimensions & Weight Indoor Unit						
Main Body (W x D x H)	in.	33 1/16 x 33 1/16 x 10 1/4	33 1/16 x 33 1/16 x 13 3/8	33 1/16 x 33 1/16 x 13 3/8	33 1/16 x 33 1/16 x 13 3/8	33 1/16 x 33 1/16 x 13 3/8
Net/Gross Weight	lbs.	58/75	72/88	72/88	72/88	72/88
Dimensions & Weight Faceplate						
Panel (W x D x H)	in.	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2	37 3/8 x 37 3/8 x 2 1/2
Net/Gross Weight	lbs.	15/24	15/24	15/24	15/24	15/24



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 (Phillip's and Flat)
- Hammer
- Knife
- Scissors
- Safety Glasses
- Dust Mask
- Gloves
- Ladder

2) Refrigeration Related Work

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

3) Electrical Related Installation

1. Wire Cutter
2. Wire Stripper
3. Sharp Plier
4. Cable Ties
5. Black Tape for Electrical Use
6. Electrical Meter

4) Trial Running Units and Inspection

- Clamp Meter (Not Shown)
- Manifold
- Infra Thermometer (Not Shown)



INSTALLATION SITE SELECTION

Indoor Unit

⚠ WARNING

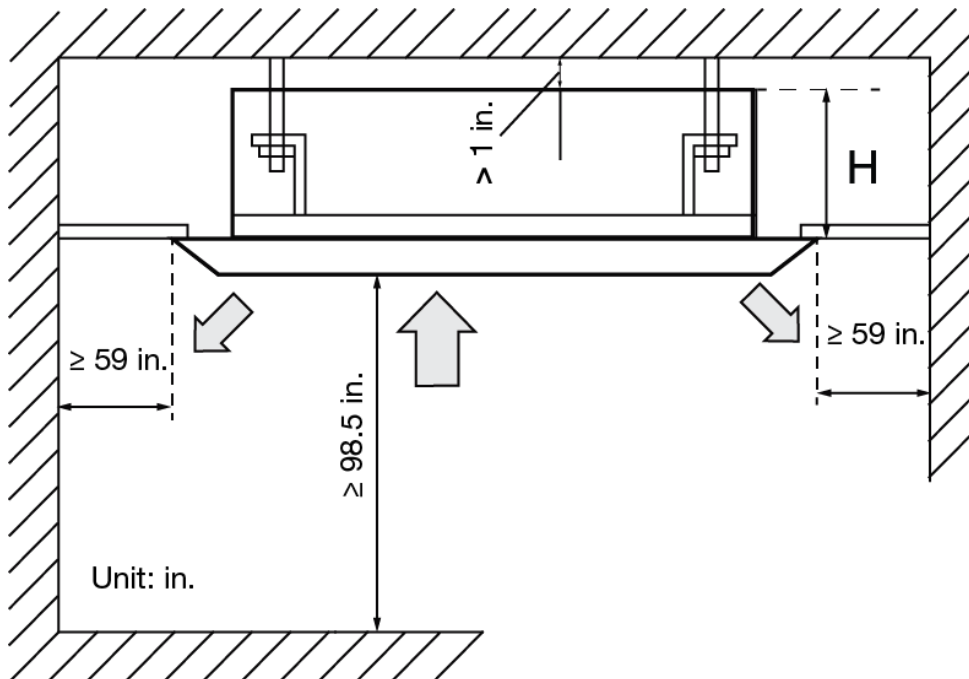
The unit must be installed in a location which can withstand four times the weight of the unit. Inadequate support may result in serious property damage and injuries.

⚠ CAUTION

- Do not install where there is the danger of combustible gas leakage.
- Do not install the unit near a heat source, steam or flammable gas.
- Children under 10 years old must be supervised not to operate the unit.

Select a site that allows for the following:

- Ensure the installation complies with the installation minimum dimensions and meets the minimum and maximum connecting piping length and maximum change in elevation.
- Air inlet and outlet should be clear of obstructions, ensuring proper airflow throughout the room.
- Condensate can be easily and safely drained.
- All connections can be easily made to outdoor unit.
- Indoor unit is out of reach of children.
- A structure strong enough to withstand four (4) times the full weight and vibration of the unit.
- Filter can be easily accessed for cleaning.
- Leave enough free space to allow access for routine maintenance.
- Do not install in a laundry room or by a swimming pool due to chemicals corroding cassette coil.



Models	H
VRFI-12EC4-D2B(55)5	10.04 in.
VRFI-18EC4-D2B(55)5	
VRFI-24EC4-D2B(55)5	

Connection Pipe Requirement

⚠ CAUTION

The maximum length of the connection pipe is listed in the table below.
Do not place the units between which make the distance exceed the maximum length of the connection pipe.

Model	Size of Fitting Pipe(Inch)		Max. Pipe Length (ft)	Max. Height Difference between Indoor Unit and Outdoor Unit (ft)	Drainage Pipe (Outer Diameter x wall thickness) (mm)
	Liquid	Gas			
VRFI-12EC4-D2B(55)5	1/4	3/8	65.6	49	Φ25×1.5
VRFI-18EC4-D2B(55)5	1/4	1/2	65.6	49	
VRFI-24EC4-D2B(55)5	3/8	5/8	98.4	49	

The connection pipe should be insulated with proper water-proof insulating material.
The pipe wall thickness should be 0.5-1.0mm and the pipe wall should be able to withstand the pressure of 6.0 MPa.
The longer the connecting pipe, the lower the cooling and heating performance.

Electrical Requirements

Electric Wire Size and Fuse Capacity.

Indoor Units	Power Supply	Fuse Capacity	Min. Power Supply Cord
	V/Ph/Hz	A	mm2
12~24k	208-230V~ 60Hz	5	AWG 18

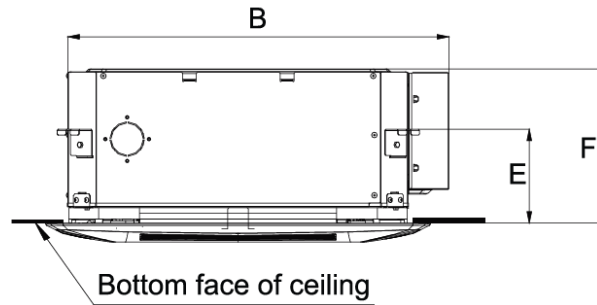
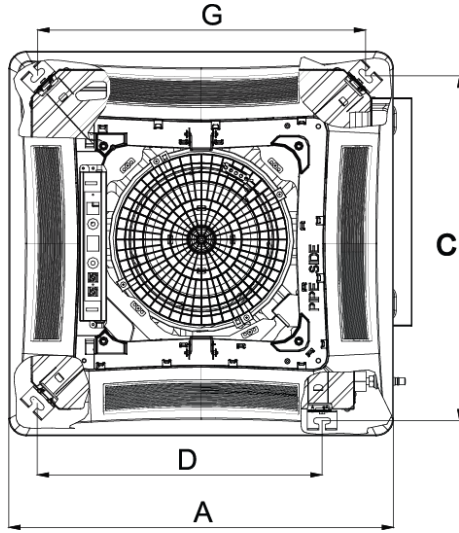
Notes:

1. The fuse is located on the main board.
2. Install the disconnect device with a contact gap of at least 3 mm in all poles near the units (both indoor unit and outdoor units).The appliance must be positioned so that the plug is accessible.
3. The Specifications of the power cable listed in the table above are determined based on the maximum power (maximum amps) of the unit.
4. The specifications of the power cable listed in the table above are applied to the conduit-guarded multi-wire copper cable (like, YJV copper cable, consisting of PE insulated wires and a PVC cable jacket) used at 104°F (40°C) and resistible to 194°F (90°C) (see IEC 60364-5-52). If the working condition changes, they should be modified according to the related national standard.

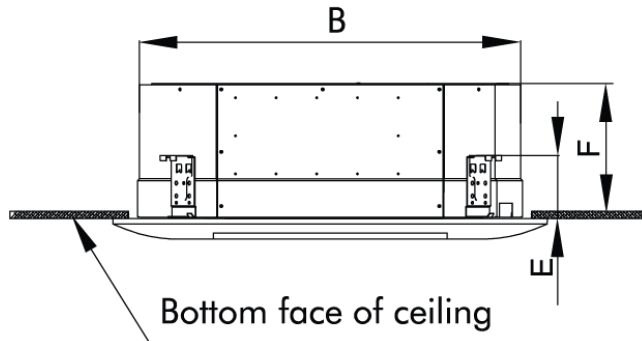
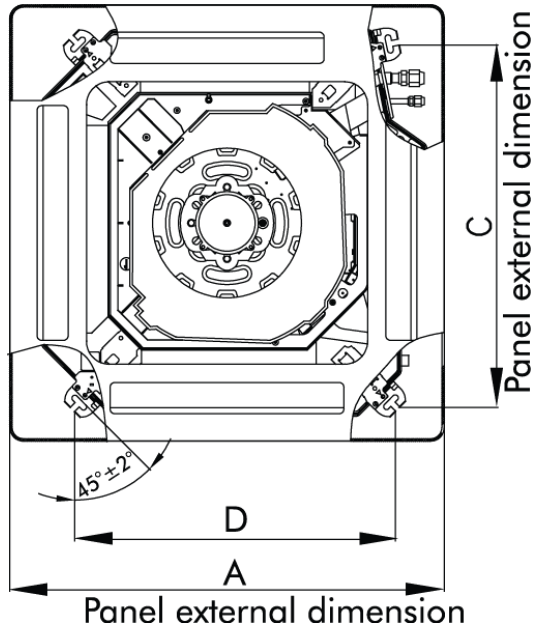
Installation of the Unit

