



BIDDER: _____

BID NAME: HVAC Lab VRF Equipment Installation

BID NUMBER: 08-21-002

BIDS DUE: Wednesday, September 15, 2021 at 2:00 p.m.

Pre-Bid Meeting: Wednesday, September 8, 2021 at 2:00 p.m. in Akerlow Hall, HVAC Lab, Room 108

RETURN BIDS TO:

**Purchasing
Waubonsee Community College
45783 State Route 47
Dickson Center, Room 259
Sugar Grove, IL 60554-9903**

Responses to this IFB shall be submitted in a sealed envelope to the address above. **Envelopes must be clearly identified with the name of the BID and Due Date/Time.** Proposals received after the date and time specified in this BID will not be considered.

All correspondence or questions concerning this BID should be addressed to purchasing@waubonsee.edu.

To Be Returned with Bid

- BID FORM
- AUTHORIZATION PAGE
- CERTIFICATIONS
- CONFLICT OF INTEREST DISCLOSURE AND NON-COLLUSION FORM
- STATE OF ILLINOIS BUSINESS ENTERPRISE INFORMATION FORM
- REFERENCES

Sugar Grove
Rt. 47 at Waubonsee Drive
Sugar Grove, IL 60554-9454
(630) 466-7900

Aurora Downtown
18 S. River St.
Aurora, IL 60506-4131
(630) 801-7900

Aurora Fox Valley
2060 Ogden Ave.
Aurora, IL 60504-7222
(630) 585-7900

Plano
100 Waubonsee Drive
Plano, IL 60545-2276
(630) 552-7900

TABLE OF CONTENTS

COLLEGE OVERVIEW	3
Campus Locations	3
GENERAL REQUIREMENTS	3
Summary	3
Schedule.....	3
Information.....	4
Instructions	5
SCOPE OF WORK	6
Summary.....	6
General.....	6
Approach, Plan of Work and Timeline.....	7
Equipment / Material	7
Protection	7
Waste and Disposal.....	8
BID FORM.....	9
BID AUTHORIZATION PAGE.....	10
CERTIFICATIONS.....	11
CONFLICT OF INTEREST DISCLOSURE AND NON-COLLUSION FORM.....	12
STATE OF ILLINOIS BUSINESS ENTERPRISE FOR MINORITIES, FEMALES, AND PERSONS WITH DISABILITIES ACT INFORMATION	13
REFERENCES OF SIMILAR WORK PERFORMED	14
BUSINESS ENTERPRISE PROGRAM PARTICIPATION AND UTILIZATION PLAN	15
Appendix A: WCC’s STANDARD TERMS AND CONDITIONS	16
Appendix B: INSURANCE AND INDEMNITY REQUIREMENTS.....	20
Attachment A: Pictures of HVAC Lab – Rooms 109 and 111	21
Attachment B: VRF Sketch with Placements	26
Attachment C: York Variable Refrigerant Flow Systems Report	28

COLLEGE OVERVIEW

Waubonsee Community College (WCC), located forty-five miles west of Chicago, Illinois, has served more than 300,000 students since its inception. As one of 48 public community colleges in the Illinois Community College System, WCC is governed by a board of trustees composed of seven community members elected from the district at large and a student trustee selected by the student body. WCC serves 22 municipalities, 12 public high school districts and nine private high schools in a five-county, 600-square-mile district. In order to proactively address student and community needs, WCC has cultivated a learning-centered culture that values, and an infrastructure that advances, continuous quality improvement.

Campus Locations

Main Campus

Waubonsee Community College Sugar Grove, Rte. 47 at Waubonsee Drive, Sugar Grove, Illinois 60554

Extension Campuses

Waubonsee Community College Plano Campus, 100 Waubonsee Drive, Plano, Illinois 60545

Waubonsee Community College Aurora Downtown Campus, 18 South River St. Aurora, Illinois, 60506

Waubonsee Community College Fox Valley Campus, 2060 Ogden Ave, Aurora, Illinois 60504

GENERAL REQUIREMENTS

Summary

Complete installation services for new Variable Refrigerant Flow (VRF) Equipment in the college's HVAC Lab, Akerlow Hall, Room 108 located at the Sugar Grove Campus. Equipment has already been purchased by the college.

A mandatory pre-bid meeting will be held on Wednesday, September 8, 2021 at 2:00 p.m. in Akerlow Hall, HVAC Lab, Room 108.

Schedule

- | | |
|---------------------------|-------------------------------------------|
| • Bid Publication Date | Wednesday, September 1, 2021 |
| • Pre-Bid Meeting | Wednesday, September 8, 2021 at 2:00 p.m. |
| • Last Addenda Published | Monday, September 13, 2021 |
| • Bids Due | Wednesday, September 15, 2021 |
| • Recommendation of Award | Wednesday, October 20, 2021 |

Information

1. Bid documents are available for download from the college's purchasing webpage at <https://www.waubonsee.edu/local-businesses-employers-and-vendors/bidrfprfi-opportunities>.
2. Bids may be withdrawn by written request from Bidder or his agent prior to the date and time established for opening of Bids.
3. All late, faxed or emailed Bids will be rejected.
4. All Bid prices must be good for a period of ninety (90) days from the date of opening.
5. The award of the contract will be made within ninety (90) days after the opening of BIDS to the lowest responsive and responsible bidder whose bid complies with all requirements prescribed herein.
6. Awarded Bidder(s) will be notified and notification will also be posted to the college's purchase webpage.
7. If the Bid is not awarded within ninety (90) days after the opening of bids, a Bidder may file a written request with the Purchasing Manager on the withdrawal of their bid, and the Purchasing Manager will permit such withdrawal.
8. The price bid for each item is the full purchase price, including delivery to destination, rigging expenses, balancing provisions no matter what the cause for imbalance, and includes all transportation and handling charges, premiums on bonds, material or service costs, patent royalties and all other overhead charges of every kind and nature. Unless otherwise specified, prices shall remain firm for the contract period. List all costs individually on a separate sheet.
9. The college reserves the right to award this project to one vendor or split the award based on the best interests of the college.
10. The college reserves the right to reject or accept any or all Bid responses, to extend the bidding period, to waive technicalities in the documents or rebid prior to award of the Contract.
11. The college will issue a purchase order upon award by the college's Board of Trustees. Invoices will be paid monthly for work completed. The college's payment terms are net 30 days.
12. The Prevailing Wage Act requires contractors and subcontractors to pay laborers, workers and mechanics employed on PUBLIC WORKS construction projects no less than the general prevailing rate of wages (consisting of hourly cash wages plus fringe benefits) for work of a similar character in the county where the work is performed.
13. Waubonsee Community College encourage the participation of qualified businesses owned by minorities, females and persons with disabilities in contracts the college awards. This policy shall be furthered by complying with the Business Enterprise for Minorities, Females and Persons with Disabilities Act, 30 ILCS 575/0.01 et seq. and by cooperating with the Illinois Business Enterprise Council.
14. WCC belongs to the following consortiums and Group Purchasing Organizations: E&I (Educational and Institutional Cooperative Purchasing); Sourcewell, US Communities;

INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.

TCPN/National IPA; Midwest Higher Education Compact Consortium, and the Illinois Public Higher Education Cooperative. If you have pricing agreements with any of these organizations, pricing should minimally reflect these discounts. The college expects to be provided with the best available pricing.

15. All bid responses will become the property of Waubonsee Community College. All materials received or created by the college are considered **public records** and subject to disclosure to third parties in accordance with the Freedom of Information Act (FOIA). These records include but are not limited to bid or proposal submittals, agreement documents, contract work product, or other information submitted by a vendor to the college.
 - a. If the Respondent requests that the college withhold their trade secrets, commercial information or financial information from disclosure to a third party in response to a FOIA request, the Respondent must include in its submittal:
 - i. A written notification specifically identifying such information
 - ii. A statement that disclosure of such information will cause competitive harm to the Respondent
 - b. Any content not so marked by the Respondent at the time of submittal will be presumed to be open to public inspection

Instructions

1. Provide one (1) original and two (2) copies of your Bid in a sealed envelope.
2. Bid submittals must include all pages noted on the cover page of this bid document including, but not necessarily limited to, a completed Bid Form, Certification page, Authorization Page, Conflict of Interest and Non-collusion Form, and References.
3. Erasures or changes in bids must be initialed. White-out is NOT permitted.
4. Bidders may not contact any college employee to discuss this IFB. **All correspondence or questions concerning the IFB should be addressed to purchasing@waubonsee.edu.** All questions must be submitted in writing and will be responded to by addendum. Do not expect an immediate answer. Include your email address and/or fax number for any necessary communication.
5. Bidders are responsible for checking the college's purchasing webpage for updates to the IFB and will be required to acknowledge receipt of the addenda in the IFB response.
6. **Bid Deposit**
 - a. A Bid Bond is NOT required for this project.
7. **Performance and Payment Bond**
 - a. The successful Bidder shall furnish a Performance and Payment Bond in the full amount of the Contract. The Surety issuing the Performance and Payment Bond must have a general rating of "A" and shall be a Class V or higher in the financial size category as defined by Best's Key Rating Guide – Property and Casualty.

In the event the Bidder fails to furnish the Performance and Payment Bond within fourteen (14) calendar days after notice of award, the college may elect to retain the Bidder's bid deposit as liquidated damages and not as a penalty and the Contract may be terminated.

8. Subcontracting

- a. Provide the names and full contact information of any subcontractors to be used on this project. Subcontractors are subject to college approval.

SCOPE OF WORK

Summary

Complete installation services for new Variable Refrigerant Flow (VRF) Equipment in the college's HVAC Lab, Akerlow Hall, Room 108 located at the Sugar Grove Campus. Equipment has already been purchased by the college. Close out drawings are required as part of the closeout documentation.

General

1. All installation work, including but not limited to moving/rigging, mechanical and electrical labor and materials, and commissioning is to be provided by the awarded Contractor.
2. The Contractor shall be solely responsible for furnishing all labor, materials, equipment, tools, traffic control, permits, crane and rigging, transportation and supervision and for performing all work as required to complete the work of this project as described.
3. Close out drawings are required as part of the closeout documentation.
4. The Contractor shall be responsible for maintaining a safe worksite for the duration of the project.
5. The Contractor shall supply all labor, transportation, apparatus, scaffolding, and tools necessary for the completion of the work, maintain and remove temporary equipment, and construct in excellent and workmanlike manner the complete work and everything properly incidental thereto as stated in the contract documents or reasonably implied there from.
6. Each Contractor's work shall be performed in a timely fashion to meet the project time schedule for all work. All safety gear and support equipment shall meet or exceed all required State, Local and OSHA safety regulations. All associated costs for such compliance shall be borne solely by the contractor.
7. Contractor is responsible for the direct supervision of its personnel through its designated representative, and such representative shall, in turn, be available at all reasonable times to report and confer with the designated agents of the college with respect to the services rendered.

Subcontractors

1. Identify any work to be subcontracted and provide company name, contact information and purpose.
 - a. Waubonsee Community College reserves the right to reject any subcontractor.

Approach, Plan of Work and Timeline

1. Waubonsee Community College estimates a start date after award in October 2021 and completion in November 2021. Firms should identify if this timeline is reasonable or if more time would be required.
2. Before submitting a Bid, each Bidder is responsible for conducting or obtaining any additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the Site or otherwise, that may affect cost, progress, performance, or furnishing of Work or that relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or that Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of Contract Documents.
3. On request, the college will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid. Bidders must fill all holes and clean up and restore the Site to its former condition upon completion of its explorations, investigations, tests, and studies. Such investigations and Site examinations may be performed during any and all Site visits indicated in the Notice to Bidders and only under the provisions of the Contract Documents, including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such work, and college's prior approval.

Equipment / Material

1. Equipment specifications, location drawings and pictures are provided at the end of this bid document.

Protection

1. Care shall be taken by Contractor to safeguard all existing facilities, site amenities, utilities, irrigation systems, windows, and vehicles on or around the job site. Damage done to public and/or private property by the Contractor, shall be the responsibility of the Contractor and shall be repaired and/or replaced by Contractor at no additional cost to the college.
2. The Contractor shall use all means to protect existing objects, structures and vegetation. In the event of damage, the Contractor shall immediately make all repairs, replacements and dressings to damaged materials, to the approval of the college, at no additional cost to the college.

Waste and Disposal

1. Contractor shall be responsible for all cleaning required for work under the Contractor's jurisdiction as well as for keeping all work areas, passageways, ramps, stairs and all other areas of the premises free of accumulation of surplus materials, rubbish, debris and scrap which may be caused by the Contractor's operations.
2. Remove rubbish, debris and scrap promptly upon its accumulation and in no event later than the end of each workday. Contractor is responsible for the management and removal of waste materials, including hazardous materials, to be disposed of in accordance with all applicable laws, regulations, codes, rules, and standards.
3. Burning of rubbish or debris is not allowed at the site. Rubbish, debris and scrap is not to be thrown through any window or other opening, or dropped from any great height; it shall be conducted to the ground, to waiting truck(s) or removable container(s) by means of approved chutes or other means of controlled conveyance.
4. Spillages of oil, grease or other liquids that could cause a slippery or otherwise hazardous situation or stain a finished surface shall be cleaned up immediately.
5. If rubbish and debris is not removed, or if surfaces are not cleaned as specified above, the college reserves the right to have said work done by others and the related cost(s) will be deducted from monies due the Contractor.