Indoor unit dimension

For the units: 12-18k

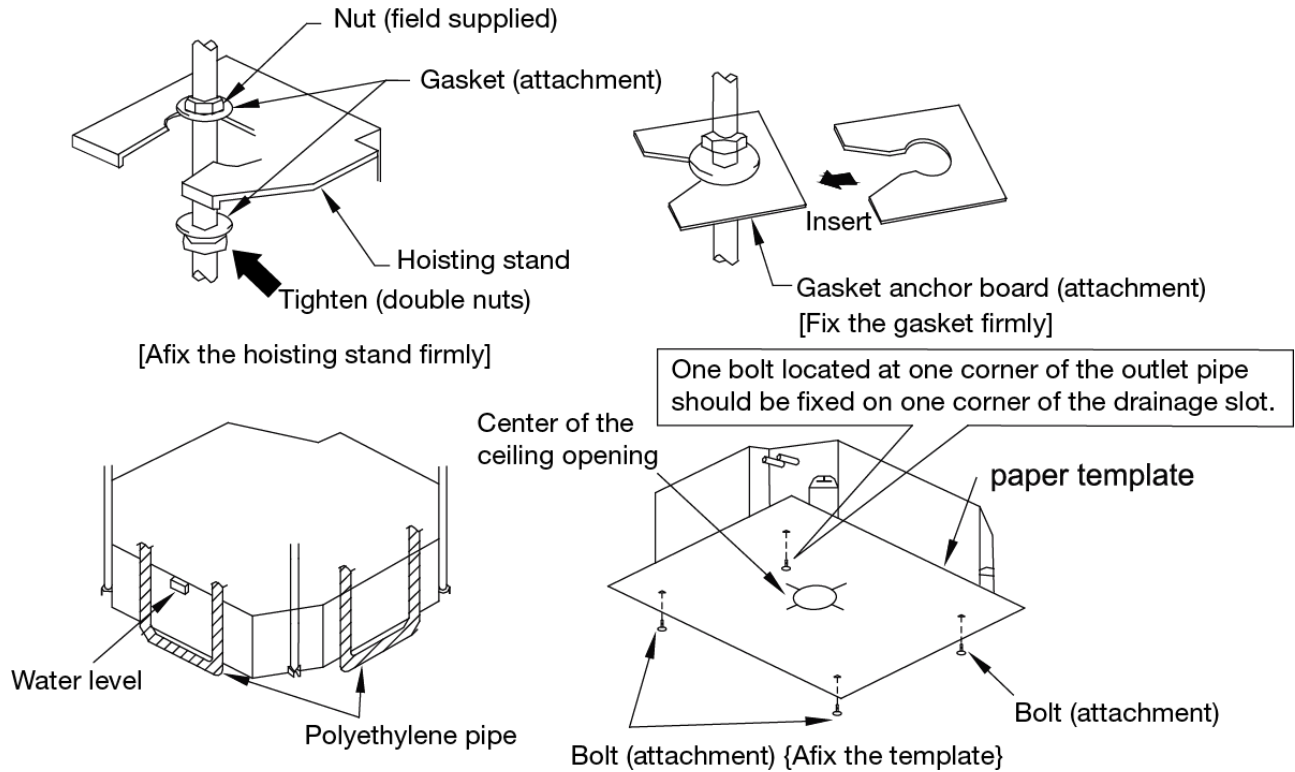


For the unit: 24k



Model	A	B	C	D	E	F	G
VRFI-12EC4-D2B(55)5	26.378" (670 mm)	26.2" (666 mm)	23.6" (600 mm)	19.53" (496 mm)	5.7" (145 mm)	9.45" (240 mm)	23.46" (596 mm)
VRFI-18EC4-D2B(55)5	26.378" (670 mm)	26.2" (666 mm)	23.6" (600 mm)	19.53" (496 mm)	5.7" (145 mm)	9.45" (240 mm)	23.46" (596 mm)
VRFI-24EC4-D2B(55)5	37.4" (950 mm)	33" (840 mm)	30.7" (780 mm)	26.76" (680 mm)	5.7" (145 mm)	9.45" (240 mm)	

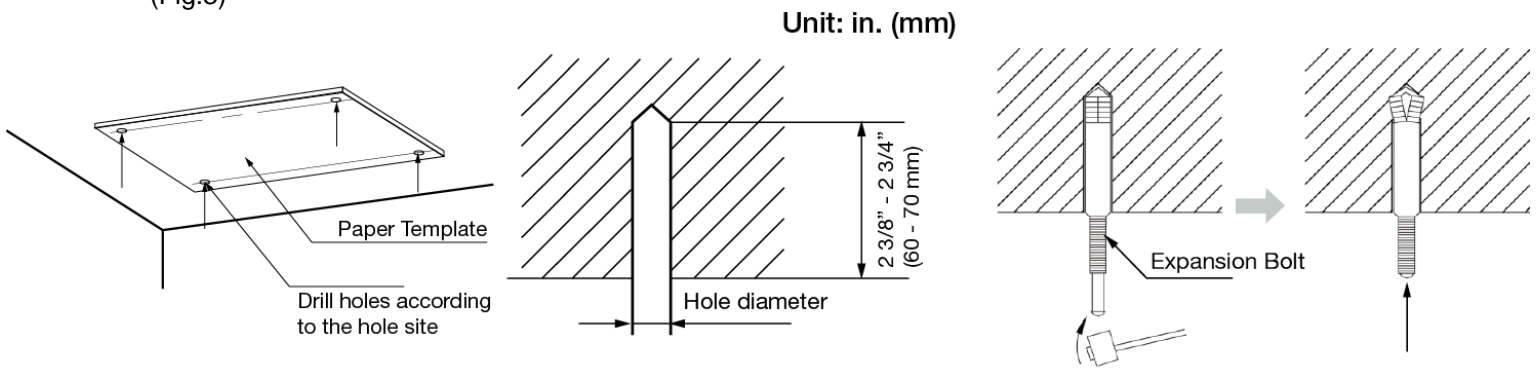
Installing the Main Body Unit



1. Install the hoisting stand on the hoisting screw by using nuts and gaskets at both the upper and lower sides of the hoisting stand. To prevent the gasket from breaking off, a gasket anchor board can be helpful.
2. Install the paper template on the unit, and fix the drain pipe at the outlet vent.
3. Adjust the unit to the best position.
4. Check if the unit is installed level horizontally in all four directions. If not, the water pump and the float switch will function improperly and can even lead to water leakage.
5. Remove the gasket anchor board and tighten the remaining nuts.
6. Remove the paper template.

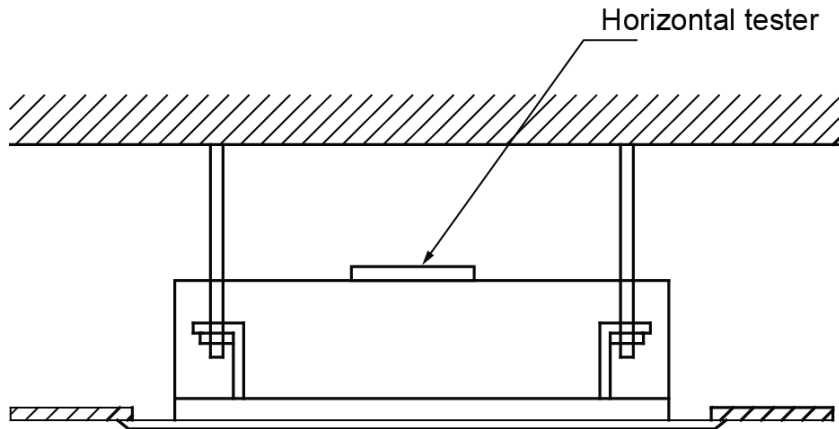
Installing the Suspension Bolts

1. Using the installation template, drill holes for bolts (four holes). (Fig. 1)
2. Install the bolts to the ceiling at a place strong enough to hang the unit. Mark the bolt positions from the installation template. With a concrete drill, drill for 12.7mm (1/2") diameter holes. (Fig.2)
3. Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer. (Fig.3)



Leveling

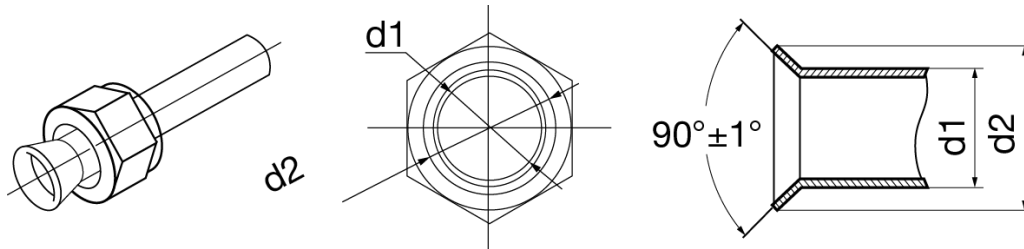
The water level test must be done after installing the indoor unit to make the unit is horizontal, as shown below.



Installation of the Connection Pipe

Flare Processing

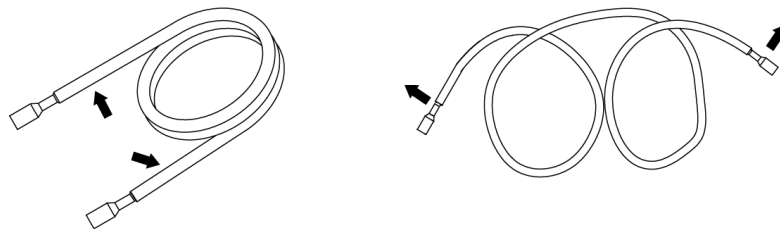
1. Cut the connection pipe with the pipe cutter and remove the burrs.
2. Hold the pipe downward to prevent cuttings from entering the pipe.
3. Remove the flare nuts at the stop valve of the outdoor unit and inside the accessory bag of the indoor unit, then insert them into the connection pipe. After that, flare the connection pipe with a flaring tool.
4. Check if the flared line is spread evenly and there are no cracks.



Bending Pipes

1. Shape the pipes with your hands. Be careful not to collapse or crush them.

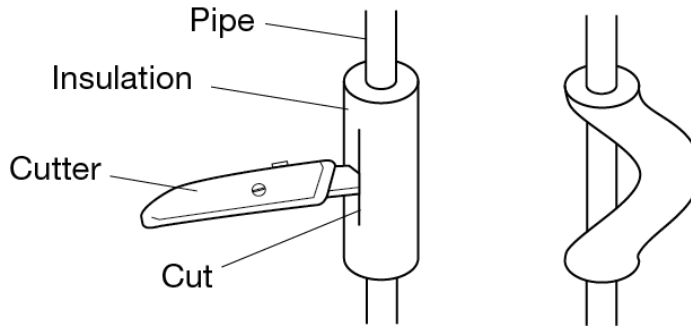
Extend the pipe by uncoiling it



Correct

Wrong

2. Do not bend the pipes at an angle greater than 90°.
3. When pipes are repeatedly bent or stretched, the material will become hardened, making them difficult to bend or stretch further. Do not have more than three bends in a pipe.
4. Do not bend pipe while covered in insulation. The pipe could kink or collapse. Instead, cut the heat insulation on the pipe with a utility knife, as shown, and bend when the pipe is exposed. After bending the pipe to the desired shape, replace the insulation on the pipe, and secure it with tape.



CAUTION

1. To prevent damaging the pipe avoid sharp bends. Pipe bends should have a radius of 6 inches (150 mm) or more.
2. Bending the pipe repeatedly in the same area may cause it to split or break.

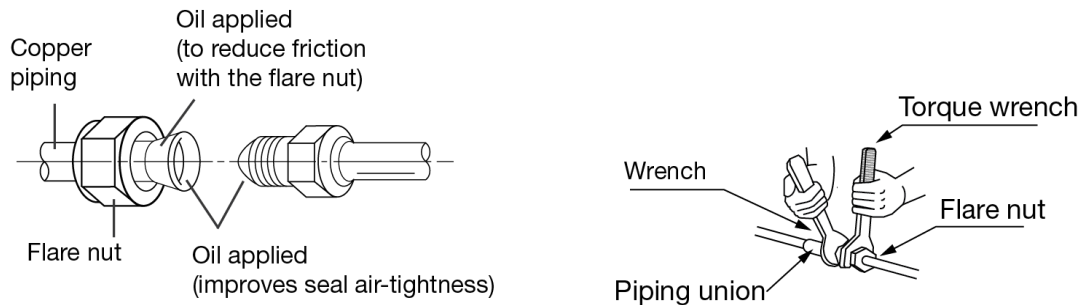
Connecting the Pipe at the Indoor Unit Side

Detach the caps and plugs from the pipes.

CAUTION

1. Be sure to connect the pipe against the port on the indoor unit correctly. If the pipe is not centered, the flare nut will not tighten smoothly. If the flare nut is forced to turn, the threads will be damaged.
2. Do not remove the flare nut until the pipe is connected, to prevent debris from getting into the piping system.

- When connecting or removing it the refrigerant pipes to the unit, it is recommended that both a wrench and torque wrench are used.
- When connecting, cover both the inside and outside of the flare nut with refrigeration oil. Tighten by hand, and then finish tightening it with a wrench.