BID FORM

BIDDER (COMPANY) NAME _____

All Bidders are required to complete and sign this form. Please print clearly. Attach a detailed proposal with a breakdown of costs for all equipment, delivery, installation and training.

Total Base Bid

Having examined the bid documents, as prepared by Waubensee Community College, and having inspected the site and the conditions affecting and governing the construction of said Project, the Bidder hereby proposes to furnish all labor and materials, supervision, coordination, rigging, transportation, material and services for the sum of:

\$ _____ Total
In Figures

In Words

Questions to be Answered

1. **What is your warranty for parts and labor?** _____
2. **Can you provide an annual maintenance program?** _____
3. **What is the annual cost for the first year?** _____

Acknowledgement of Addenda

I acknowledge having received addenda # _____.

BID AUTHORIZATION PAGE

All Bidders are required to complete and sign this form.

I HEREBY AUTHORIZE THIS BID, ACKNOWLEDGING THAT I UNDERSTAND AND AGREE TO THE PROVISIONS OF THIS BID. I WARRANT THAT ALL INFORMATION PROVIDED IN THE SUBMITTED BID IS TRUE AND ACCURATE. I FURTHER WARRANT THAT FAILURE TO HAVE READ ALL THE PROVISIONS OF THIS SOLICITATION SHALL NOT BE CAUSE TO ALTER ANY RESULTING CONTRACT OR REQUEST ADDITIONAL COMPENSATION. BY SIGNING THIS DOCUMENT.

Name of Company

Address

City

State

Zip Code

Telephone Number

Fax Number

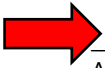
Authorized Signature

Date

Print Name

Title

Email Address



CERTIFICATIONS

All Bidders are required to complete and sign this form. Completed form must be returned with Bid no later than the advertised Bid deadline. Failure to return this completed form may result in disqualification.

Bidders are cautioned to carefully read these certifications prior to signing below. Signing this page shall constitute a warranty by the undersigned that all of the statements, certifications and information set forth within these certifications are true, complete and correct as of the date signed. The undersigned is notified that if the college learns that any of the following certifications were falsely made, any contract entered into with the undersigned shall be subject to termination.

1. Prevailing Wage Act. To the extent required by law, Contractor shall not pay less than the prevailing wage as established pursuant to an Act Regulating the Wages of Laborers, Mechanics, and Other Workman employed under Contract for Public Workers 820 ILCS 130/1 et seq. Our company certifies that it is eligible for bidding on public contracts and has complied with section 11a of the Prevailing Wage Act, 820 ILCS 130.01-12.
2. Human Rights Act. To the extent required by law, Contractor shall abide by the Illinois Human Rights Act, 775 ILCS 10/0.01 et seq.
3. Drug Free Workplace. To the extent required by law, Contractor shall abide with the requirements of the Drug Free Workplace Act 30 ILCS 580.1 et seq.
4. Sexual Harassment Policy. Contractor represents by the signing of this agreement that it has a written sexual harassment policy that is in accordance with 775 ILCS 5/2-105 (A) (4).
5. Non-debarment. By executing this agreement Contractor certifies that it has not been debarred from public contracts in the State of Illinois for violating either 33E-3 or 33E-4 of the Public Contracts Act, 720 ILCS 5/33E-1 et seq.
6. Fair Employment Practice: Company is in compliance with all State and Federal laws regarding Fair Employment Practice as well as all rules and regulations.
7. Our company has an Equal Employment Opportunity and Affirmative Action Program which complies with Executive Order 11246, the Vietnam Era Veterans' Readjustment Assistance Act of 1974, and the Rehabilitation Act of 1973.
8. Our company certifies that it is eligible for bidding on public contracts and is not in violation of either paragraph 33E-3 or 33-E-4 of Public Act 86-150, 720ICLS 5 with regards to bid rigging/bid rotating.
9. When required by law, the bidder and all bidder's subcontractors must participate in applicable apprenticeship and training programs approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training as required by Illinois Public Act 093-0642.
10. MINORITY/WOMAN-OWNED, DISADVANTAGED BUSINESS? **Yes**____ **No**____. If yes, please attach copy of certification and advise certification number and expiration date below:

Name of Certifying Entity: _____ Cert. # and Exp. Date: _____

Authorized Signatory: _____ **Date:** _____

CONFLICT OF INTEREST DISCLOSURE AND NON-COLLUSION FORM

All Bidders are required to complete and sign this form. Completed form must be returned with Bid no later than the advertised Bid deadline Failure to return this completed form may result in disqualification of Bid.

Conflict of Interest Disclosure

Waubonsee Community College is requiring that any and all relationships with the college, its administrators, trustees, committee member, or any other employee of the college be disclosed in writing as a part of any bid submitted. Contact in regards to this Bid with any employee of Waubonsee Community College during the pre-award period, except as noted in the solicitation, is strictly forbidden and is considered sufficient grounds for dismissal from the IFB/RFP process.

Define the relationship with any Waubonsee Community College administrator, trustee, committee members, or their immediate family member, with which your company or any of its owners, officers, trustees, employees does business with, or for which there is an opportunity to influence a related college decision.

Bidder certifies that there is no known conflict of interest with any WCC administrator, trustee, committee member or employee of the college.

Non-Collusion Statement

The undersigned affirms that he/she is duly authorized to execute this contract and that this company, corporation, firm, partnership or individual has not prepared this Bid in collusion with any other Bidder, and that the contents of this Bid as to prices, terms or conditions of said Bid have not been communicated by the undersigned, nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this Bid.

The undersigned further affirms that this Bid was prepared independently for this project and that it contains no fees or amounts other than for legitimate execution of this work as specified and that it includes no understandings or agreements in restraint of trade.

Firm Name: _____

By: _____
(Authorized Signatory)

_____ Title

STATE OF ILLINOIS BUSINESS ENTERPRISE FOR MINORITIES, FEMALES, AND PERSONS WITH DISABILITIES ACT INFORMATION

Vendor shall provide the following information on the MBE status of its business so that the College can comply with the Business Enterprise for Minorities (MBE), Females (WBE), Persons with Disabilities Act (DBE), or Veteran Owned Business (VOB), 30 ILCS 575/1, et seq.

Identify Business Certification Status (___ MBE ___ WBE ___ DBE ___ VOB)

- African American
- Alaskan Native/Native American
- Asian American
- Disabled
- Female
- Hispanic American
- Veteran
- Not Applicable

Small Business Certification

- HUBZone small business
- Service-disabled veteran-owned small business
- Small Business
- Small disadvantaged business
- Veteran-owned small business
- Women-owned small business
- Not Applicable

Certifying Organization

- DCMS (Department of Central Management Services) Business Enterprise Program
- CMBDC (Chicago Minority Business Development Council)
- IDOT (Illinois Department of Transportation)
- WBDC (Women's Business Development Center)
- Other (Please Specify)
- Not Applicable

For more information please visit:

<http://www.illinois.gov/cms/business/sell2/bep/Pages/Default.aspx>

REFERENCES OF SIMILAR WORK PERFORMED

Name

Company Name

Address

City

State

ZIP Code

Name

Company Name

Address

City

State

ZIP Code

Name

Company Name

Address

City

State

ZIP Code

BUSINESS ENTERPRISE PROGRAM PARTICIPATION AND UTILIZATION PLAN

This document is available under separate cover and must be returned with the bid documents.

Appendix A: WCC's STANDARD TERMS AND CONDITIONS

Legal Entity: Waubonsee Community College District 516, commonly known as Waubonsee Community College is described herein as "Buyer" or "WCC".

Seller: The "Seller" means any person, business or entity designated on this purchase order or contracted to provide "Deliverables." Deliverables means the tangible and/or intangible personal property, product, service, software, information technology, telecommunications technology, apparatus, equipment, supplies, repairs, or other goods delivered pursuant to this purchase order, including items incident to the provision of services.

Limitation of Authority: All purchases shall be made in accordance with Illinois law. No officer or employee of WCC not expressly authorized under Illinois law, shall make any purchase on its behalf, or enter into any contract of purchase, verbal or written, for any Deliverable of any kind or description, or accept any of them on approval or otherwise. Seller is directed to applicable Illinois law to verify the authority of any person purportedly signing on behalf of the Legal Entity. The Buyer will not be responsible for articles delivered and/or services performed for its account without a specific written purchase order that has been authorized by the Purchasing Manager.

Governing Law and Limitation of Liability: This Agreement shall be governed and construed in accordance with the law of Illinois without reference to its conflict of laws and/or provisions. It is the intent of the parties that arbitration and mediation shall not be a remedy or prerequisite required by this contract, and any reference to "arbitration" or "mediation" contained in any contract or agreement resulting from the execution of this Purchase Order is void and of no legal effect. The parties waive any right to demand a trial by Jury and agree that the venue for litigation arising from this Purchase Order or any Contract or Agreement entered into subsequent to the execution of this Purchase Order shall be in the Circuit Court for the 16th Judicial Circuit, Kane County, Illinois regardless of the place of business or residence of Seller. The parties agree that this venue is convenient for all of them and each consent to the personal jurisdiction of such court. In the event of any litigation the prevailing party shall have the right to recover its reasonable attorney's fees and costs. WCC shall not be liable to the Seller, or to any subcontractor, regardless of the form of action, for any consequential, incidental, indirect, or special damages, or for any claim or demand based on a release of information, or patent, copyright, or other intellectual property right infringement.

Indemnification: The Seller agrees to hold harmless and indemnify WCC, its officers, agents, trustees and employees, and defend each of them, against any losses, damages, judgments, claims, expenses, costs and liabilities imposed upon or incurred by or asserted against WCC, its officers, agents, trustees or employees, including reasonable attorneys' fees and expenses, arising out of the acts or omissions of Seller, its officers, agents or employees, resulting from or connected with Seller's performance hereunder or failure to comply with any applicable law or regulation.

Bidding: Seller certifies that it is not barred from bidding on agreement/contract as a result of a conviction for either bid rigging or bid rotating under Illinois law. WCC reserves the right to reject any and all bids, and waive any bid irregularities.

Purchases: A purchase order is required for all orders. Seller shall invoice Buyer for the goods at the time of final shipment unless otherwise provided for in this purchase order. Invoices shall show the purchase order number for each separate purchase order number issued. Failure to do so may result in a delay of payment. Packing slip shall be affixed to outside of package(s), listing contents of each package and notating an authorized purchase order number. Shipments without a purchase order will be rejected at the receiving dock.

Warranty:

- 1) Seller warrants that all Deliverables furnished hereunder will be free from defects in design, material, and workmanship, and will conform to applicable specifications, drawings, samples, and descriptions. This warranty is in addition to any warranties available under law, from the manufacturer, or any standard warranty of Seller.
- 2) At the time of delivery, no software shall contain any virus, timer, counter or other limiting design, instruction, or routine that would erase data or programming or cause the software or any hardware or computer system to become inoperable or otherwise incapable of being used in the full manner for which it was designed.
- 3) No Deliverable shall violate or infringe upon the rights of any third party, including, without limitation, any patent, copyright, trademark, trade secret, or other proprietary rights of any kind.

INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.

4) Seller warrants that it has full title to the Deliverables and has the right to grant to WCC the rights and licenses contemplated herein without the consent of any third party.

Assignment: This purchase order may not be assigned, and no duty or right hereunder may be delegated, or monies payable hereunder, by Seller and Seller may not use any sub-contractor to perform hereunder, without the prior written consent of Buyer, which consent may be given or withheld at Buyer's sole discretion. Any assignment made without such consent shall be null and void.

Prices: Buyer accepts Seller's quote or bid prices as recorded on Seller's proposal and on this purchase order which shall not be changed prior to delivery or completion of services without Buyer's prior written agreement. Unless otherwise provided in this purchase order, the price includes all charges for freight and insurance. No separate charges, except those clearly recorded on Seller's proposal and on this purchase order can, or will be allowed. Seller represents that the price charged for the goods and services covered by this purchase order is commercially reasonable and is the lowest price charged by Seller to buyers of a class of purchasers similar to Buyer under conditions similar to those specified in this purchase order. All prices quoted are in U.S. dollars.