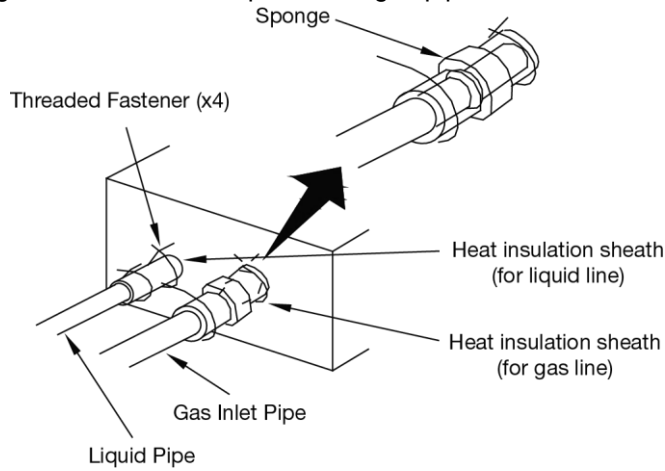
- Refer to table below to check if the wrench has been tightened properly over tightening can damage the nut and cause leakage).

Flare nut tightening torque

Pipe Diameter	Tightening Torque
1/4"(Inch)	15-30 (N·m)
3/8"(Inch)	35-40 (N·m)
5/8"(Inch)	60-65 (N·m)
1/2"(Inch)	45-50 (N·m)
3/4"(Inch)	70-75 (N·m)
7/8"(Inch)	80-85 (N·m)

- Examine the connection pipe for leaks, then perform the treatment of heat insulation, as shown in the illustration.

- Use a medium-sized sponge to insulate the coupler of the gas pipe.



CAUTION

Be sure to connect the gas pipe after connecting the liquid pipe completely.

Connecting the Pipe at the Outdoor Side Unit

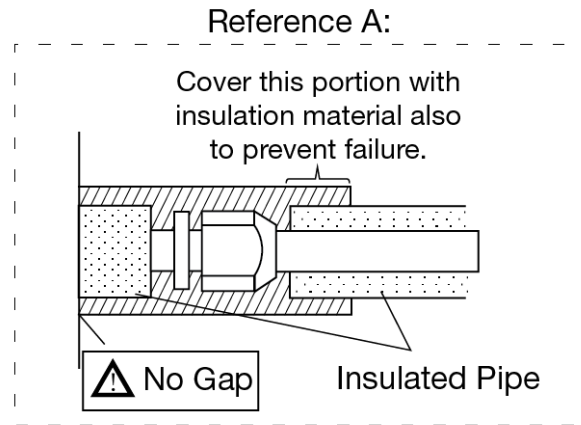
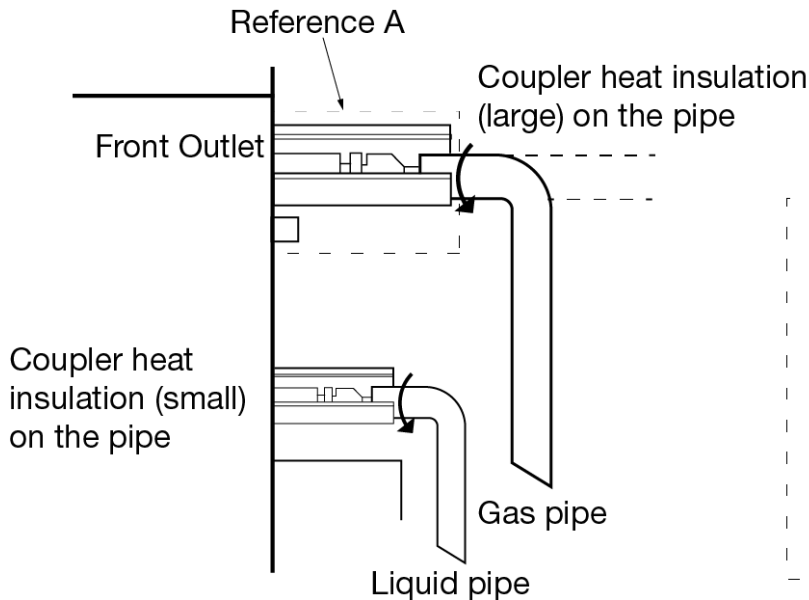
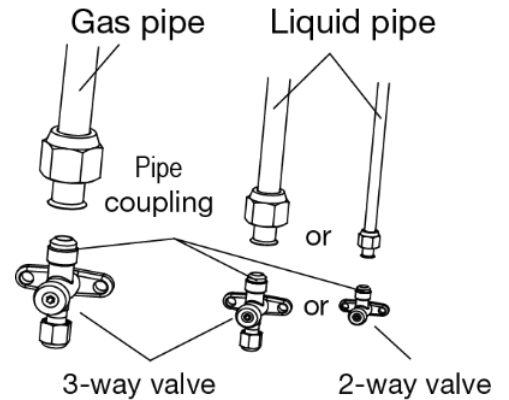
Tighten the flare nut of the connection pipe at the outdoor unit valve connector. The tightening method is the same as that as at the indoor side.

Checking the Pipe Connections for Leaking Gas

For both indoor and outdoor unit side, check the joints for gas leaking by the use of a gas leakage detector without fail when the pipes are connected.

Heat Insulation on the Pipe Joints (Indoor Side Only)

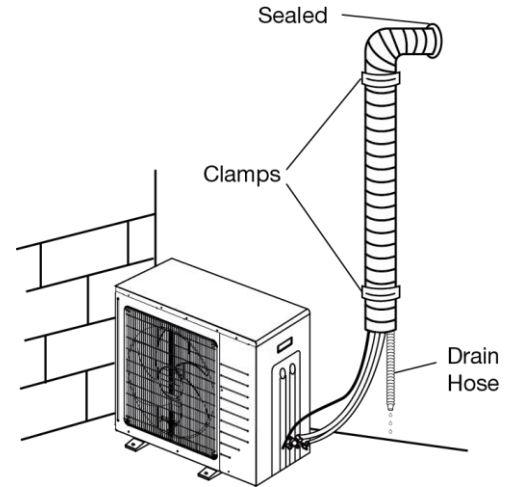
Stick coupler heat insulation (large and small) to the place where connecting pipes.



Liquid Pipe and Drain Pipe

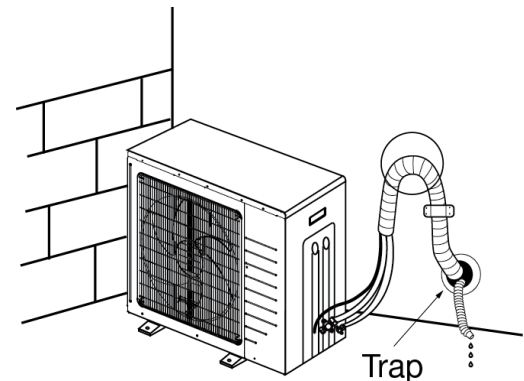
If the outdoor unit is installed lower than the indoor unit (See Illustration)

1. A drain pipe should be above ground and the end of the pipe should not be able to become submerged into water.
2. Taping pipes must be done from bottom to top.
3. All pipes are bound together by tape and fastened to the wall using saddles.



If the outdoor unit is installed higher than the indoor unit (See Illustration)

1. Taping should be done beginning at the lower portion and continuing to the upper portion.
2. All pipes should be bound and taped together, and also should use a water trap to prevent water from returning to the room.
3. Secure all pipes to the wall with saddles.



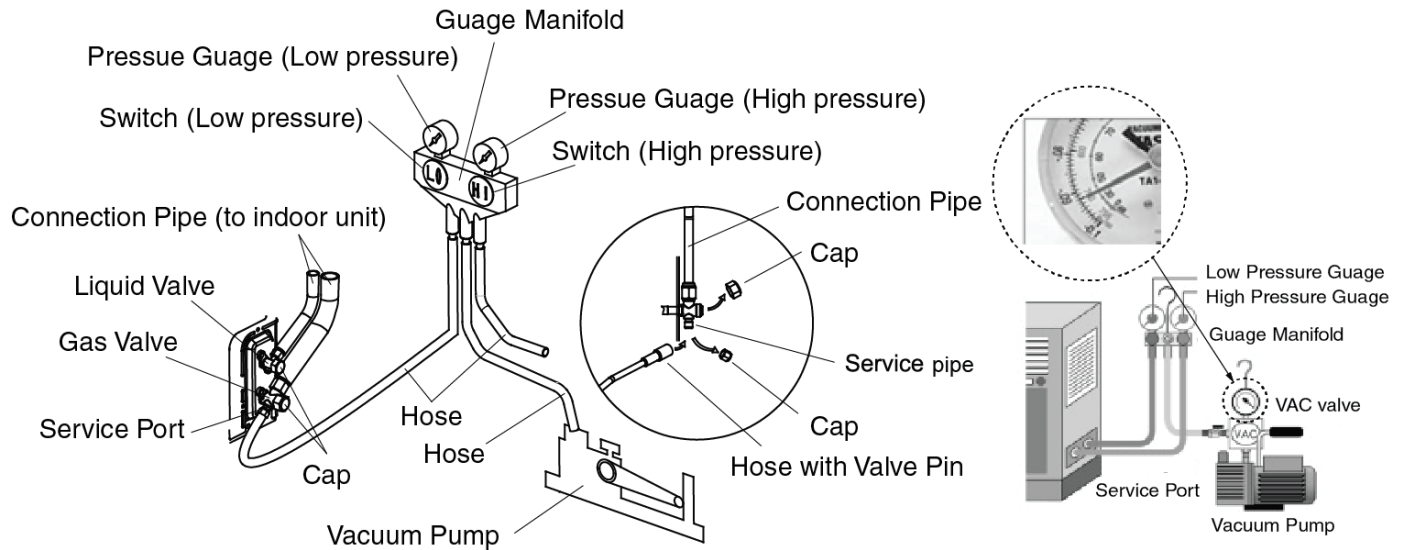
Vacuum and Gas Leakage Inspection

CAUTION

Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation!
There is no extra refrigerant in the outdoor unit for air purging!

Vacuum

1. Remove the caps of the liquid valve, gas valve and the service port.
2. Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas valve. The gas and liquid valves should be kept closed in case of refrigerant leak.
3. Connect the hose used for evacuation to the vacuum pump.
4. Open the switch at the lower pressure side of the manifold valve assembly and start the vacuum pump. The switch at the high pressure side of the manifold valve assembly should be kept closed, otherwise evacuation will fail.
5. The evacuation duration depends on the unit's capacity. Generally, 15 minutes for the 12k units, 20 minutes for the 18k units, 30 minutes for the 24 units. Make sure to verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -1.0Mp (-75cmHg), if not, it may indicate there is leak. Then, close the switch fully and stop the vacuum pump.
6. Wait for a period of time to see if the system pressure remains unchanged. We recommend 3 minutes for the units less than 18k, 5 minutes for the 18K~24k units. During this time, the reading of the pressure gauge at the low pressure side cannot be higher than 0.005Mp (0.38cmHg).
7. Open the liquid valve slightly, and let some refrigerant go into the connection pipe to balance the pressure inside and outside, so that air cannot come into the connection pipe when removing the hose. Note that the gas and liquid valve can be opened fully only after the manifold valve assembly is removed.
8. Replace the caps of the liquid valve, gas valve, and service port.