Cancellation:

- 1) In addition to all other rights and remedies provided for hereunder or under law (including without limitation, damages) Buyer may cancel all or any part of this purchase order:
 - a) if Seller breaches any of the terms, warranties or provisions hereof
 - b) upon the occurrence of any event entitling Buyer to reject the goods
 - c) if any insolvency proceeding is instituted by or against Seller
 - d) if Seller provides material false information to Buyer
- 2) Buyer, at Buyer's sole discretion, may cancel this purchase order at any time as to the goods not then delivered.
- 3) Buyer shall not be deemed to have canceled this purchase order unless it notifies Seller of its intent to do so in writing. Upon receipt of such notice Seller will immediately stop work and notify any other parties performing any part of the work to stop work and will protect property in Seller's possession in which Buyer has or may acquire an interest.
- 4) Unless Buyer exercises its right to cancel because of the events described in paragraph (1) above or because of other event or condition caused by or under the control of Seller, Seller may claim:
 - a) Reimbursement for actual out-of-pocket cost incurred by Seller as a result of such cancellation (exclusive of costs for materials that Seller can use on other orders) and
 - b) A reasonable profit on the work performed by Seller prior to cancellation. Such claim must be made within twenty (20) days of the notice of cancellation and the total amount of such claim shall not exceed the purchase price for the completed goods. In the event of cancellation Seller shall deliver to WCC all material and information as may have been involved in the provision of services or Deliverables to the date of termination.

Taxes: Waubonsee Community College is exempt from Federal Excise and State Sales Taxes and such taxes shall not be included in prices. Federal Excise Tax Exception Certificate will be furnished upon request.

Articles or Services: Deliverables and/or services to be delivered or performed shall be in accordance with the terms, prices, delivery time, specifications, and conditions as recorded on Seller's proposal and as itemized on this purchase order. Stated delivery time must be adhered to. Buyer reserves the right to cancel this order if Seller does not make deliveries as specified on this order. No substitutions of articles or change of any nature shall be made without written authorization from the Buyer.

Inspection, Acceptance and Payment by Buyer: All Deliverables shall be received subject to Buyer's right to inspection and rejection. Those rejected as a result of inspection will be held for Seller's inspection at Seller's risk and, if Seller directs, will be returned at Seller's expense. Freight to and from original destination for excess goods except for customary quantity variations recognized by trade practice, will be paid by Seller. Payment for Deliverables on an order prior to inspection shall not constitute acceptance.

Responsibility for Deliverables and Risk of Loss: All shipments are to be made "F.O.B. Destination" unless otherwise specified on Seller's proposal and on this purchase order and accepted by Buyer. Seller assumes and accepts that all risk of loss of goods covered hereby shall be borne by Seller until goods have been received and accepted by Buyer or received, installed, and accepted by Buyer, whichever is applicable. When articles are sold "F.O.B. Point of Origin" and the purchase order confirms

INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.

this, Seller is to prepay shipping charge and record prepaid charges on invoice and attach the original receipt, freight bill or express receipt to the invoice.

OSHA: All equipment and material shall be in accordance with applicable OSHA Rules and Regulations in effect at the time of order.

MSDS: Seller shall forward any required material safety data sheet (MSDS) to Buyer on all products subject to this order.

Prevailing Wage: When a contract/order requires construction of Public Works as defined in the Illinois Prevailing Wage Act, including new structures, renovation, remodeling and expansion of existing structures, maintenance and repair of equipment on a construction site, transportation of equipment or materials to or from a construction site:

- 1) Seller and its subcontractors must pay prevailing wage to any laborers or workers working on the project. It is Seller's responsibility to determine the appropriate current prevailing wage rate.
- 2) Seller shall maintain a certified payroll which will be required prior to payment, and shall be required to submit a Wage Certification Form and maintain records in accordance with the Prevailing Wage Act [820 ILCS 130/1-12]
- 3) Prior to payment of the purchase price, Seller shall furnish lien waivers, releases, affidavits, and other documents as Buyer requires, keeping Buyer's premises lien free.

Bonds: For Public Works projects over \$50,000, the Seller shall furnish a Performance Bond and a Labor and Material Bond in an amount equal to the contract before commencing work. The surety on the bond shall be a company that is licensed by the Department of Insurance authorizing it to execute surety bonds and the company shall have a financial strength rating of at least A- as rated by A.M. Best Company, Inc., Moody's Investor Service, Standard & Poor's Corporation, or a similar rating agency.

Confidential Data: Seller shall develop, implement, maintain and use appropriate administrative, technical and physical security measures to preserve the confidentiality, integrity and availability of all confidential data, whether in hard copy or electronically maintained or transmitted, received from, or on behalf of WCC or its students. These measures will be extended by contract to all subcontractors used by the Seller. Unless authorized by WCC, Seller may not copy, store, or transmit unencrypted confidential and sensitive data on non-WCC-owned/leased computing devices, or other portable storage or computing devices. Seller shall destroy such data when they are no longer needed for the purpose for which they were released.

Non-Disclosure: Seller shall not announce this agreement and relationship in any press releases or other publications, or use WCC's name or logo's in any marketing materials without prior written consent of WCC.

- 1) All information that is obtained and work performed under this agreement and the Seller's Waubonsee Community College contract/order is considered sensitive, may or may not require use of sensitive and personal data and information and falls under one or more categories of information that is subject to protection from disclosure and misuse, including but not limited to: personal information and highly restricted personal information in connection with law enforcement sensitive data and information, the Privacy Act of 1974, 5 U.S.C. § 552a et. seq., the Family Educational Rights and Privacy Act of 1974, 20 U.S.C. § 1232g et seq. (FERPA), and personal information as defined under and governed by the Personal Information Protection Act, 815 ILCS 530 et seq.
- 2) Seller agrees to comply with all federal and state statutes, rules and regulations as identified in the Waubonsee Acceptable Usage Agreement (located at www.waubonsee.edu/it), understands that disclosure of any information, by any means, for a purpose or to an extent unauthorized herein, shall be grounds for immediate termination of the contract/order and this agreement, and may subject the offender to criminal and civil sanctions.
- 3) All source materials/data/information and resultant work products compiled or created and any information or portion of information derived therefrom are the property of the Waubonsee Community College and must not be used by Seller for any purpose other than the purpose outlined by the contract/order and this agreement.
- 4) Neither Seller, nor its officers, directors, agents, or employees shall divulge, sell, or distribute any information obtained from Waubonsee Community College or derived therefrom at any point in time to a third party, even after termination or expiration of a contract/order, except as may otherwise be required by law.
- 5) Seller shall notify each of its officers, directors, agents, and employees having access to the Waubonsee Community College information that such information may be used only for the purpose and to the extent authorized in this contract.

INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.

Insurance: During the term of this agreement, upon Buyer's request, Seller shall maintain, and require its subcontractors to maintain, insurance policies with limits acceptable to Buyer, to protect against claims that may arise from this purchase order. In addition, Seller and its subcontractors shall maintain Workman's Compensation insurance and Comprehensive Automobile Liability insurance coverage in amounts as required by Illinois law. Seller may be required to provide additional insurance as noted in the BID/RFP documents including but not limited to professional liability, E & O (Errors and Omissions), environmental liability and umbrella coverage. WCC, its officers, agents, employees and assigns as will be named as Additional Insured thereunder on a primary and noncontributory basis and certificate holder for all work performed on Buyer's property.

Independent Contractor: Seller shall perform its obligations as an independent contractor of WCC and nothing herein shall be deemed to constitute Seller and WCC as partners, joint venturers, or principal and agent. Seller has no authority to represent WCC and shall not represent that it or any of its subcontractors are in any manner agents or employees of WCC.

License: Upon payment in full for software, Seller grants to WCC a perpetual, non-exclusive, worldwide, irrevocable, fully paid right and license to install and use the software on all computing devices used by or for the benefit of WCC. This license is subject to the limitation on the maximum number of end users or other limitations listed on Seller's proposal, but if none, this license shall be deemed to be enterprise-wide and the software may be used by all WCC end users without any maximum number. Any Deliverable under this purchase order that may be subject to a copyright shall be considered a "work for hire" as defined by the U.S. Copyright Act and shall be owned by WCC and WCC shall be considered the author of such item. If a Deliverable shall not be considered a "work for hire" under the U.S. Copyright laws, Seller hereby irrevocably assigns all right, title, and interest in the Deliverable, including all intellectual property rights effective from the moment of creation of the Deliverable.

Smoke Free Campus: The policy of the WCC Board of Trustees is to have a smoke free college environment. Smoking on college grounds and inside college facilities and college vehicles is prohibited. Smoking is only permitted inside private vehicles.

Affirmative Action/Equal Opportunity: Waubensee Community College is an Affirmative Action/Equal Opportunity Employer and does not discriminate against any employee or service provider because of race, sex, color, age, religion, national origin, marital status, veteran's status, physical or mental disability or any other protected status under federal or state law.

Entire Agreement: This purchase order, together with any written documents incorporated by reference, constitutes the entire agreement between Buyer and Seller with respect to this transaction and supersedes all previous communications. Any additional or different terms by the Seller or Seller's acknowledgement are rejected by the Buyer unless expressly agreed to in writing by an authorized representative of the Buyer. This agreement shall be binding upon and inure to the benefit of all heirs, personal representative, successors and assigns of the Seller.

Appendix B: INSURANCE AND INDEMNITY REQUIREMENTS

1. **SAFETY:** The Contractor, its agents, employees, material men and its Subcontractors will perform all work on the project in a safe and responsible manner, and in compliance with all Federal, State and local safety requirements and standards.
2. **INDEMNIFICATION:** The work performed by the Contractor shall be at the risk of the Contractor exclusively. To the extent permitted by law, Contractor shall indemnify, defend, and hold harmless Owner, affiliated companies of Owner, their partners, joint venturers, representatives, members, designees, officers, directors, shareholders, employees, agents, successors, and assigns ("Indemnified Parties"), from and against any and all claims for bodily injury, death or damage to property, demands, damages, actions, causes of action, suits, losses, judgments, obligations and any liabilities, costs and expenses (including but not limited to investigative and repair costs, attorney's fees and costs, and consultants' fees and costs) which arise in whole or in part or are in any way connected with the Work performed, Materials furnished, or Services provided under this Agreement by Sub-Contractor or its agents.
3. **INSURANCE:** The insurance required shall be written for the duration of the Contract in amounts not less than the following minimum limits or as required by law whichever is greater. The Insurer must give the college at least 30 days prior written notice of cancellation and termination of the firm's coverage thereunder. All subcontractors the firm hires must comply with the same requirements.
 - a. Comprehensive General Liability including Contractor's protective liability, Contractual liability, Completed Operations and Products liability. The latter shall be written for a period of one year from the date of acceptance by the Owner, to be renewed annually as long as the contract is in force. Minimum limits shall be as follows:
 - i. Not less than \$1 million dollars Each Occurrence, \$2 million Products/Completed Operations aggregate, \$1 million Personal and Advertising Injury limits, and \$2 million General Aggregate subject to a per project aggregate.
 - ii. **Firm shall provide Waubensee Community College with a Certificate of Insurance and endorsement naming Waubensee Community College District No. 516, its officers, agents, employees and assigns as Additional Insured thereunder on a primary and noncontributory basis.**
 - b. Workman's Compensation as required by all applicable laws including employer's liability in the amount of \$500,000.00 or as otherwise limited by law.
 - c. Comprehensive Business Automobile Liability including non-ownership and hired car coverage as well as owned vehicles. Minimum limits shall be as follows:
 - i. Written in the amount of not less than \$1 million each accident and covering any auto.
 - d. Umbrella Liability Insurance: Written in the amount of no less than \$2 million each accident.
4. **PROPERTY INSURANCE:** It is agreed that the Contractor shall purchase and maintain property insurance for its material left at the job site. Contractor waives all rights of subrogation against Owner for loss of, or damage to, Contractor's work, tools, machinery, equipment, materials or supplies.

Attachment A: Pictures of HVAC Lab – Rooms 109 and 111



Figure 1-Room 109 Facing West (1)



Figure 2-Room 109 Facing North

**INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.**



Figure 2-Room 111 Facing North



Figure 3-Room 111 Facing South

**INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.**



Figure 3-Room 111

**INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.**



Figure 4-Area outside Room 109 entrance facing west

**INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.**



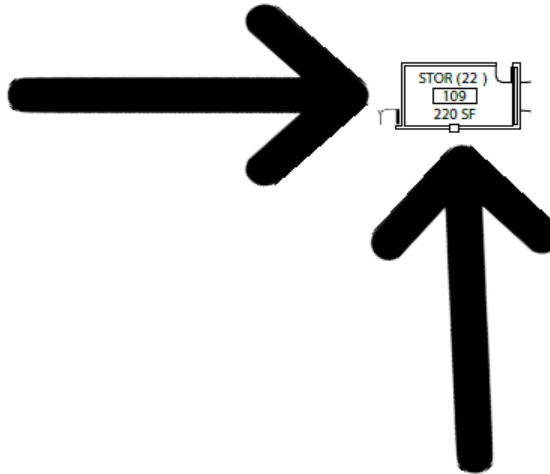
Figure 5-Area outside Room 109 entrance facing west #2

**INVITATION FOR BID (IFB)
08-21-002 HVAC Lab VRF Equipment Installation
September 15, 2021 at 2:00 p.m.**

Here on the West wall of AKL109 would be the following:

The YIDH015B23S should be installed in the ceiling of the WW.

The YIDH015B23S should be installed on the WW below the unit listed above using Unistrut.



Here on the South wall would be the following:

YICS015B22S Indoor unit installed above the door on this wall which is at the SE corner of the room.

The YIC4015B21S & YIC1008B22S should be installed in the ceiling as close to the South wall as possible.

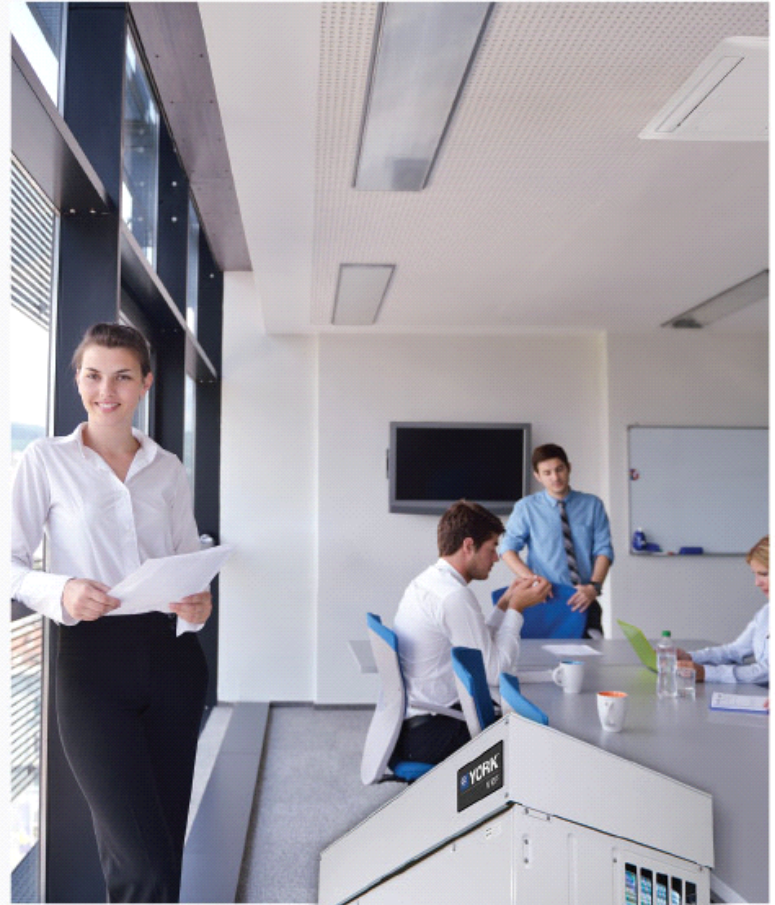
The YMAHP18B21S, TIWM012B22S, & YIDS008B21S units should all be installed on the South wall below the units listed above. These units are all hung on Unistrut. The order of the units is immaterial and can be determined by the contractors as to what makes the most sense.

The - YIC4048B21S - unit will go in the ceiling of AKL111. The exact placement is not important.



[Attachment C: York Variable Refrigerant Flow Systems Report](#)

Windy City VRF Report begins on the next page.



Variable Refrigerant Flow Systems Selection Software Report



Project Name: Waubensee CC VRF System

Project Number:

Submitter Name: Eric Veit

Revision: 1

Equipment Release and Approval Form

The following tables must be completed prior to releasing the equipment for fabrication/shipment. Please initial the column indicating the information contained in this submittal has been verified, or indicate to refer to a marked-up page.

SUBMITTAL VERIFICATION	
	<i>Purchaser Initials:</i>
Electrical voltage and electrical connections are compatible with jobsite requirements.	
Refrigerant Piping Lengths have been verified.	
Unit tag designations are correct.	
Equipment dimensions (length, width, and height) and weights have been verified to comply with jobsite conditions and rigging requirements. Please indicate approval by your initials on all included drawings.	

Important Notes:

- 1) Actual release cannot commence until this form is signed by the customer and returned to the submitter along with a release notification, want date, and ship to address.
- 2) Equipment "lead-time" does not start until confirmed release documentation is received, and the order is actually released to the factory.
- 3) Modifications to equipment configurations after release may impact cost and lead-time.
- 4) Attached configurations are as shown in the approved equipment submittals or as defined in superseding customer correspondence.
- 5) It is recommended that systems designed for operation below 14F ambient air temperature in heating mode and/or above 109F in cooling mode not exceed 100% connection ratio or total pipe length of 984ft. If exceed, the system may be at risk for reduced capacity (comfort) and/or shorter equipment lifespan. Consideration should be given to reducing connection ratio by upsizing the outdoor unit or utilizing building diversity for a true "operating" connection ratio and re-design the layout to reduce total pipe length.
- 6) "Want date" and/or "ship to address" changes made after this document is confirmed may impact cost and lead-time.

Please fill out the following table and refer to the receiving/rigging instructions in this submittal to help ensure a smooth delivery and installation of the equipment.

DELIVERY INFORMATION	
<i>Please fill out information below:</i>	
Contact name for coordinating delivery of equipment with transportation company.	
Contact phone number	
Advance notice required from transportation company prior to delivering equipment (typically 48 hours)	
Ship to address:	
Other special shipping instructions or requirements	

CUSTOMER APPROVAL:	
Customer Name:	_____
Signature (*)	_____
Date:	_____

Materials

Part number	Qty / Length	Description
YVAHR144B32S	1	YVAHR144B32S Outdoor unit (YVAHR144B32S) 12 Ton VRF HR OU 208/230V 3PH - Outdoor unit 1
YIFE006B21S	1	Indoor 1 Room 1 - 0.5 Ton Floor Exposed IU 208/230V 1PH
CIW01	1	Indoor 1 controller - Wired Controller
YICS015B22S	1	Indoor 2 Room 1 - 1.3 Ton Ceiling Suspended IU 208/230V 1PH Gen II.5
CIW01	1	Indoor 2 controller - Wired Controller
YIC4015B21S	1	Indoor 3 Room 1 - 1.3 Ton 4-way Cassette IU 208/230V 1PH
CIW01	1	Indoor 3 controller - Wired Controller
P-AP160NA2	1	Indoor 3 accessory - Air Panel
YIC1008B22S	1	Indoor 4 Room 1 - 0.7 Ton 1-way Cassette IU 208/230V 1PH Gen II.5
CIW01	1	Indoor 4 controller - Wired Controller
P-AP36CNA	1	Indoor 4 accessory - Air Panel
YIDS008B21S	1	Indoor 5 Room 1 - 0.7 TN Ducted Slim IU 208/230V 1PH
CIW01	1	Indoor 5 controller - Wired Controller
TIWM012B22S	1	Indoor 6 Room 1 - 1 Ton Wall Mount IU 208/230V 1PH
CIW01	1	Indoor 6 controller - Wired Controller
YMAHP18B21S	1	Indoor 7 Room 1 - 1.5 Ton Multi-Position AH with DX-Kit IU 208/230V 1PH
CIW01	1	Indoor 7 controller - Wired Controller
YIDH015B23S	1	Indoor 8 Room 1 - 1.3 Ton Ducted Hi Static IU 208/230V 1PH Gen II.5
CIW01	1	Indoor 8 controller - Wired Controller
MW-NP562X3	1	Multi kit - Multi kit
COB04M132B22S	2	Change over box - Change over box
1/2	8.01ft	Length of pipe - not provided by manufacturer, provided by others
1/4	7.00ft	Length of pipe - not provided by manufacturer, provided by others
1 1/8	1.00ft	Length of pipe - not provided by manufacturer, provided by others
3/4	1.00ft	Length of pipe - not provided by manufacturer, provided by others
3/8	3.00ft	Length of pipe - not provided by manufacturer, provided by others
5/8	4.00ft	Length of pipe - not provided by manufacturer, provided by others

**All equipment must be installed per the Installation and Maintenance Manual and local codes.
 Information is subject to change without notice.
 Equipment models depicted are representational only. Refer to submittal documents for specifications.**



$\frac{7}{8}$	1.00ft	Length of pipe - not provided by manufacturer, provided by others
Additional refrigerant	14.1lb	Outdoor unit 1 additional refrigerant - R410A - not provided by manufacturer, provided by others

Indoor unit details

Outdoor Unit	Name	Unit Type	Unit	Cooling Dry Bulb Temp (F)	Cooling Wet Bulb Temp (F)	Heating Dry Bulb Temp (F)	Total Cooling Capacity (MBH)	Sensible Cooling Capacity (MBH)	Total Heating Capacity (MBH)	Air Flow (CFM)	
Outdoor unit 1 YVAHR144B32S	Indoor 1	Floor Exposed	YIFE006B21S	80.0	67.0	70.0	6.2	4.9	7.0	300	
	Indoor 2	Ceiling Suspended	YICS015B22S	80.0	67.0	70.0	15.6	12.2	17.5	530	
	Indoor 3	4-Way Cassette	YIC4015B21S	80.0	67.0	70.0	15.6	12.1	17.5	777	
	Indoor 4	1-Way Cassette	YIC1008B22S	80.0	67.0	70.0	8.3	6.6	9.3	335	
	Indoor 5	Slim Ducted	YIDS008B21S	80.0	67.0	70.0	8.3	6.6	9.3	318	
	Indoor 6	Wall	TIWM012B22S	80.0	67.0	70.0	12.5	9.7	14.0	494	
	Indoor 7	Multi-Position AHU (B - Cabinet)	YMAHP18B21S	80.0	67.0	70.0	18.7	15.1	21.0	674	
	Indoor 8	High Static Pressure Ducted	YIDH015B23S	80.0	67.0	70.0	15.6	13.2	17.5	512	
Additional refrigerant (lb):		14.1				Total (MBH):		101.0	80.3	113.0	

Indoor unit type			Duct 3 pipe	Non-duct 3 pipe	Mixed 3 pipe
Outdoor unit 1	YVAHR144B32S		10323665	10323569	10323812
Cooling	Capacity	[Btu/h]	138000.00	138000.00	138000.00
	EER	[Btu/Wh]	11.20	10.90	11.05
	IEER	[Btu/Wh]	21.20	23.90	22.55
Heating	Capacity 47F	[Btu/h]	154000.00	154000.00	154000.00
	COP47F	[W/W]	3.40	3.42	3.41
	Capacity 17F	[Btu/h]	110000.00	110000.00	110000.00
	COP17F	[W/W]	2.15	2.12	2.14
Cooling & Heating	SCHE	[Btu/Wh]	28.10	30.90	29.50

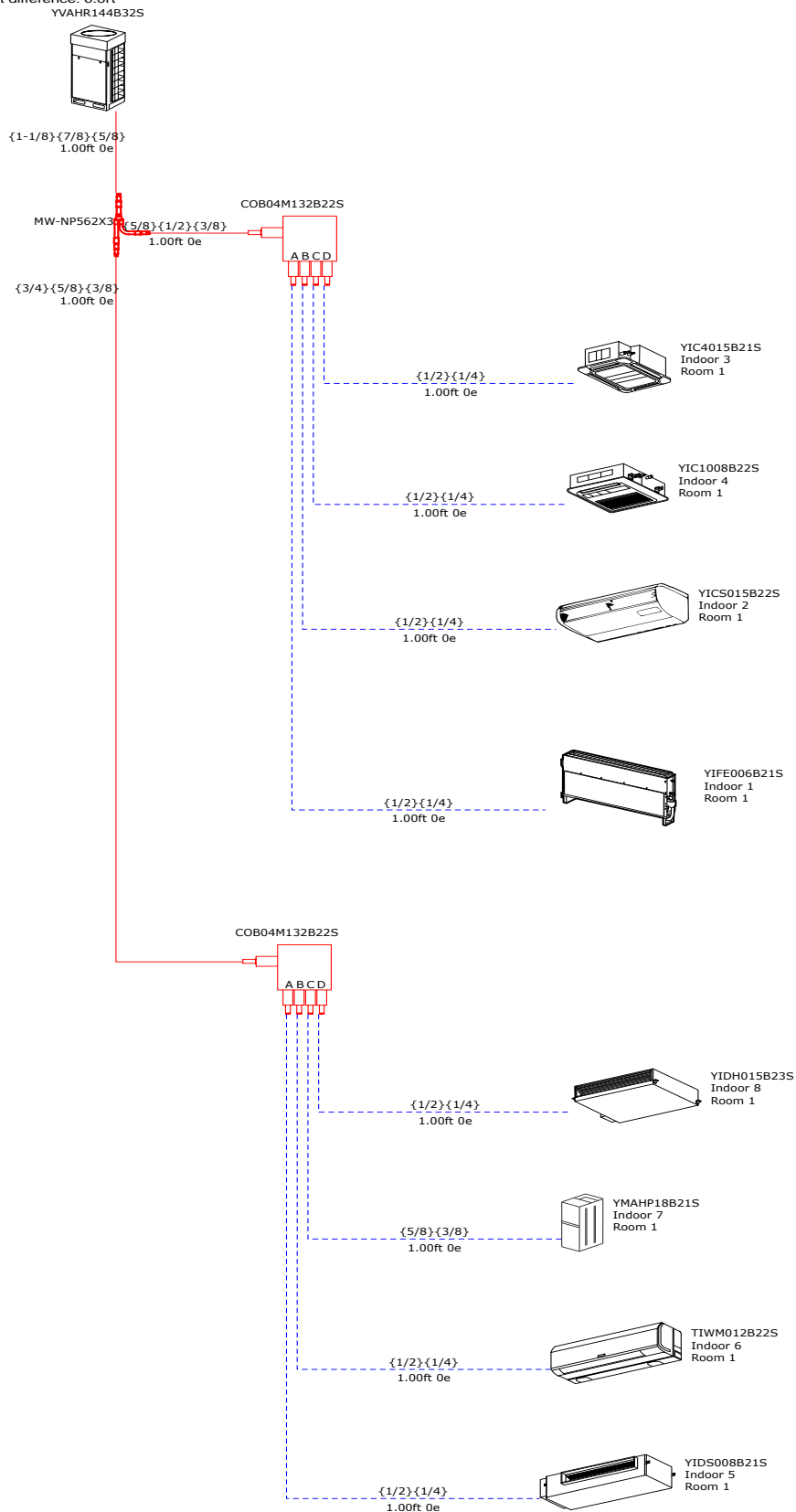
Outdoor unit 1	YVAHR144B32S
Cooling DB (°F)	95.0
Heating DB (°F)	47.0
Heating WB (°F)	43.0
Connection %	67%
Total Cooling MBH	101.0
Sensible Cooling MBH	80.3
Heating MBH	113.0