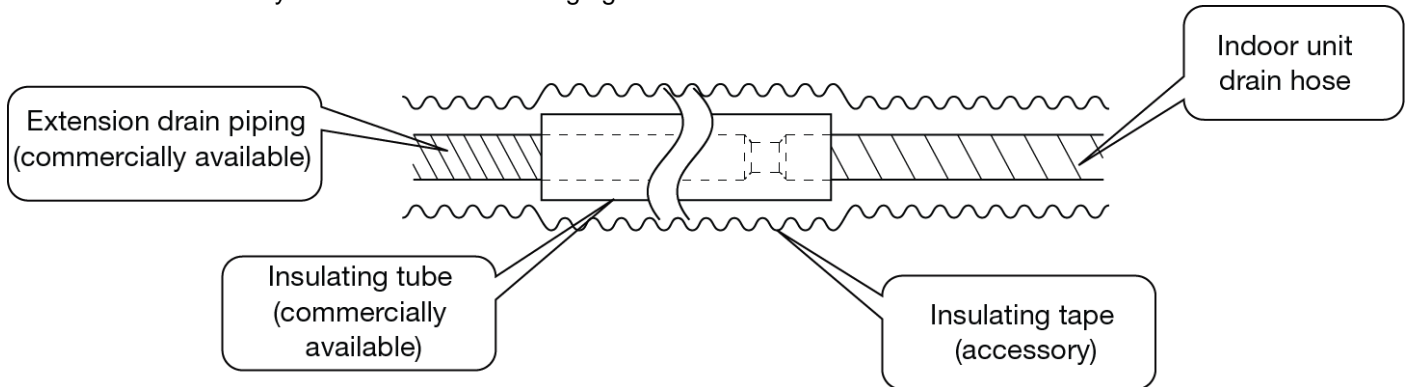


Note:

For larger capacity units, have a service port for both the gas valve and the liquid valve. During evacuation, it is possible to connect both hoses of the manifold valve assembly to the two service ports to quicken the evacuating speed.

Installation of the Drain Hose
Installation of Drain Piping

1. Keep piping as short as possible and slope it downwards at a gradient of at least 1/100 so that air will not remain trapped inside the pipe.
2. Keep pipe size equal to or greater than that of the connecting pipe.
3. Install the drain piping as shown and take measures to avoid condensation. Improperly rigged piping can lead to leaks and eventually wet furniture and belongings.

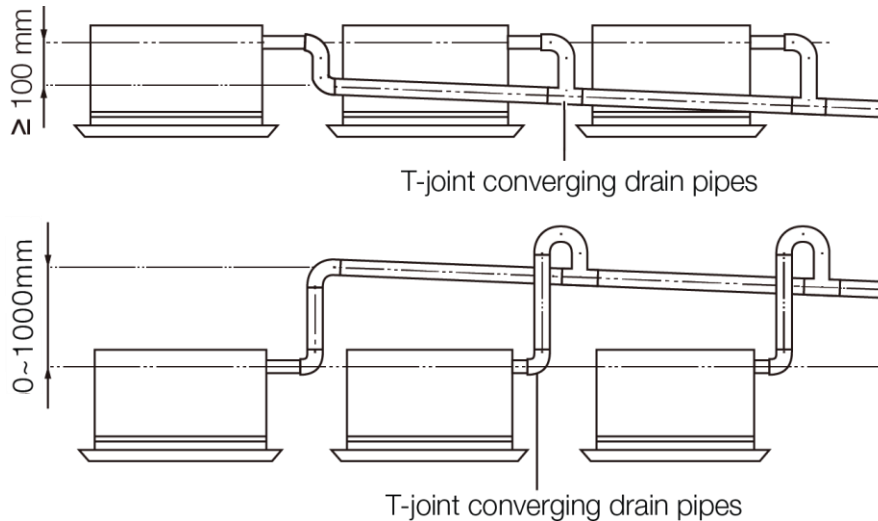


Installing the Drain Pipes

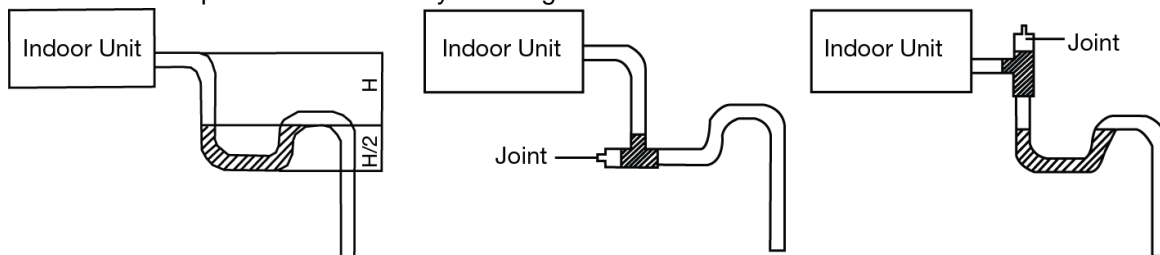
1. Insert the drain pipe to the drain outlet of the unit and then tighten the clamp securely with tape.
2. Connect the extension drain pipe to the drain pipe and then tighten the clamp with tape.

<p>During the installation, distance from soft drain pipe to the gasket is A mm when the bolt is tightened.</p> <table border="1"> <thead> <tr> <th>Indoor Unit</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>VRFI-12EC4-D2B(55)5</td> <td>10±2mm(2/5±2/25inch)</td> </tr> <tr> <td>VRFI-18EC4-D2B(55)5</td> <td>10±2mm(2/5±2/25inch)</td> </tr> <tr> <td>VRFI-24EC4-D2B(55)5</td> <td>15±3mm(3/5±1/10inch)</td> </tr> </tbody> </table> <p>Do not apply PVC or similar glue on the joints of the two ends of drain pipe.</p> <ol style="list-style-type: none"> 1. Metal clamp 2. Drain hose (accessory) 3. Grey tape (accessory) 	Indoor Unit	A	VRFI-12EC4-D2B(55)5	10±2mm(2/5±2/25inch)	VRFI-18EC4-D2B(55)5	10±2mm(2/5±2/25inch)	VRFI-24EC4-D2B(55)5	15±3mm(3/5±1/10inch)	<p>Insulate the pipe clamp and the drain hose using heat insulation sponge.</p> <ol style="list-style-type: none"> 1. Metal clamp (accessory) 2. Insulation sponge (accessory) 3. Grey tape (accessory)
Indoor Unit	A								
VRFI-12EC4-D2B(55)5	10±2mm(2/5±2/25inch)								
VRFI-18EC4-D2B(55)5	10±2mm(2/5±2/25inch)								
VRFI-24EC4-D2B(55)5	15±3mm(3/5±1/10inch)								

3. When unifying multiple drain pipes, install the pipes as Fig.20. Select converging drain pipes whose gauge is suitable for the operating capacity of the unit.(take the cassette type unit for example)



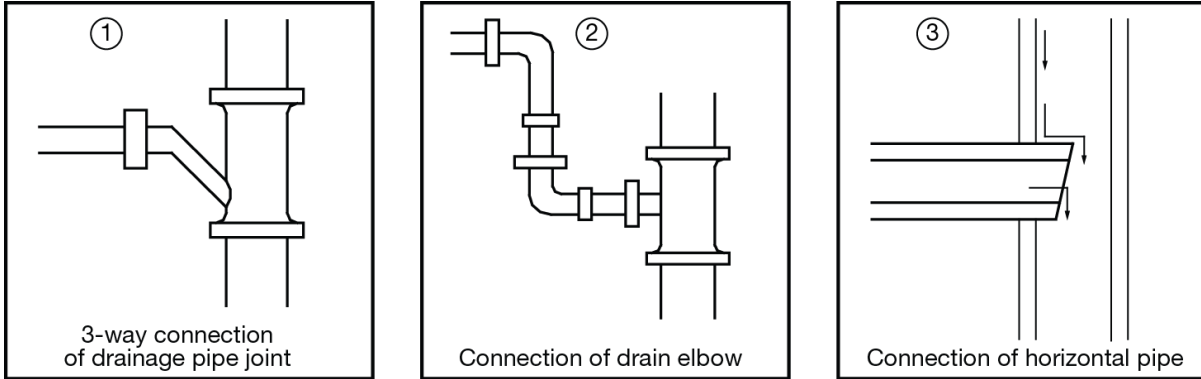
4. When the drain hose cannot keep a sufficient gradient, it is necessary to fit a riser pipe (field supplied) to it.
5. If the air flow of the indoor unit is high, this may cause negative pressure and result in return suction of outdoor air. Therefore, a U-type water trap shall be designed on the drainage side of each indoor unit.
6. Install one water trap for each unit.
7. Installation of water trap shall consider easy cleaning in the future.



8. Connection of drainage branch pipe to the standpipe or horizontal pipe of drainage main pipe

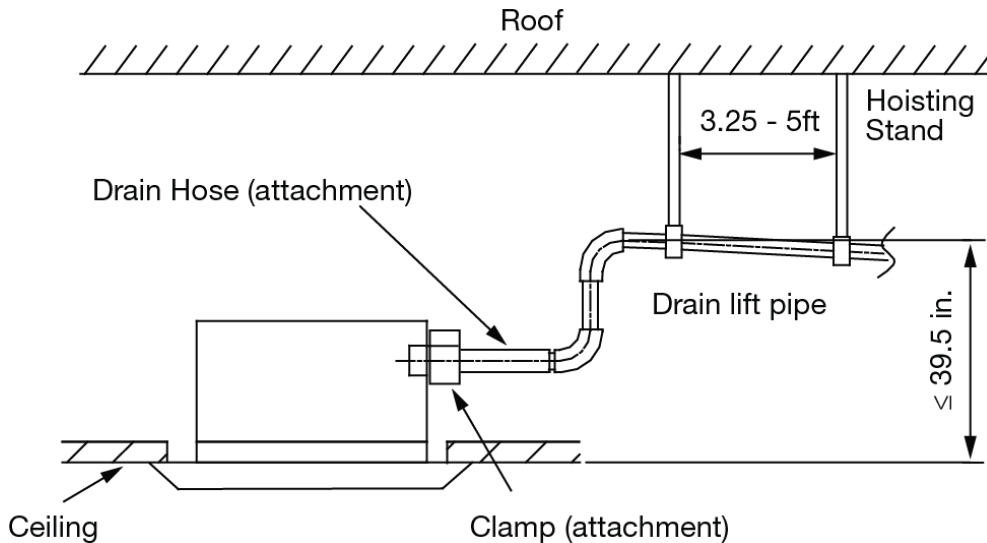
The horizontal pipe cannot be connected to the vertical pipe at the same height. It should be connected using the method shown below:

- NO.1: Attach the 3-way connection of the drainage pipe joint as shown in illustration 1.
- NO.2: Attach the drain elbow as shown in the second illustration 2.
- NO.3: Attach the horizontal pipe as shown in illustration 3.

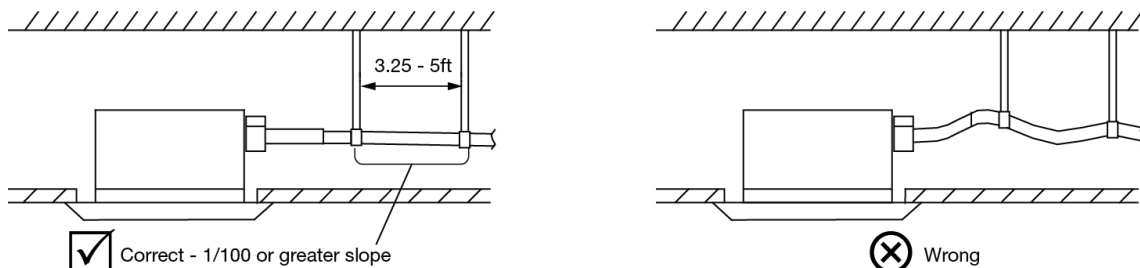


Precautions When Doing Riser Piping Work

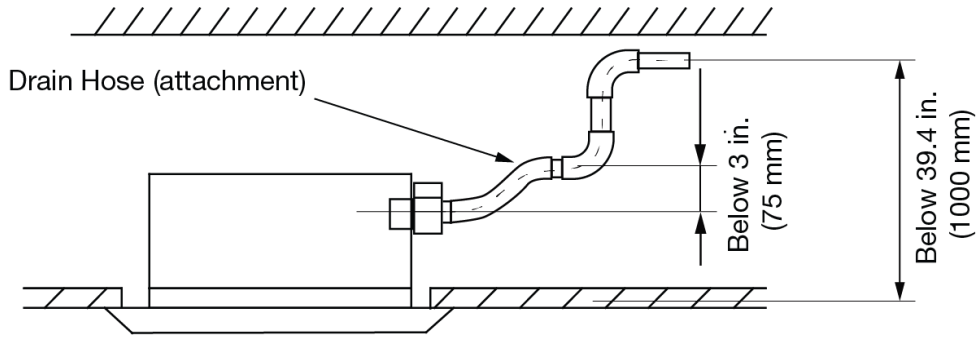
- 1. Make sure that heat insulation work is executed on the following 2 spots to prevent any possible water leakage due to condensation.
- 2. Connect the drain hose to the drain lift pipe, and insulate them.
- 3. Connect the drain hose to the drain outlet on the indoor unit, and tighten it with the clamp.



- 4. Make sure the pipe has a downward gradient of 1/100 or more for the drain pipe. To accomplish this, mount supporting brackets at an interval of 3.25-5 ft (39-60 in.).

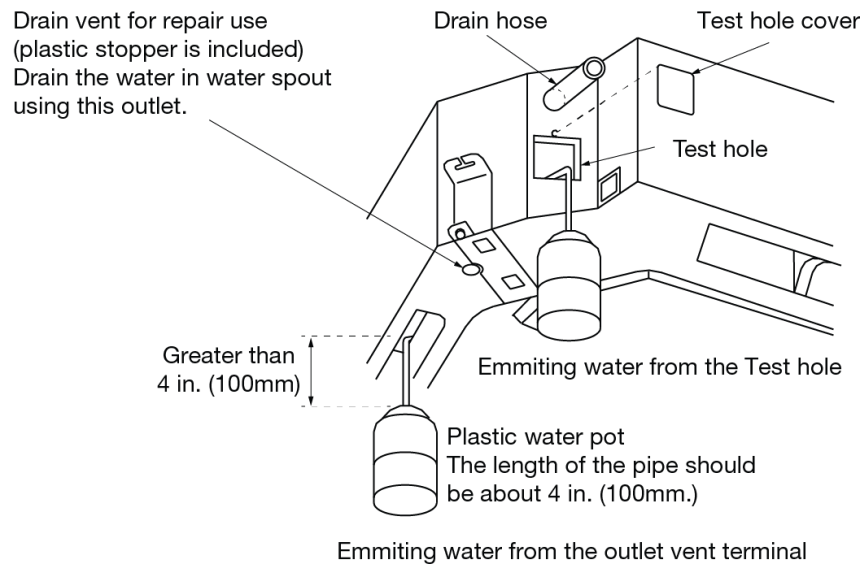


- The incline of attached drain hose should be 3 in. (75 mm) or less so that the drain outlet does not have to withstand additional force.



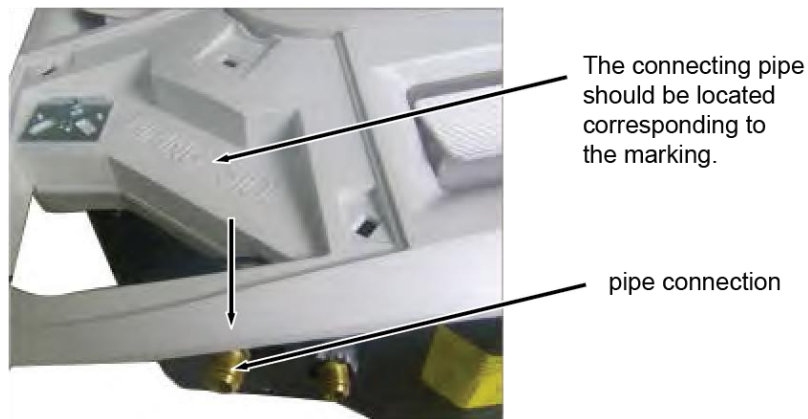
Testing of Drain Piping

Add approximately 1 liter of water slowly into the drain pan and check drainage flow while the system is running in COOLING mode.

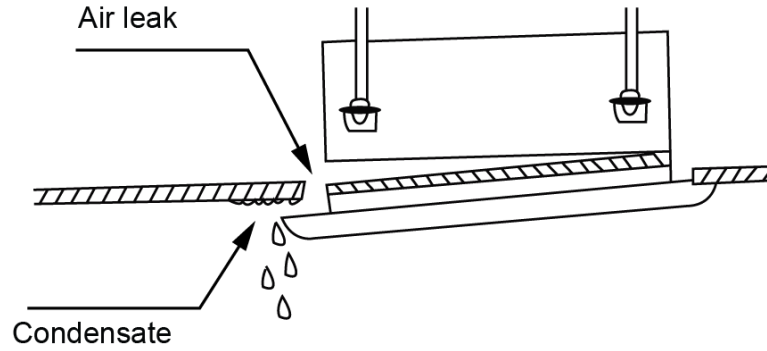


Panel Installation Precautions

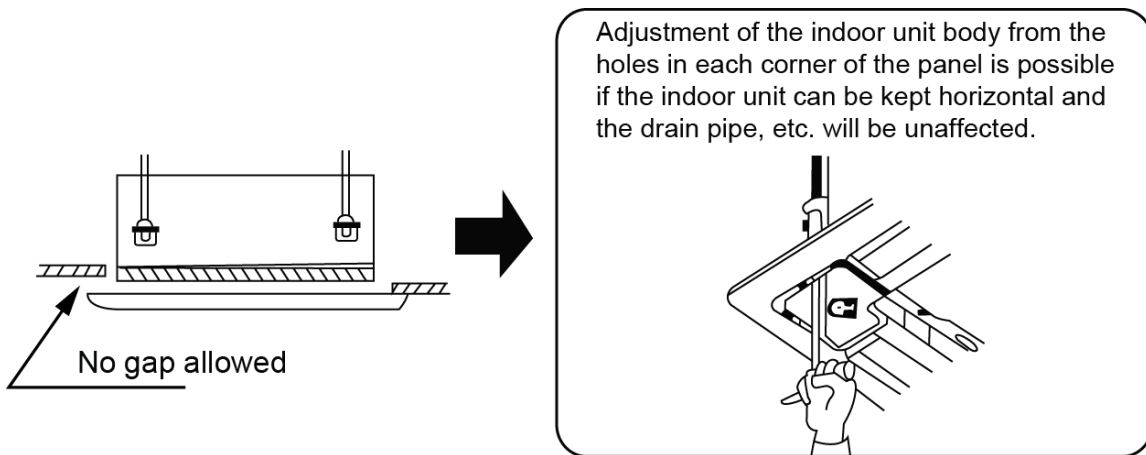
- See the figure below for the relationship of the front panel and the pipe connection.



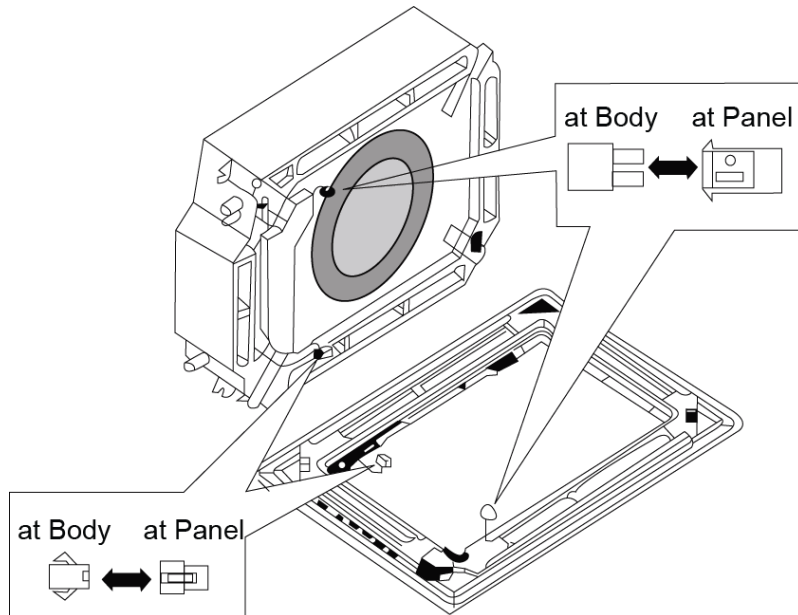
2. Improper tightening of the screws may cause air leakage or condensate leakage as shown below.



3. If a gap still exists between ceiling and fascia panel after tightening the screws, readjust the height of the indoor unit.