All equipment must be installed per the Installation and Maintenance Manual and local codes.
 Information is subject to change without notice.

Equipment models depicted are representational only. Refer to submittal documents for specifications.

Total length (liquid): 11.0ft
 Max. equivalent length: 3.0ft
 Estimated max. equivalent length: 24.6ft
 Additional refrigerant charge: 14.1lb
 Total refrigerant charge: 37.7lb
 Maximum indoor unit height difference: 0.0ft
 Maximum indoor unit to change over height difference: 0.0ft

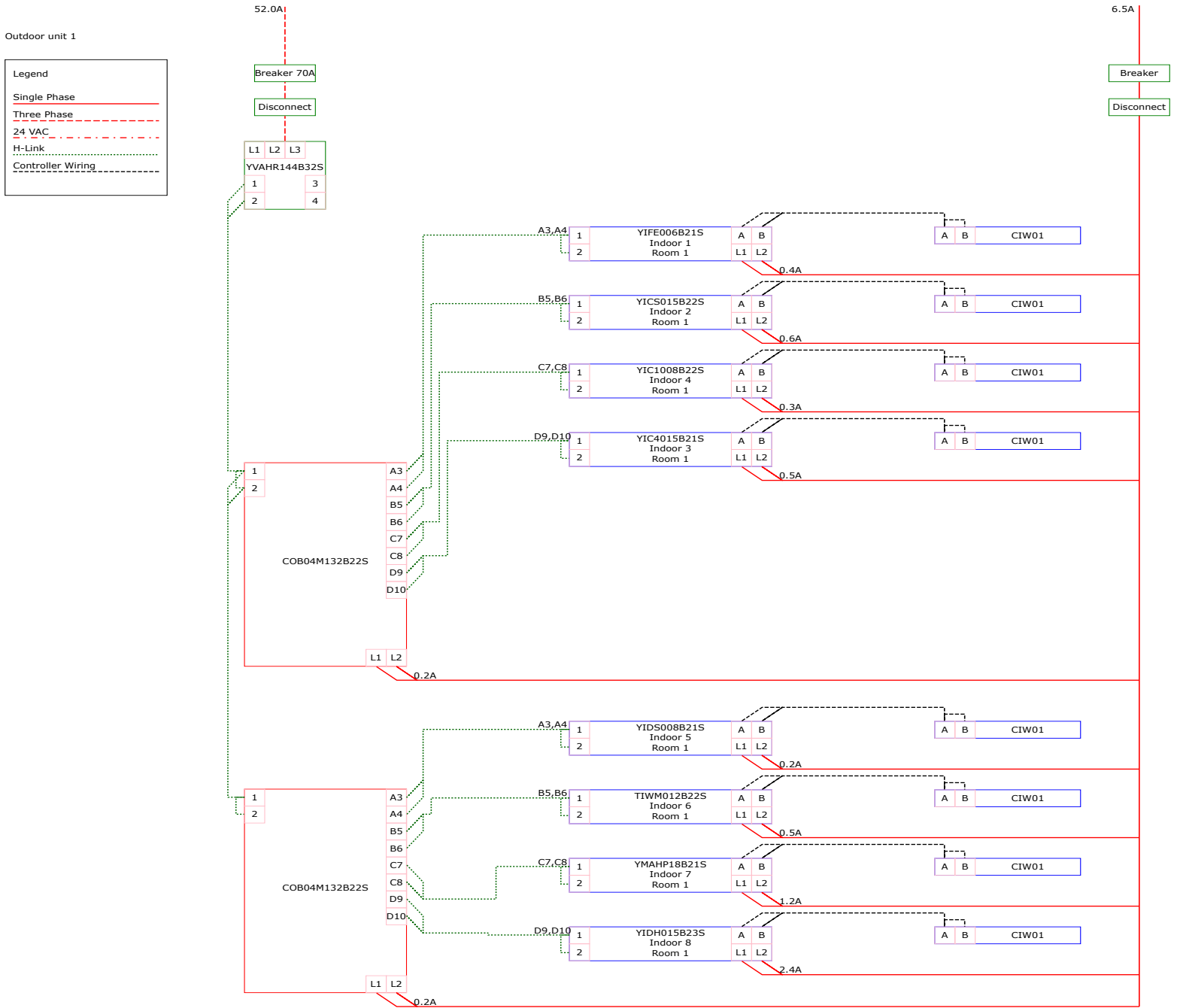
Outdoor unit 1



All equipment must be installed per the Installation and Maintenance Manual and local codes.
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 Equipment models depicted are representational only. Refer to submittal documents for specifications.

Controller details

H-Link II System 1		Zone	Zone Controller (CIW01)	Indoor 1 - Room 1 (YIFE006B21S) - (YVAHR144B32S)
		Zone	Zone Controller (CIW01)	Indoor 2 - Room 1 (YICS015B22S) - (YVAHR144B32S)
		Zone	Zone Controller (CIW01)	Indoor 3 - Room 1 (YIC4015B21S) - (YVAHR144B32S)
		Zone	Zone Controller (CIW01)	Indoor 4 - Room 1 (YIC1008B22S) - (YVAHR144B32S)
		Zone	Zone Controller (CIW01)	Indoor 5 - Room 1 (YIDS008B21S) - (YVAHR144B32S)
		Zone	Zone Controller (CIW01)	Indoor 6 - Room 1 (TIWM012B22S) - (YVAHR144B32S)
		Zone	Zone Controller (CIW01)	Indoor 7 - Room 1 (YMAHP18B21S) - (YVAHR144B32S)
		Zone	Zone Controller (CIW01)	Indoor 8 - Room 1 (YIDH015B23S) - (YVAHR144B32S)



All equipment must be installed per the Installation and Maintenance Manual and local codes.
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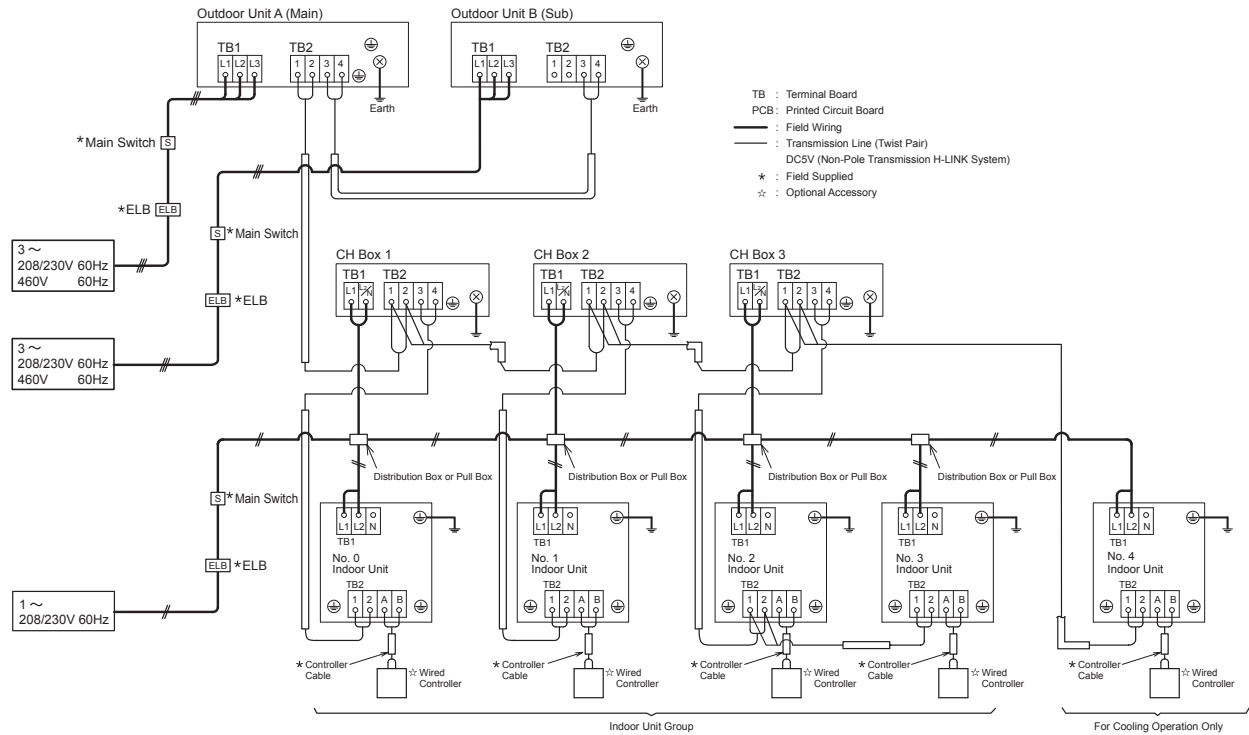
H-LINK II

The H-LINK transmission system for connection between outdoor and indoor units provides an extended system configuration and improved functions without sacrificing workability and flexibility.

Item	H-LINK II
Max. Number of Refrigerant Groups / System	64
Address Setting Range of Indoor Units / Refrigerant Group	0 to 63
Max. Number of Indoor Units / System	160
Total Number of Devices in the same H-LINK	200
Max. Wiring Length	Total 3,281feet(1,000m)

Control System Device	Outdoor Unit/ Indoor Unit	1 (One) H-LINK II System	
		Outdoor Units (Number of Ref. Groups)	Indoor Units
H-LINK II	H-LINK II	64	160

Instruction for Electrical Wiring Connection (Heat Recovery System)



All equipment must be installed per the Installation and Maintenance Manual and local codes.

Information is subject to change without notice.

Equipment models depicted are representational only. Refer to submittal documents for specifications.

12 RT (Y,H)VAHR144B32S

(Consists of one (Y,H)VAHR144B32S module.)

FEATURES:

- 6 to 36 Ton capacity system with all Inverter Compressors delivering maximum efficiency at part load conditions, providing comfortable individual zone control
- Large capacity outdoor units (single module up to 16 Ton and double module up to 30 Ton) for increased layout and installation flexibility, space and weight savings, and reduced piping and electrical connections
- Design flexibility with long piping lengths up to 3,280 ft. total and up to 360 ft. vertical distance between Outdoor Units and Indoor Units
- Large connection ratio ranges – up to 150% and down to 55%
 - Heating down to -13F
 - Cooling down to -4F (with optional Kit)
 - Simultaneous cooling and heating down to -4F
- Flexible solution with 1-, 4-, 8-, and 12-port Change-over Boxes
- Energy efficient and personal comfort via simultaneous cooling and heating capability
- Maintenance and installation friendly design of Outdoor Unit – all components accessible from the front

ACCESSORIES:

- Piping Kit
- Snow Protection Hood
- Protection Net
- Drain Adapter

Notes

1. Rating Conditions are based on the AHRI 1230 test standard.
2. External static pressure can be changed via DSW setting 0.32 in. W.G. (80Pa).
3. For more details, please refer to Engineering manual "Operation range" section.
4. External static pressure can be changed via DSW setting 0.32in.W.G.(80Pa).