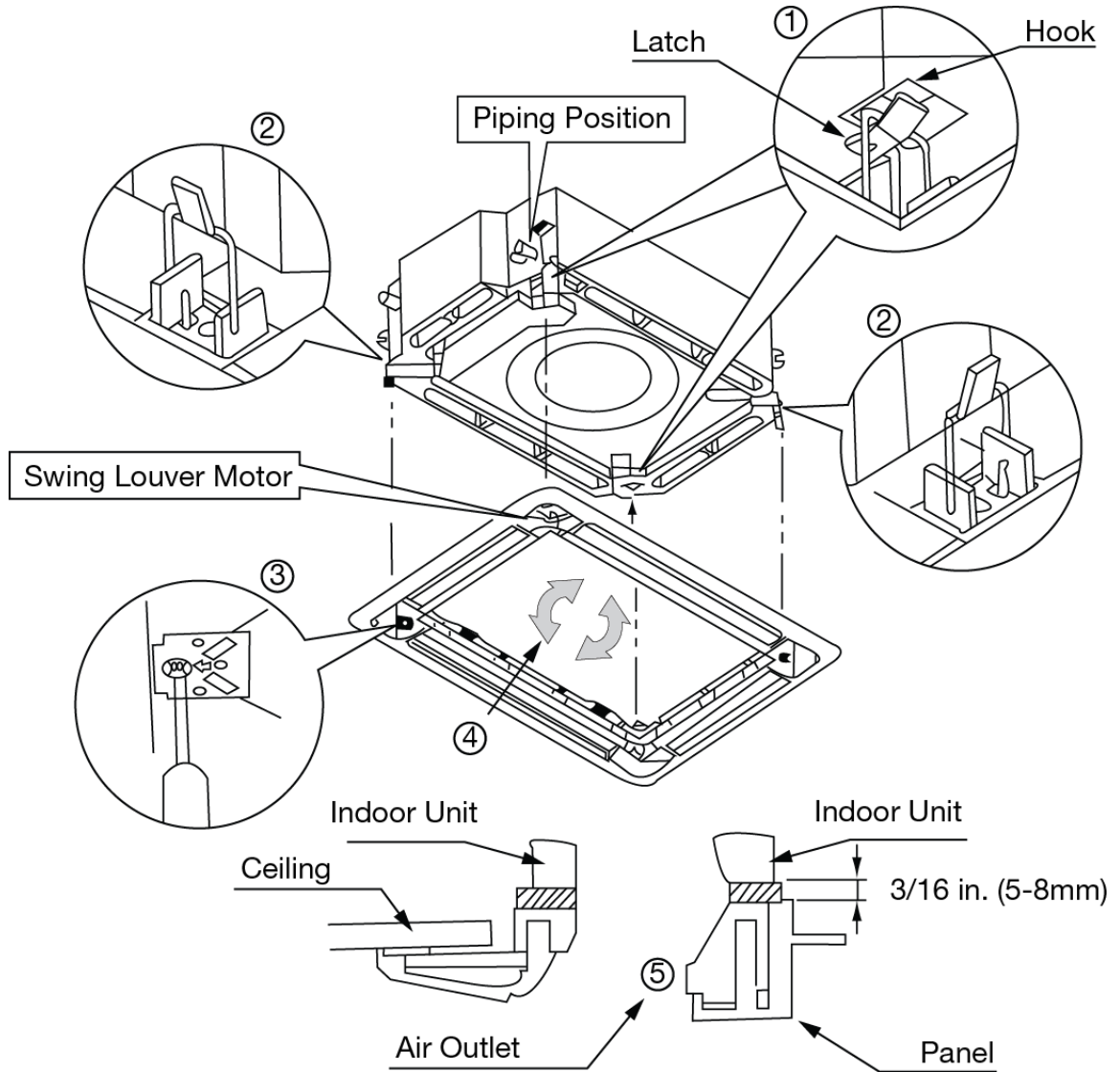


4. Wire the swing flap as shown in the illustration below.



Installing the Panel

1. Place the panel at the unit, and latch the hooks beside and opposite of the swing louver motor.
2. Latch other two hooks.
3. Tighten four hexagonal screws under the latches approximately 5/8 in. (15mm).
4. Adjust the panel along the direction indicated by the arrow as shown in Fig.35.
5. Tighten the screws until the thickness of the sealing material between the panel and the indoor unit reduces to 3/16 in. (5-8mm).



Electrical Wiring Wiring Precautions

⚠ WARNING

1. Before obtaining access to terminals, all supply circuits must be disconnected
2. The rated voltage of the unit is as shown as Table 4
3. Before turning the unit on, verify that the voltage is within the 198~264V range (for single phase unit) or 342~457V range (for three-phase unit).
4. Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.
5. The special branch circuit breaker is installed with the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3 mm between the contacts of each pole.
6. Perform wiring work in accordance with national and local standards so that the air conditioner can be operated safely and correctly.
7. Install a leakage special branch circuit breaker in accordance with the related laws and regulations and electric company standards.

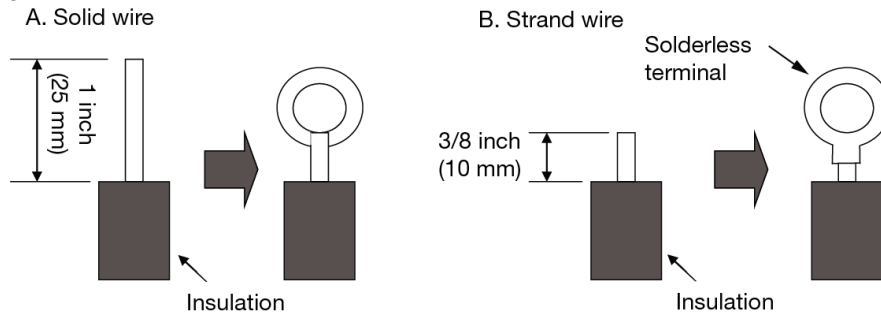
⚠ CAUTION

1. The power source capacity must be the sum of the air conditioner current and the current of other electrical appliance. When the current contracted capacity is insufficient, change the contracted capacity.
2. When the voltage is low and the air conditioner is difficult to start, contact the power company to raise the voltage.

Electrical Wiring

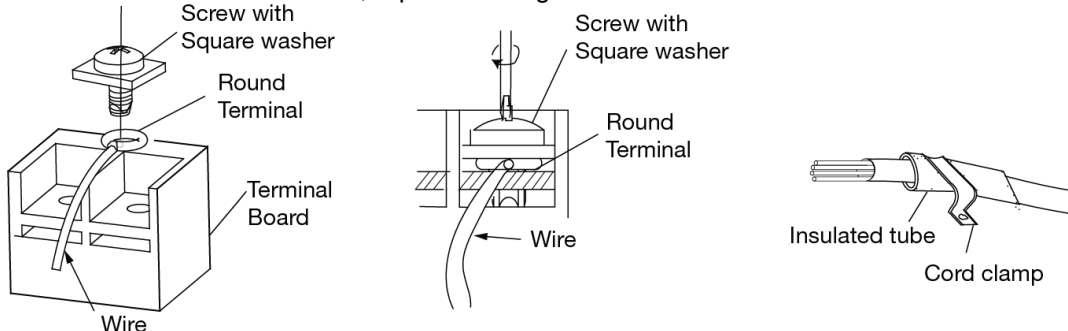
1. For solid core wiring (Illustration below)

- 1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation about 25 mm (15/16") .
- 2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- 3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
- 4) Shape the loop wire properly, place it on the terminal board and secure it with the terminal screw using a screwdriver.



2. For strand wiring (Illustration below)

- 1) Cut the wire end using wire cutter, then strip the insulation back approximately 3/8" (10mm).
- 2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- 3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.
- 4) Position the round terminal wire, replace and tighten the terminal screw with a screwdriver.



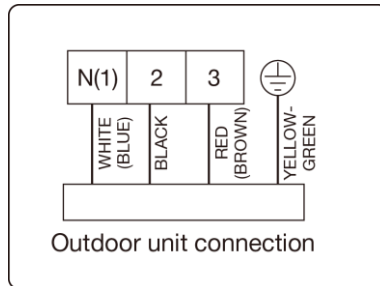
3. Once connected, secure the power and connection wires with a cord clamp. (see illustration of preceding page)

⚠ WARNING

1. Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
2. Match the terminal block numbers and connection wire colors with those of the indoor unit side.
3. Improper wiring can cause burning or damage to the electric components.
4. Connect the wires firmly to the terminal block. Improperly securing the wiring can cause a fire.
5. Always fasten the outside covering of the connection cord with cord clamps. (If the insulator is not clamped, electric leakage may occur.)
6. Always connect the ground wire.

Electric wiring between the indoor and outdoor units

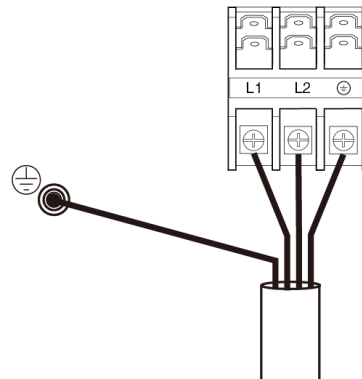
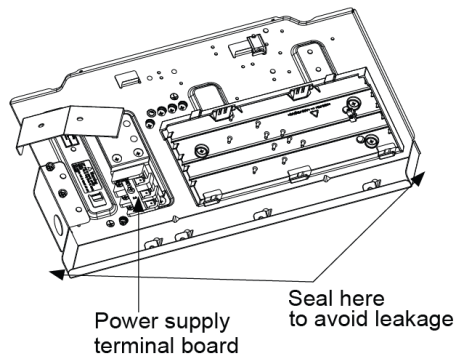
Single-phase units (12~24k)



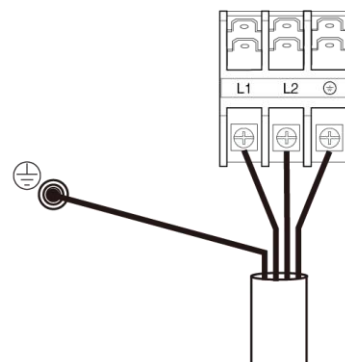
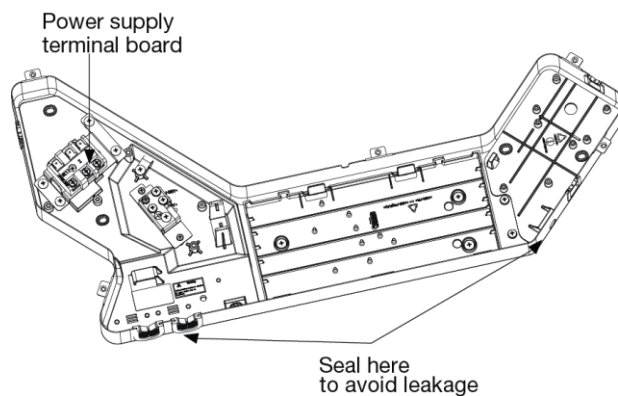
Electric wiring of indoor unit side

Remove the electric box cover from the electric box sub-assembly and then connect the wire.

12k and 18k



24k:



⚠ CAUTION

1. Tighten the power wires respectively on the terminal boards using the screws. Faulty connections can result in a fire.
2. If the power supply wires are connected incorrectly the air conditioner may be damaged.
3. Connect the indoor unit connection cord properly based on the corresponding marks as shown in the illustrations on the previous page.
4. Ground both the indoor and outdoor units using a ground wire.
5. The unit should be grounded in compliance with the applicable local and national codes.

Installation of Controllers

Refer to the Installation Manual of the controller for more details.

Test Running

Trial Operation and Testing

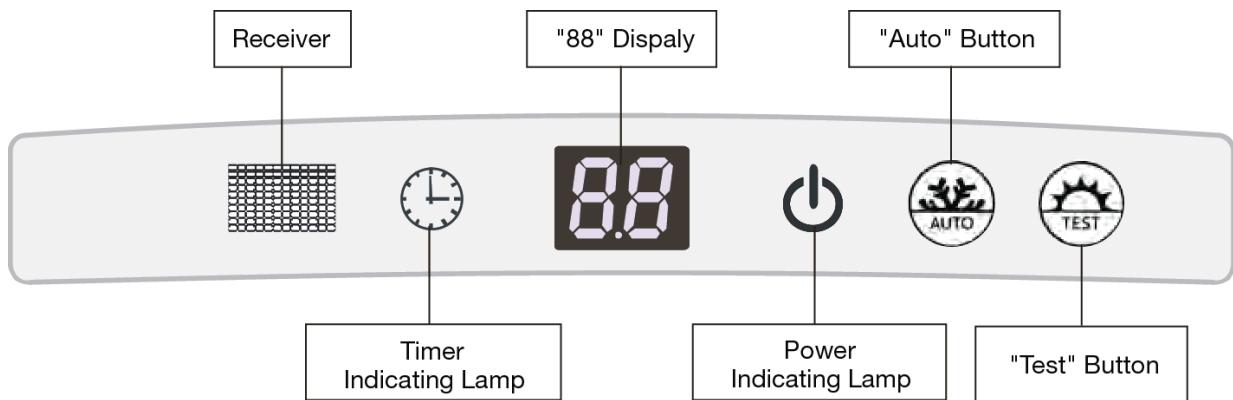
1. The error codes and definitions:

Number	Error Code	Error
1	E1	Compressor high pressure protection
2	E2	Indoor anti-freeze protection
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant collecting mode
4	E4	Compressor high discharge temperature protection
5	E5	AC over-current protection
6	E6	Communication error
7	E7	Mode conflict
8	E8	Anti-high temperature protection
9	E9	Full water protection
10	F1	Indoor ambient temperature sensor is open/short circuited
11	F2	Indoor evaporator temperature sensor is open/short circuited
12	F3	Outdoor ambient temperature sensor is open/short circuited
13	F4	Outdoor condenser temperature sensor is open/short circuited
14	F5	Outdoor discharge temperature sensor is open/short circuited
15	C5	Jumper cap malfunction protection
16	EE	Loading EEPROM malfunction

Notes:

- If you see an error code not listed, please contact qualified professionals for service.
- When the unit is connected to the wired controller, the error code will be simultaneously shown on it.

2. Instructions to the Error Indicating Lamps on the Panel of the Cassette Type Unit.



Power and ON/OFF Indicating Lamp:

The indicator lamp will turn red when the unit is powered on. The indicator lamp will turn white when the unit is started.

Timer Indicating Lamp:

Timer indicator on indoor unit will be lit when the TIMER ON is set while the unit is turned off, or when the TIMER OFF is set while the unit is turned on.

"88" Display:

When there is no error, the dual-8 nixie tube display the set temperature.

After receiving the command to display the indoor ambient temperature from the remote controller, the Indoor Unit will display the room temperature for 3s and then resume to display the set temperature.

If there is error, the error code will be displayed.

If there are multiple errors, the error codes will be displayed in sequence.

AUTO button:

Used for turning on or turning off the unit. When this button is used to turn on the unit, it will power on the unit, and automatically go into AUTO mode.

TEST button:

Used to test the units. This button is only valid for the first 3 minutes after the unit is energized

NOTE:

1. If the Display Light on the indoor unit is turned off, when the remote controller is used to send the unit a command, the display will turn on for 3s and then back to off.
2. When the wired controller is connected to the unit, the indoor unit display is disabled, and the unit won't receive the remote control command. Point your remote at the wired controller instead of at the display of the unit.

Troubleshooting and Maintenance

Troubleshooting

If your air-conditioning unit is experiencing abnormal operation, or a system failure, please follow these steps before repair:

Failure	Possible Causes
The unit will not start	<ol style="list-style-type: none"> 1. The power supply is not connected. 2. Electrical leakage of air-conditioning unit causes tripping of the breaker. 3. The operating keys are locked on the remote or wall mount controller. 4. The control loop has failure.
The unit operates for a while and then stops.	<ol style="list-style-type: none"> 1. There is obstacle in front of the condenser. 2. The control loop is abnormal. 3. Cooling operation is selected when the outdoor ambient temperature is above 118°F (48°C).
Poor cooling performance	<ol style="list-style-type: none"> 1. Air filter is dirty or obstructed 2. There is heat source or too many people in the room. 3. A door or window is open. 4. There is obstacle at the air intake or outlet. 5. The set temperature is too high. 6. There is a refrigerant leakage. 7. The room temperature sensor is malfunctioning.
Poor heating performance	<ol style="list-style-type: none"> 1. Air filter is dirty or obstructed 2. Doors or windows in the room are not closed 3. The set room temperature is too low. 4. There is a refrigerant leakage. 5. The outdoor ambient temperature is lower than -5°F. 6. Control loop is abnormal.

Note:

After checking the list of above items, and taking steps to solve the issue, if the air conditioning system is still not running normally, or functioning well, please stop the operation of the unit immediately and contact a local HVAC service technician. A qualified HVAC technician will be required to diagnose and service the system.

Routine Maintenance

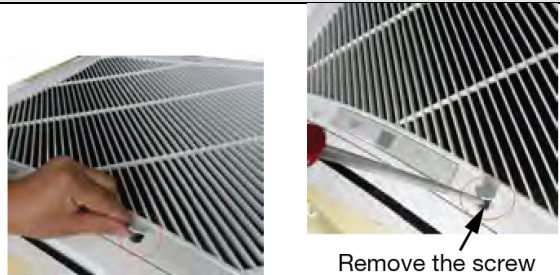

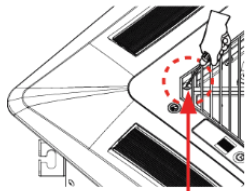
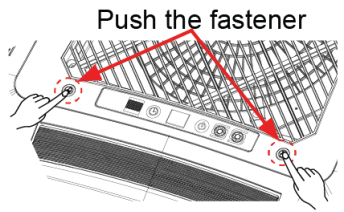
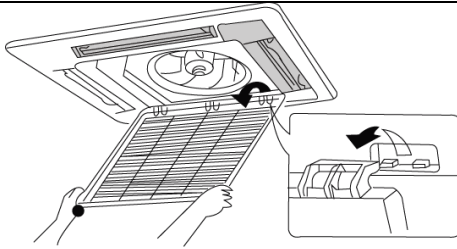
Only qualified service persons should perform maintenance.

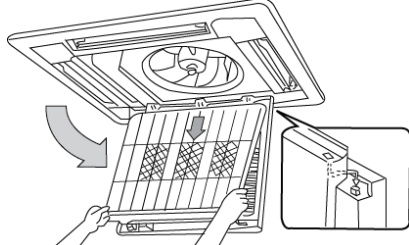
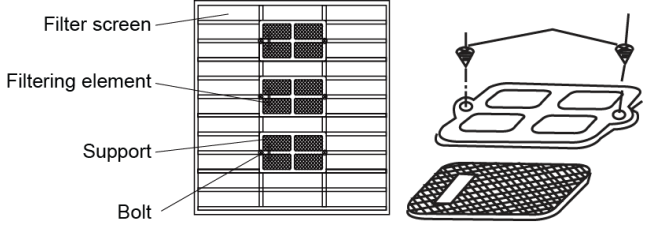
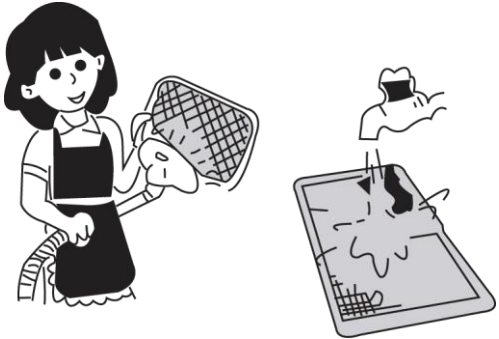
Before accessing to terminal devices, all power supply circuits should be disconnected.

Do not expose to water, or air that is 122°F (50°C) or warmer for cleaning air filters or outside panels.

Notes:

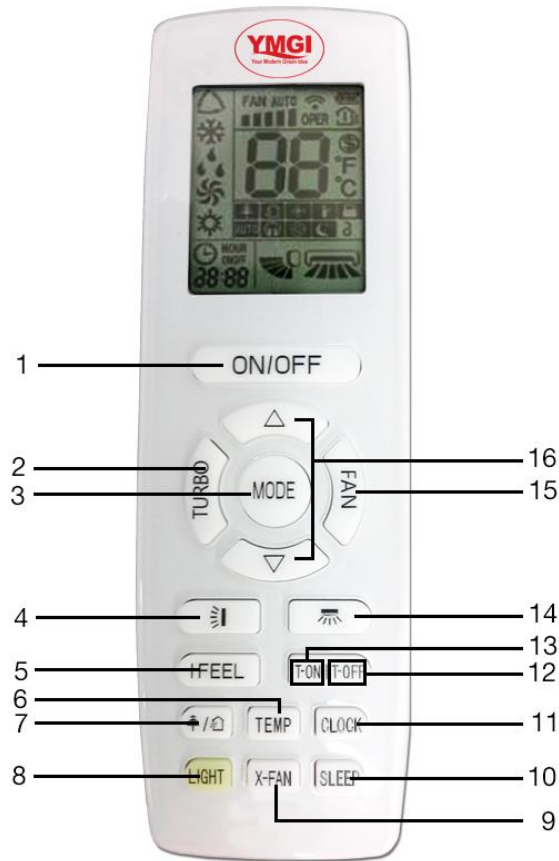
1. Do not operate the air conditioner with the filter uninstalled, otherwise dust would come into the unit.
2. Do not remove the air filter except for cleaning. Unnecessary handling may damage the filter.
3. Do not clean the unit with anything than contains: acetone, gasoline, benzene, thinner, polishing powder or liquid insecticide. These can discolor and warp the unit.
4. Do not get components of the indoor unit wet. This can cause electric shock or fire hazard.
5. Increase the frequency of cleaning if the unit is installed in a room where the air is excessively dusty. (As a general rule, we recommend cleaning the filters once every six months.
6. If dirt becomes impossible to clean, replace the air filter.

How to clean the air filter	
<p>1. Open the air inlet grille</p> <p>How to open the panel grille of the 24k cassette type unit</p> <ol style="list-style-type: none"> a. Push the buckle as shown in the figure. b. Remove the screws under buckles using a screwdriver. c. Push the fastener and open the panel grille 	 <p style="text-align: right;">Remove the screw</p> 
<p>How to open the panel grille of the 12k / 18k cassette type unit</p> <ol style="list-style-type: none"> a. Remove the screws using a screwdriver as shown in the illustration. b. Push the two fasteners to open the panel grille. 	 <p style="text-align: center;">Remove the screw</p>  <p style="text-align: center;">Push the fastener</p>
<p>2. Disassemble the air inlet grille</p> <ol style="list-style-type: none"> a. Open the air inlet grille at 45° angle, lift the pegs to remove the grille. 	

<p>3. Disassemble the filter screen a. Draw out the filter screen and remove it.</p>	
<p>4. Disassemble the air purifier a. Remove the air purifier after removing the fixed screws on it.</p>	
<p>5. Clean the filter screen a. Clean the filter screen using a vacuum cleaner. b. If oil stains on the filter cannot be removed or cleaned with a vacuum, wash the filter using warm water and a mild detergent. c. Do not dry filters in direct sunlight.</p> <p>Note:</p> <ul style="list-style-type: none"> • Never use water warmer than 113°F (45°C). Hot water can cause color fading, or the plastic to yellow. • Never dry filters near open flame. The plastic can warp or catch fire. 	
<p>6. Replace the filter into the frame.</p>	<p>The same as step 3</p>
<p>7. Re install the grille.</p>	<p>The same as step 1 and 2</p>

Remote Controller YAP1F



Button Name and Function Introduction



No.	Button name	Function
1	ON/OFF	Turn on or turn off the unit
2	TURBO	Set Turbo function
3	MODE	Set operating Mode
4		Set up & down Swing status
5	I FEEL	Set I FEEL function
6	TEMP	Switch Temperature displaying type on the unit's display
7		Set Health function and Air function
8	LIGHT	Set Light function
9	X-FAN	Set X-FAN function
10	SLEEP	Set Seep function
11	CLOCK	Set Clock of the system
12	T-OFF	Set Timer Off function
13	T-ON	Set Timer On function
14		Set left & right Swing status
15	FAN	Set Fan speed
16		Set Temperature and Time

Preparation before Operation

When using the remote control for the first time or after replacing the batteries, please set the system time to the current time in the following steps:

1. Press the CLOCK button. The  icon will begin blinking.
2. Press the ▲ or ▼ button. The clock time will increase or decrease.
3. Press CLOCK button again to confirm the time. The  icon will stop blinking. The display will show current time.

Introduction of operation functions

1. Selecting operation MODE

In unit ON status, press MODE button to select operation mode in the following sequence.