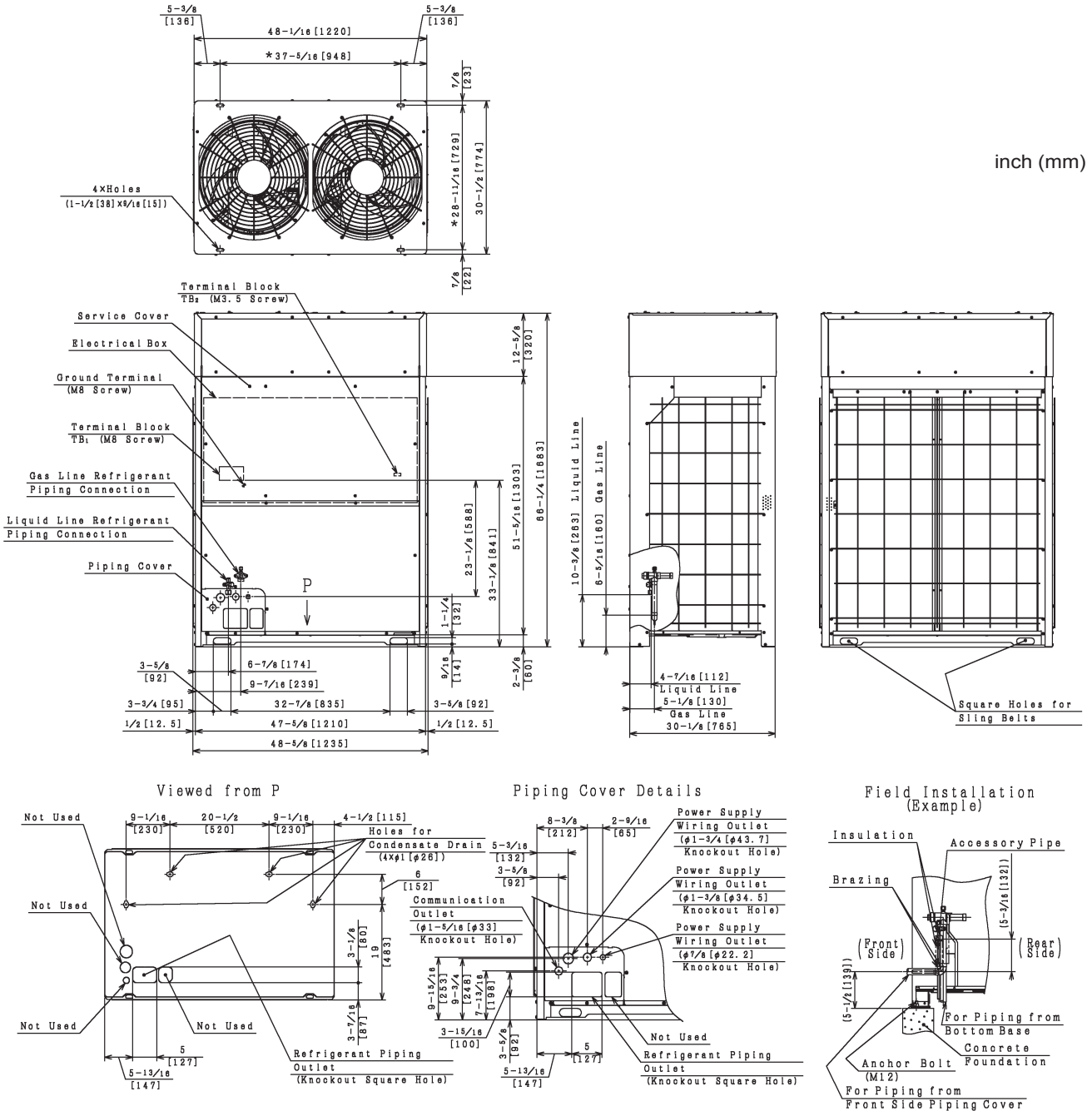
VERSION 201706 - Specification Subject to Change

Category		Ton		12RT		
Model (Combination)				(H,Y)VAHR144B32S		
Model (Individual)		Unit A		(H,Y)VAHR144B32S		
		Unit B		-		
		Unit C		-		
Power Supply				208/230V/ 3PH 60Hz		
Capacity ¹	Cooling	Capacity (Nominal)	Btu/h (kW)	144,000 (42.2)		
	Heating	Capacity (Nominal)	Btu/h (kW)	162,000 (47.5)		
Efficiency Ratings ²	Cooling	Capacity (Rated)	Btu/h (kW)	138,000 (40.4)		
		EER	Btu/Wh (W/W)	10.9 (3.18)		
		IEER	Btu/Wh (Wh/Wh)	23.9 (6.99)		
	Heating High	Capacity (Rated)	Btu/h (kW)	154,000 (45.1)		
		COP	W/W		3.42	
	Heating Low	Capacity	Btu/h (kW)	110,000 (32.2)		
		COP	W/W		2.12	
Heating&Cooling		SCHE	Btu/Wh	30.90		
Cooling Operating Range	Indoor	°F WB (°C WB)		59(15) ~ 73(23)		
	Outdoor ³	°F DB (°C DB)		23(-5) ~ 122(50)		
	Outdoor ³ (with Snow Protection Hood)	°F DB (°C DB)		14(-10) ~ 109(43)		
	Outdoor ³ (with Damper Kit)	°F DB (°C DB)		-4(-20) ~ 109(43)		
Heating Operating Range	Indoor	°F DB (°C DB)		59(15) ~ 80(27)		
	Outdoor ³	°F WB (°C WB)		-13(-25) ~ 59(15)		
Cabinet Color (Munsell Code)				2.5Y 8/2		
Outer Dimensions	Height x Width x Depth		in		66-1/4 x 48-5/8 x 30-1/2	
			mm		1681 x 1235 x 765	
Weight	Net		lbs (kg)	732 (332)		
	Gross		lbs (kg)	776 (352)		
Connection Ratio	Standard (Extended)		%		130(150) - 55	
	Max. (Recommended) Indoor Units/System		Q'ty		26 (10)	
Heat Exchanger	Type		-		Multi-Pass Cross- Finned Tube	
	Material		-		Cu-Al (Anti-corrosion)	
Compressor	Type		Inverter 1		AA50PHD×2	
			Inverter 2		-	
	Motor Output (Pole)		kW (Pole)		6.4(6)×2	
	Start Method		-		inverter	
	Operation Range		%		6 ~ 100	
Refrigeration Oil Type		-		FVC68D		
Crank Case Heater		W×Q'ty		34.2 (230V) ×6		
Fan	Type		-		Propeller Fan	
	Motor Output (Pole)		kW (Pole)		0.39(8) × 2	
	Quantity		Q'ty		2	
	Airflow Rate		cfm (m ³ /min)	9,037 (256)		
	External Static Pressure ⁴		in.W.G. (Pa)	0-0.32 (0-80)		
Drive		-		Direct-drive		
Electrical	Min Circuit Amps		A		58/52	
	Maximum Overcurrent Protective Device		A		70	
	Maximum Fuse Size		A		70	
Sound Pressure Level	Cooling (Night Shift)		dB (A)		65 57	
	Heating		dB (A)		65	
Protection Devices	Cycle		-		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection	
	PCB		-		Over-current protection	
Refrigerant	Type		-		R410A	
	Factory Charge Amount		lbs (kg)	23.6 (10.7)		
Refrigeration Oil	Factory Charge Amount		gal/Unit (L/Unit)	2.1 (7.9)		
Defrost Method		-		Reversed Refrigerant Cycle		
Main Refrigerant Piping (Heat Recovery)	Low Pressure Gas Line		in (mm)	1-1/8 (28.58)		
	High/Low Pressure Gas Line		in (mm)	7/8 (22.2)		
	Liquid Line		in (mm)	5/8 (15.88)		
Simultaneous Cooling & Heating Operating Range³						
Outdoor temperature			Indoor temperature			
Standard	with Snow Hood	with Damper Kit	Cooling	Heating		
22F (-6C)~ 59F (15C) WB	12(-11)~59(15) WB	-6(-21)~59(15) WB	-	59F (15C)~80F (27C) DB		
23F (-5C)~75F (24C) DB	14(-10)~75(15) DB	-4(-20)~75(24) DB	22F (-6C)~59F (15C) WB	-		

All equipment must be installed per the Installation and Maintenance Manual and local codes. Information is subject to change without notice.

Equipment models depicted are representational only. Refer to submittal documents for specifications.

Heat Recovery Model: (Y,H)VAHR144B32S System Dimensions



NOTES:

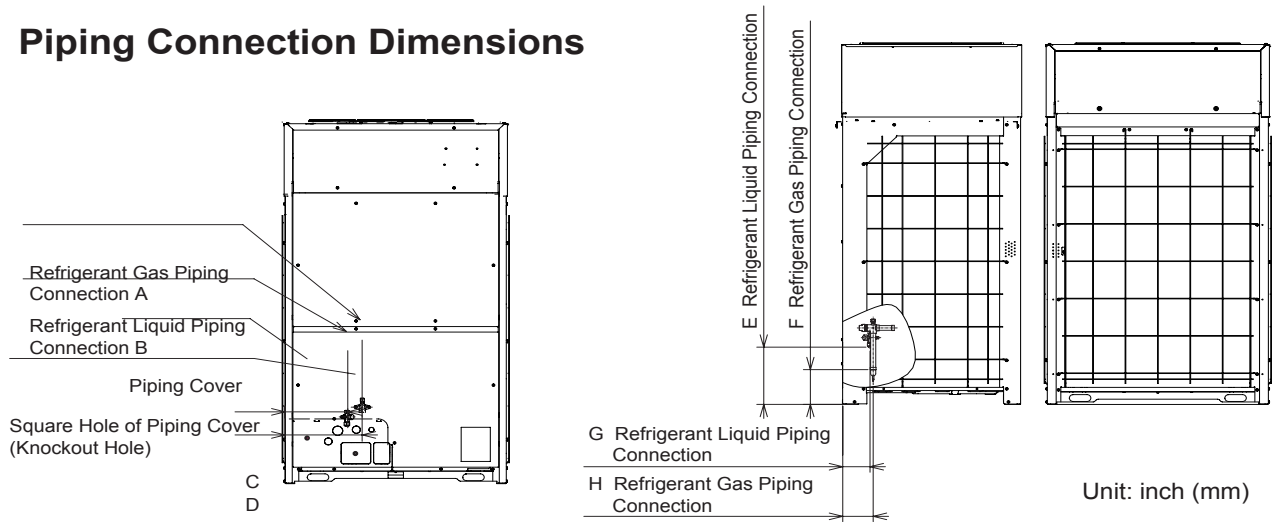
1. Drain water is discharged from the unit during the operation.
 - Ⓞ Choose a place where well drainage is available. Provide a groove for drain.
 - Ⓞ Do not provide an upward slope from the unit to avoid reverse flow of the drain. Provide a second drainpan under the outdoor unit, to collect drain water securely.
 - Ⓞ Do not use the drain boss (optional) in a cold area. (Drain water in the drain pipe may be frozen and the drain pipe may crack.)
2. The dimensions marked with * indicates the mounting pitch dimension for anchor bolts.

version 201706

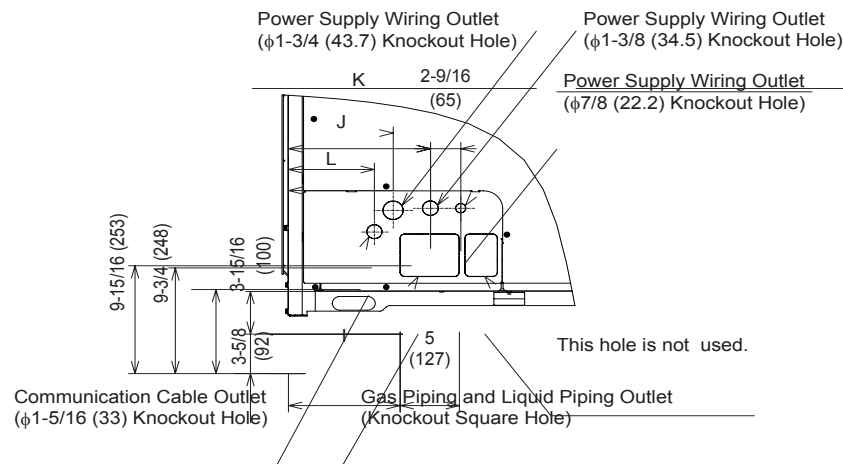
Specifications subject to change

All equipment must be installed per the Installation and Maintenance Manual and local codes. Information is subject to change without notice. Equipment models depicted are representational only. Refer to submittal documents for specifications.

Piping Connection Dimensions



Detail of Piping Cover



Model	Gas	Liquid	A	B	C	D	E	F	G	H	I	J	K	L
72	ϕ 7/8 (22.2)	ϕ 1/2 (12.7)	ϕ 7/8 (22.2)	ϕ 3/8 (9.52)	10-3/8 (264)	13-1/16 (331)	10-9/16 (268)	6-7/16 (163)	4-5/8 (117)	5-3/16 (131)	9-7/16 (240)	8-7/8 (225)	12 (305)	7-5/16 (185)
96	ϕ 7/8 (22.2)	ϕ 1/2 (12.7)												
120	ϕ 1-1/8 (28.58)	ϕ 1/2 (12.7)	ϕ 1 (25.4)	ϕ 1/2 (12.7)	6-7/8 (174)	9-7/16 (239)	10-3/8 (263)	6-5/16 (160)	4-7/16 (112)	5-1/8 (130)	5-13/16 (147)	5-3/16 (132)	8-3/8 (212)	3-5/8 (92)
144	ϕ 1-1/8 (28.58)	ϕ 5/8 (15.88)												
168	ϕ 1-1/8 (28.58)	ϕ 5/8 (15.88)	ϕ 1-1/8 (28.58)	ϕ 5/8 (15.88)	6-15/16 (177)	9-7/16 (239)	10-3/16 (259)	6-5/16 (160)	5-3/16 (132)	6 (152)	5-13/16 (147)	5-3/16 (132)	8-3/8 (212)	3-5/8 (92)
192	ϕ 1-1/8 (28.58)	ϕ 5/8 (15.88)	ϕ 1-1/8 (28.58)	ϕ 5/8 (15.88)	6-15/16 (177)	9-7/16 (239)	10-3/16 (259)	6-5/16 (160)	5-3/16 (132)	6 (152)	5-13/16 (147)	5-3/16 (132)	8-3/8 (212)	3-5/8 (92)

Refrigerant Piping Connection and Wiring Outlet



version 201706

Specifications subject to change

All equipment must be installed per the Installation and Maintenance Manual and local codes. Information is subject to change without notice. Equipment models depicted are representational only. Refer to submittal documents for specifications.

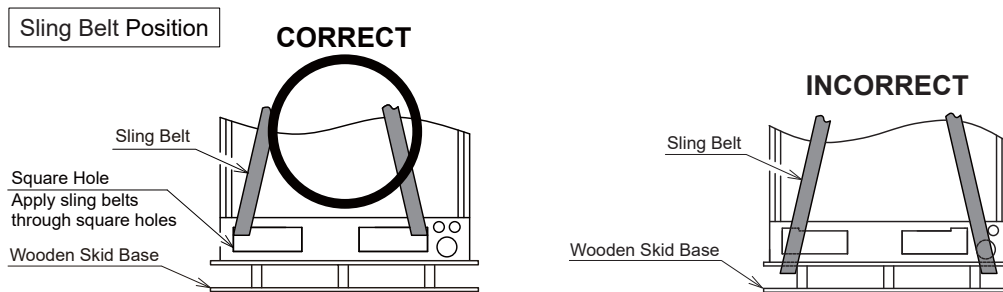
5. Transportation and Installation Work

5.1 Transportation

Transport the product as close to the installation location as practical before unpacking.
 When using a crane, hang the unit according to the description of the outdoor unit packing.

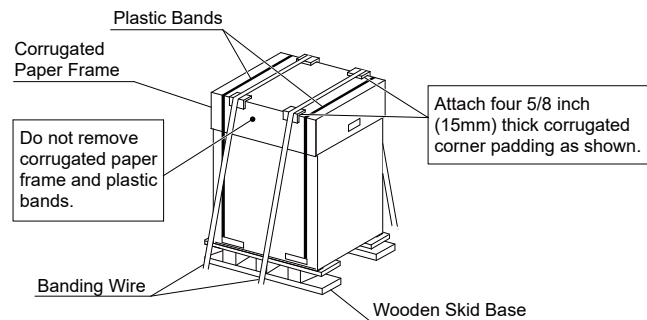
! WARNING

- Do not hang the unit with the sling belts at the wooden skid base.



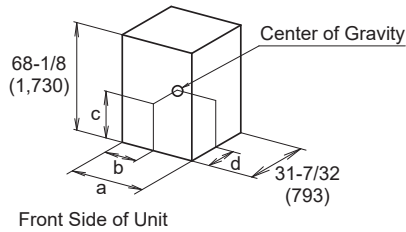
! CAUTION

- Transportation and Storage:
 - The protective corrugated cardboard is not strong enough to resist rough handling.
 - Secure with two sling belts when hoisting the outdoor unit it with a crane.
- Transportation and Banding Wire:
 - To protect the unit, do not remove any packing.
 - Do not stack or place any material on top of the product.
 - Apply banding wire to both sides of the packaged unit as shown at right.



Take special care when hanging or moving the outdoor unit because its center of mass is off-center and unbalanced. See the diagram below.

• Center of Gravity



Voltage Type	Model Type	inch (mm)			
		a	b	c	d
208/230V	72	37-7/8 (962)	18-1/2 (470)	26-25/32 (680)	13-3/8 (340)
	96, 120	48-1/8 (1,222)	20-7/8 (530)	22-27/32 (580)	12 (305)
460V	72	37-7/8 (962)	17-1/8 (435)	24-19/32 (625)	13 (330)
	96, 120	48-1/8 (1,222)	19-11/16 (500)	21-21/32 (550)	11-13/16 (300)

• Hanging Method

- (1) Suspend the unit (with wooden skid base) in its packing with two sling belts as shown in Figure 5.1.
- (2) Do not use banding wire.
- (3) Ensure that the unit is balanced.
- (4) Ensure safety while hoisting the unit gently in order not to cause the unit to tip.

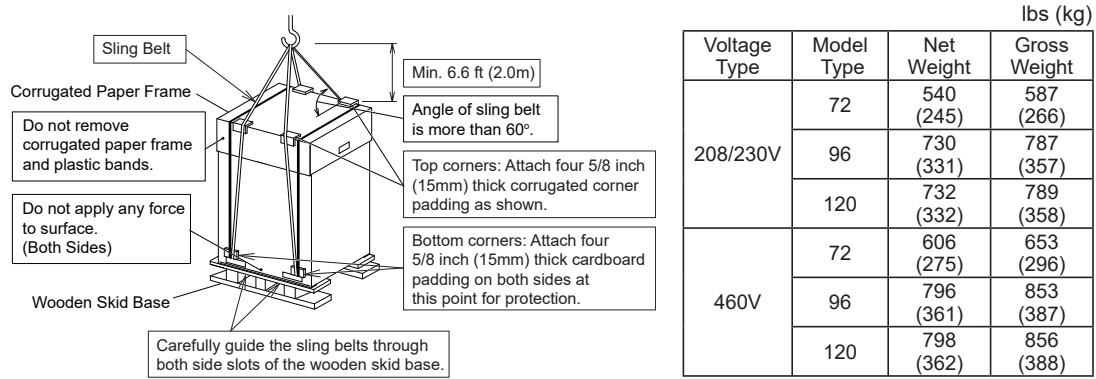


Figure 5.1 Hanging Unit on Wooden Skid Base for Transportation

- (5) Hang the unit without a wooden skid base with two sling belts as shown in Figure 5.2.

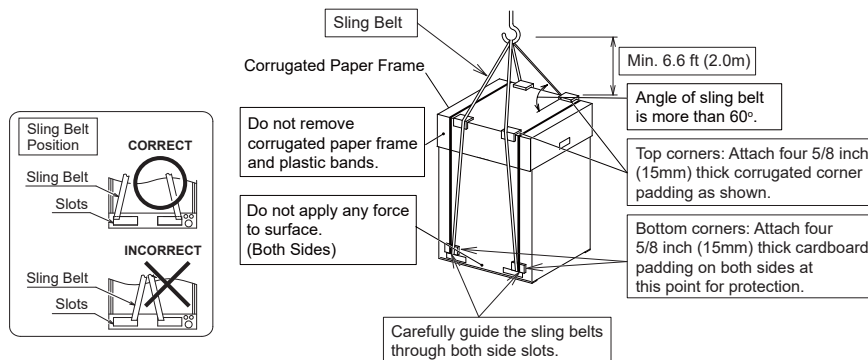
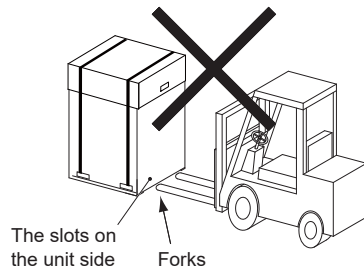


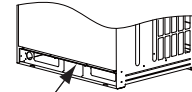
Figure 5.2 Hanging Unit without Wooden Skid Base

When using a forklift, do not insert forks into the slots at the unit side panels. The unit can sustain damage.



Do not apply excessive force to the squared slots with forks or other materials. The bottom of the unit can become deformed.

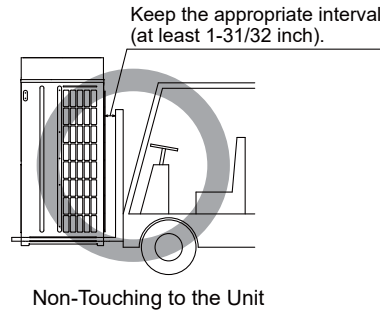
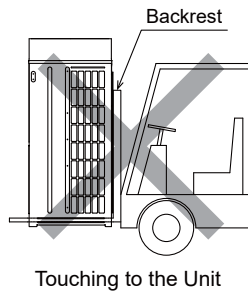
- * Do not push the bottom base with forks.
- * Do not use a roller.



Do not apply an excessive force.
(Both Sides)

⚠ CAUTION

During transportation, do not allow the backrest of the forklift to come into contact with the unit. Sudden forward movement on the forklift can cause damage to the unit heat exchanger.



Keep the appropriate interval
(at least 1-31/32 inch).

NOTE

If transporting after unpacking, protect the unit with corrugated material, styrofoam, bubble pack, or a tarp.

5.2 Handling of Outdoor Unit

⚠ WARNING

Do not place or leave any foreign objects: (cables, tools), inside the outdoor unit or control module and verify that nothing remains there prior to installation and test run. Damage and fire can result due to carelessness.

SUBMITTAL DATA SHEET

1.0 RT TIWM012B22S

Non-Ducted Wall Mount Indoor Unit

FEATURES:

- Removable front panel for easy cleaning
- Optional wireless controller and built-in wireless sensor
- Optional condensate pump

ACCESSORY:

- Strainer Kit MSF-NP120A

Model		TIWM012B22S	
Indoor Unit Power Supply		AC 1Phase, 208/230V, 60Hz	
Nominal Cooling Capacity *1	Btu/h (kW)	12,000 (3.5)	
Nominal Heating Capacity *1	Btu/h (kW)	13,500 (4.0)	
Sound Pressure Level *2 (Overall A Scale)	dB	46-40-36-33 12,000	
Outer Dimensions			
Height	in.(mm)	11-13/16	(300)
Width	in.(mm)	35-7/16	(900)
Depth	in.(mm)	9-1/16	(230)
Net Weight	lbs(kg)	24	(11)
Refrigerant		R410A	
Indoor Fan			
Air Flow Rate (Hi2-Hi-Me-Lo)	cfm (m ³ /min.)	494-388-318-265 (14-11-9-7.5)	
Motor Nominal Output	W	38	
Minimum Circuit Ampacity (MCA)	A	0.5	
Maximum Fuse Ampacity (MFA)	A	15	
Connections			
Refrigerant Piping		Flare-Nut Connection (with Flare Nuts)	
Liquid Line	in.(mm)	1/4	(6.35)
Gas Line	in.(mm)	1/2	(12.70)
Condensate Drain			
OD	in.(mm)	7/8	(22)

NOTES:

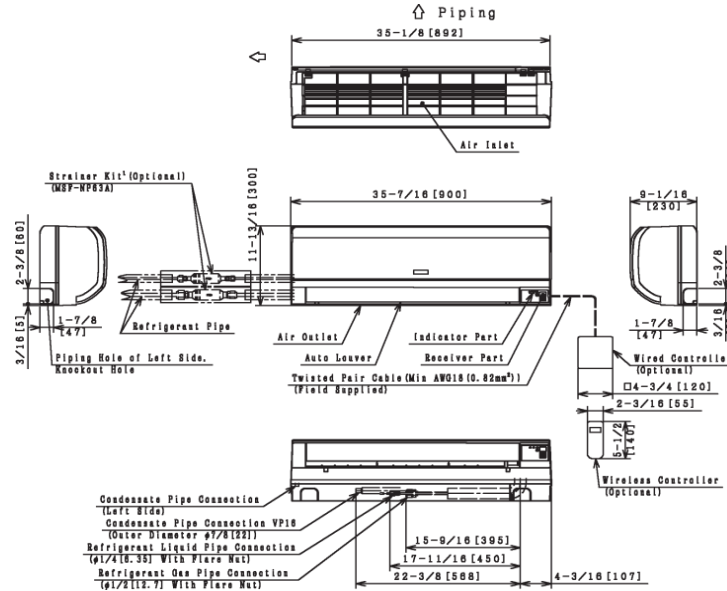
Version 202105

1. Nominal capacity is based on combinations within the VRF system under the following conditions;
 - Cooling: Indoor 80°F (26.7°C)DB / 67°F (19.4°C)WB, Outdoor: 95°F (35°C)DB
 - Heating: Indoor 70°F (21.1°C)DB, Outdoor 47°F (8.3°C)DB / 43°F (6.1°C)WB
2. The sound pressure level is based on the following conditions; 3.3ft (1m) in front of the unit and 3.3ft (1m) below the unit.
 The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