2. Setting Temperature

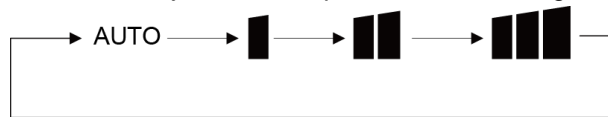
When the unit is in powered ON status, press ▲ button to increase set temperature and press ▼ button to decrease set temperature. The range of temperature is from 60.8°F - 86°F (16°C - 30°C).

NOTE:

Under AUTO MODE, the system is automatically set to 76°F, and cannot be adjusted manually.

3. Fan Speed

In unit ON status, press the FAN button to adjust the fan speed in the following sequence:





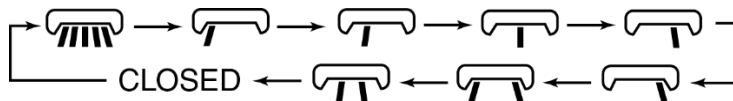
When operation mode changes, the fan speed is saved.

Under dry (dehumidify) mode, the fan speed is set to low and cannot be adjusted.


4. Swing Function

• Left and Right SWING



1. In SWING status, press  button to adjust left and right SWING status.
2. In fixed-angle SWING status, press  button to adjust left and right SWING angle. The settings cycle will follow the sequence below:

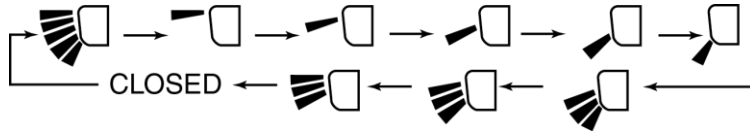


NOTE:


Left/Right SWING will operate continuously in 2 second cycles. Swing states will change accordingly to the sequence displayed above, or switch to CLOSED state and  state.

Up and Down SWING:

1. In simple SWING status, press  button to adjust up and down SWING status;
2. In fixed-angle SWING status, press  button to adjust up and down SWING angle circularly as below:





NOTE:

Up/Down SWING will operate continuously in 2 second cycles. Swing states will change accordingly to the sequence displayed above, or switch to closed state and  state.

5. TURBO function

In Cooling or Heating Mode, press TURBO button to set TURBO function.

When  icon is displayed the TURBO function is on.

When  is not displayed the TURBO function is off.

When TURBO function is on, the unit operates at high speed to achieve rapid cooling or heating.

When TURBO function is off, the unit operates in normal fan speed settings.




6. LIGHT

The LIGHT setting will turn on and off the status display on the unit. The display shows the unit's present operating status (Mode, Set Temperature, etc.).

To turn off the LIGHT, press the LIGHT button. Press again to turn the display back on.

7. Viewing Ambient Temperature

In unit on status, the receiver light board or wired controller is defaulted to display the setting temperature. Press TEMP button to view indoor or outdoor ambient temperature.

- When  icon is displayed, it means the displayed temperature is set temperature.
- When  icon is displayed, it means the displayed temperature is indoor ambient temperature.
- When  icon is displayed, it means the displayed temperature is outdoor ambient temperature.



NOTE:

Setting temperature is always displayed on Remote Controller.

8. X-FAN

The X-FAN function dries any condensation that has accumulated on the Indoor Unit's evaporator. If you are experiencing high humidity, or live in a humid climate, this can help prevent mildew inside the unit.



To use, when the unit is in Cool or Dry mode, press X-FAN button to set X-FAN function.

- When  is displayed, X-FAN function is on.
- When  is not displayed, X-FAN function is off.

9. Health Function







Health function is available if your unit is equipped with an ION generator. When health function is on, the ION generator will begin operation, adsorbing dust and killing the bacteria in the air.

- In unit on status, press  button to set the health function.

- When  is displayed, Health Function is on.
- When  is not displayed, Health Function is off.



10. Fresh Air Function

If your Indoor Unit is connected with a fresh air valve, the air function controls the connection to the fresh air valve. This allows you to control the fresh air volume, and improve the air quality inside the room

- Press  /  button until  is displayed, then the air function is turned on.
- Press  /  button until  is disappeared, then the air function is turned off.

11. Sleep Function

In unit on status, press SLEEP button to turn on or turn off sleep function.



- When  is displayed, the sleep function is on.
- When  is not displayed, the sleep function is off.

NOTES:

1. Sleep function cannot be set when the system is in Auto or Fan mode;
2. When the unit is turned off or the mode is changed, sleep function is cancelled.

12. I FEEL Function

When the I FEEL function is on, the unit will adjust the room temperature according to the temperature detected in the area around the remote control. Make sure the remote is in range of the Indoor Unit so that it has uninterrupted communication with the Indoor Unit.



- In unit ON status, press **I FEEL** button to turn on or turn off I FEEL function.
- When  icon is displayed, I FEEL function is on.
- When  icon is not displayed, I FEEL function is off.

13. Setting the Timer



You can set the operation time of unit as needed. You can also set timer ON and timer OFF in combination.

Before setting, check if the time of the system is the same as the current time. If not, set the time according to the current time.







1. Setting TIMER OFF

- a. Press the T-OFF button. "OFF" will blink on the remote display, and the clock will display the last time Timer Off time that was set.
- b. Press  or  buttons to adjust the set Off time.
- c. Press the T-OFF button to confirm the Timer Off setting. "OFF" will appear on the remote display next to the current time.
- d. To turn off the Timer Off function, press the T-OFF button. "OFF" will no longer be displayed next to the current time.

2. Setting TIMER ON

- a. Press the T-ON button. "ON" will blink on the remote display, and the clock will display the last Timer On time that was set.
- b. Press  or  buttons to adjust the set On time.
- c. Press the T-ON button again to confirm the Timer On setting. "ON" will appear on the remote display next to the current time.
- d. To turn the Timer On function off, press the T-ON button. "ON" will no longer be displayed next to the current time.

Special Functions


- **Keypad (Child) Lock**
 1. To lock the remote, press ▲ and ▼ button simultaneously to lock the buttons on the remote controller. The  icon will appear on the remote control display.
 2. To unlock the remote, press ▲ and ▼ simultaneously to unlock the buttons on remote controller. The  icon will no longer appear on the remote control display.
 3. If the buttons are locked, the  icon will blink 3 times when any button is pressed, and the operation will be invalid.
- **Switching Temperature Scale**
 1. In unit OFF status, press **MODE** button and ▼ button simultaneously to switch temperature scale between °C and °F.
- **Energy Saving Function**
 1. In unit ON status and in Cooling mode, press CLOCK and TEMP buttons simultaneously to enter Energy Saving mode.
 2. When  is appears on the remote control display the Energy-Saving Function is on.
 3. When  does not appear on the remote control display Energy-Saving Function is off.
 4. To turn off the energy-saving function, press CLOCK and TEMP buttons simultaneously and  is not displayed.

NOTE:

Energy-Saving function is only available in Cooling Mode, and will exit when Mode is changed, or Sleep function is turned on.

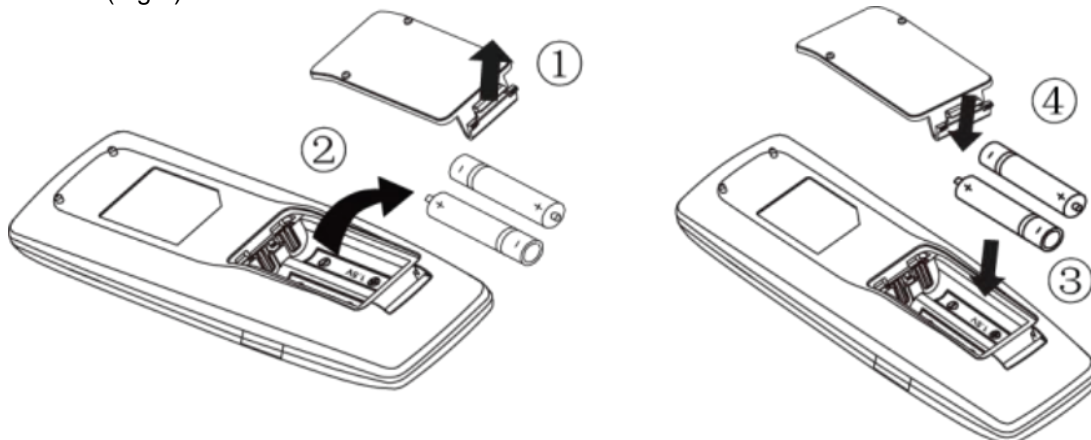
- **Absence Function**

In winter, Absence function will keep the indoor ambient temperature above 0°C (32°F) to avoid freezing. The Absence function is only available in Heating Mode, and it will shut off when the Mode is changed.


1. In unit ON status and in Heat Mode, press CLOCK and TEMP buttons simultaneously to enter Absence function. Temperature displaying zone displays “8” and .
2. Press CLOCK and TEMP button simultaneously again to exit Absence function. Temperature display will resume normal display.

Battery Replacement

1. Lift the cover along the direction of arrow (Fig. 1).
2. Remove the original batteries (Fig. 2).
3. Place two new (AAA 1.5V) batteries into the remote. Make sure the battery poles (“+” and “-”) are in the correct positions (Fig 3).
4. Reinstall the cover (Fig 4).



NOTICE

- The remote controller should be 1m (3' 3") away from a TV set or radio to avoid interference.
- The operation of the remote controller must be performed within its receiving range.
- To control the main unit, point the remote controller at the signal receiving window on the main unit to improve the receiving sensitivity of main unit.
- When the remote controller is transmitting a signal, the “” icon will be blinking for 1 second. When the main unit receives a valid command from the remote control, it will beep.
- If the remote control does not operate normally, take the batteries out for 30 seconds, and then reinsert them. If it still does not operate properly, replace the batteries.
- When replacing the batteries, do not use old or different types of batteries. This may cause the remote control to malfunction.
- When the remote controller will not be in use for a long time, remove the batteries to avoid damage that can be caused by corrosion.



USER NOTES AND INSTALLATION/SERVICE/MAINTENANCE NOTES

INSTALLATION NOTES

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

Date	Notes	Asked Your Technician for Recommendations?	Did You Contact YMGI Technical Support?





USER NOTES

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

Date	Installation Company Name, Phone Technician Name, & HVAC License #	Job Not Performed by Technician	Technician Checklist Completed Fully?





SERVICE / MAINTENANCE NOTES

Date	Contents of Service / Maintenance	Company Name, Phone, Technician Name & HVAC License #





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

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

- **Symphony SOLAR DC Inverter**
(56) Single PV, (79) Single PH
- **Symphony SOLO DC Inverter**
(57)2,3 Single Zone 16 SEER, 09-24K Btu/h
(58)2-Single Zone 16-22 SEER, 09-36K Btu/h
(58)4, (78)1-Single Zone 18-23 SEER, 09-36K Btu/h
- **Symphony CHOIR DC Inverter**
(59)2 DC Inverter Multiple Zone 16 SEER, 2x09K to 5x12K Btu/h
(59)2S-DC Inverter Multiple Zone 16 SEER 6x09K to 9x09K Btu/h
(59)4-DC Inverter Multiple Zone 21 SEER 5x09K to 5x12K Btu/h
- **Symphony VRF - DC Inverter HP or Heat Recovery up to 64 zones.**
- **Symphony HARMONY-Packaged Self-Contained**
42"x16" PTAC/PTHP Electric Heater or Hot Water Coil, and 26" TTWA
- **Symphony CONDUCTOR-Split Type Condensing Units**
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YMGI Group

601 Arrow Ln, O'Fallon, MO 63366
www.ymgigroup.com
Tel: 866-833-3138 • Fax: 866-377-3355
Email: info@ymgigroup.com

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