System Dimensions

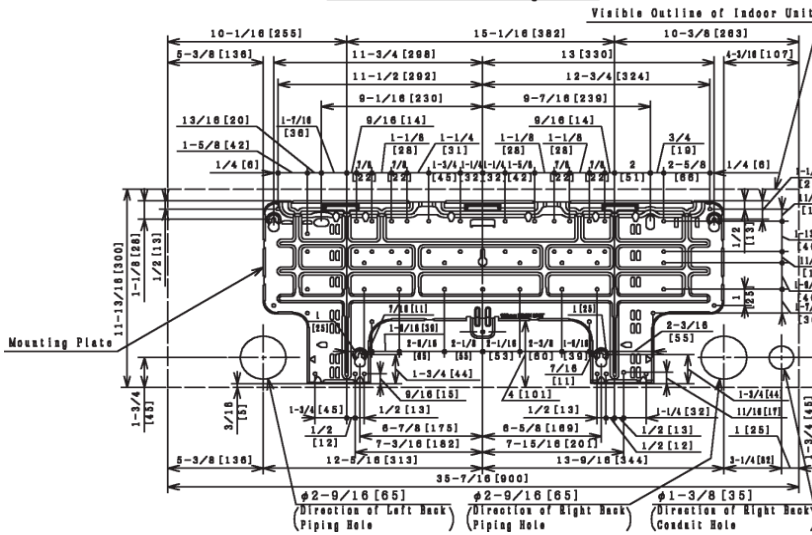
Non-Ducted Wall Mount Indoor
 Unit Model: TIWM012B22S

Unit: inch (mm)

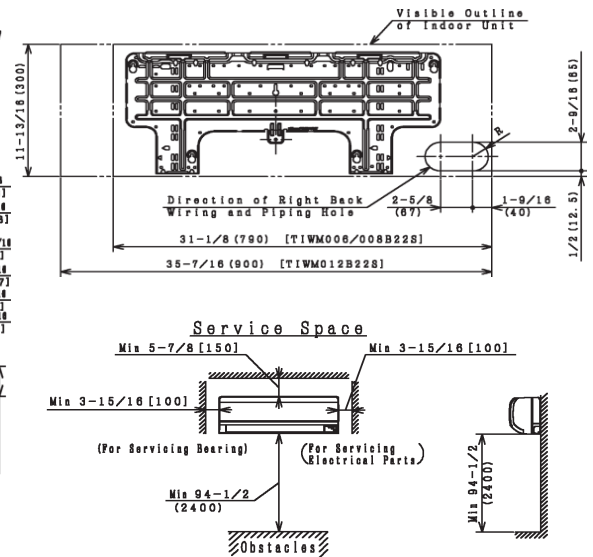


Opening Direction Option 1:

Dimension of Mounting Plate



Opening Direction Option 2



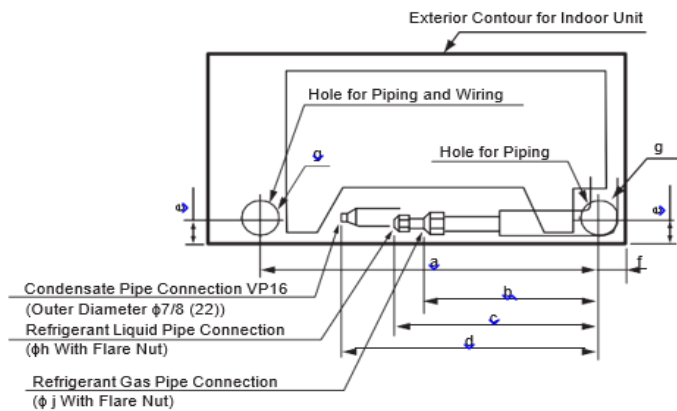
NOTES:

1. Attach strainer kit to refrigerant pipe closest to the unit when integrating wall mount type indoor unit into VRF system. The strainer kit is an option. However, if the installation environment is not clean, then the strainer kit is required.
2. Install condensate piping from either the left or right side of the knockout holes on the unit.
 In case of the left side, mount a condensate hose to condensate pipe connection of the left side.
3. Taking out of refrigerant pipe from the right bottom side and right side of the unit are not available

Version 202105

Piping Connection Dimensions

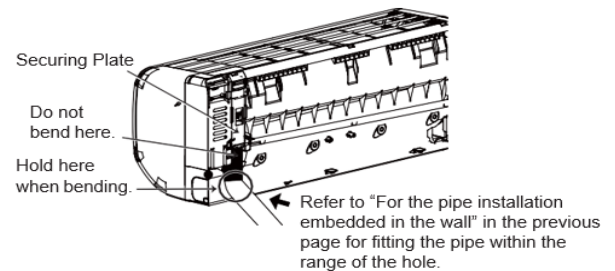
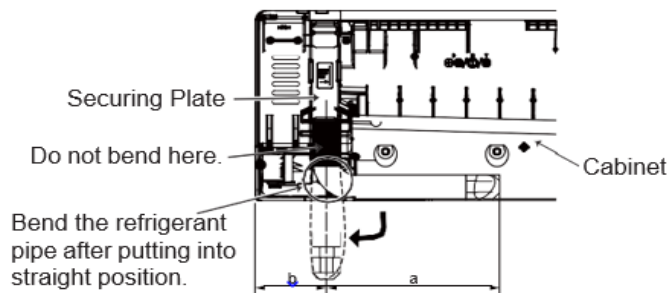
For the pipe installation embedded in the wall
 TIWM012B22S



View from Front Side for Indoor Unit

Item	TIWM012B22S
a	25-7/8 (657)
b	15-9/16 (395)
c	17-11/16 (450)
d	22-3/8 (568)
e	1-3/4 (45)
f	4-3/16 (107)
g	2-9/16 (65)
h	1/4 (6.35)
j	1/2 (12.7)

For the rear side installation



Unit: inch (mm)

Item	TIWM012B22S	
	Liquid Piping	Gas Piping
a	17-11/16 (450)	15-9/16 (395)
b	4-3/16 (107)	4-3/16 (107)



Version 202105

SUBMITTAL DATA SHEET

0.7 RT (H,Y)IC1008B22S Non-Ducted 1-Way Cassette Indoor Unit

FEATURES:

- 1.0m and stylish design
- Automatic swing louver distributes airflow evenly for uniform temperature

ACCESSORIES:

- Panel for 1 way cassette, standard, P-AP36CNA
- Motion Sensor Kit, SOR-NES
- Duct Adapter, PD-100
- Grille for Front Discharge, DG-56SW1
- Air Outlet Shutter Plate, PIS-56LS

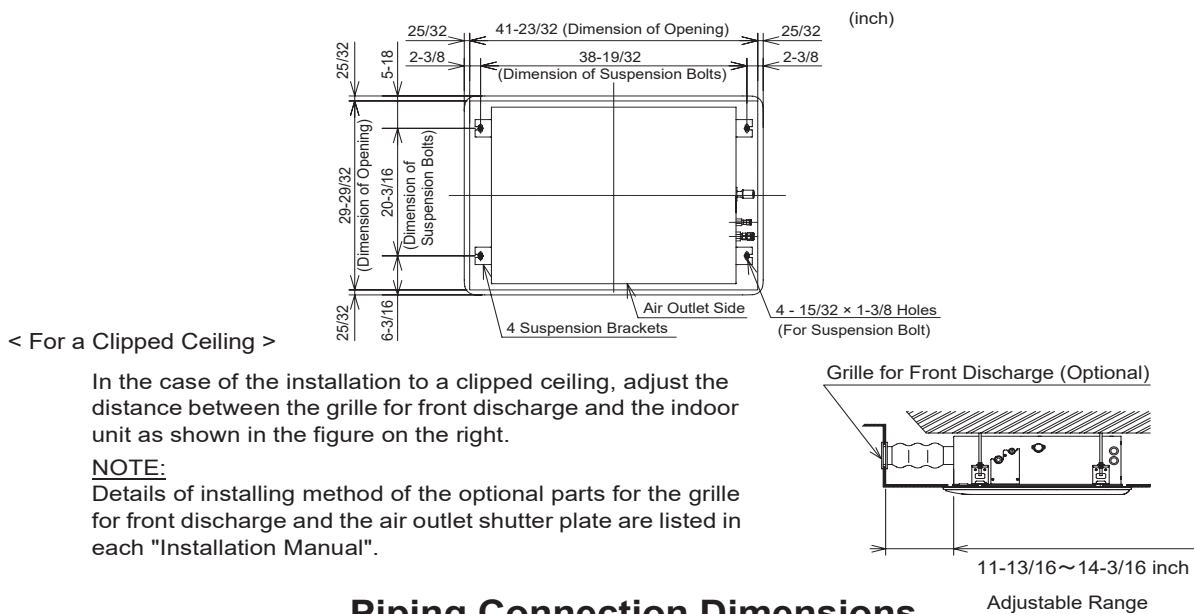
Model		(H,Y)IC1008B22S
Indoor Unit Power		AC 1Phase, 208/230V, 60Hz
Nominal Cooling Capacity *1	Btu/h (kW)	8,000 (2.3)
Nominal Heating Capacity *1	Btu/h (kW)	9,000 (2.6)
Sound Pressure Level *2 (Overall A Scale) (Hi2-Hi-Me-Lo)	dB	36-34-31-28
Outer Dimensions		
Height	in.(mm)	9-1/4 (235)
Width	in.(mm)	35-7/16 (900)
Depth	in.(mm)	27-15/16 (710)
Net Weight	lbs(kg)	55 (25)
Refrigerant		R410A
Indoor Fan		
Air Flow Rate (Hi2-Hi-Me-Lo)	cfm (m ³ /min)	335-300-265-229 (9.5-8.5-7.5-6.5)
Motor Nominal	W	50
Connections		
Refrigerant Piping		Flare-Nut Connection (with Flare Nuts)
Liquid Line	in.(mm)	1/4 (6.35)
Gas Line	in.(mm)	1/2 (12.70)
Condensate Drain		
OD	in.(mm)	1-1/4 (32)

1. Nominal capacity is based on combinations within the VRF system under the following conditions;
 - Cooling: Indoor 80°F DB / 67°F WB, Outdoor: 95°F DB
 - Heating: Indoor 70°F DB, Outdoor 47°F DB / 43°F WB
2. The sound pressure level is based on the following conditions; 4.9 ft. (1.5m) beneath the units.
 The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

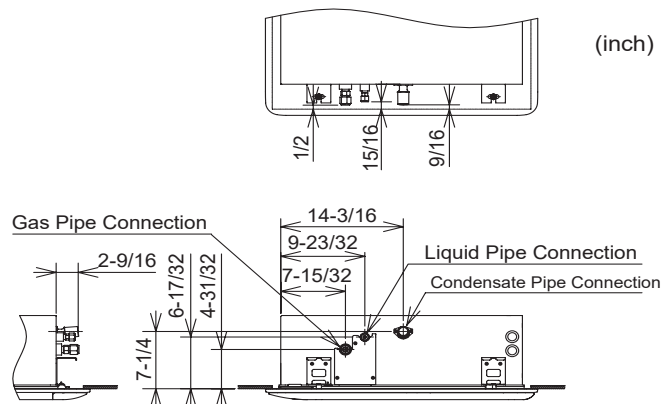
version 202104

System Dimensions

Non-Ducted 1-Way Cassette Indoor Unit Model: (H,Y)IC1008B22S



Piping Connection Dimensions



version 202104

(Y,H)IC4015B21S

Non-Ducted 4-Way Cassette Indoor Unit

FEATURES:

- Optional motion and radiant heat sensors for shut-off and activation in response to room occupancy.
- Multiple fan speed settings
- Optional fresh air kit available
- Four air volume settings with Ultra Hi for higher ceilings
- 4-way airflow standard but can be configured for 2-way or 3-way
- Integrated condensate pumps included in all units
- Uniform panel sizing
- Optional lift mechanism allows panel to be lowered for convenient service access

ACCESSORIES:

- Panel for 4 way cassette, standard, P-AP160NA2
- Panel for 4 way cassette, with motion and radiant sensors, P-AP160NAE1
- Duct Adapter, PD-75A
- Fresh Air Inlet Kit, OACI-160K3
- Filter Box, B-160H3
- T-Tube Connecting Kit, TKCI-160K
- Air Outlet Shutter Plate, PI-160LS2
- Anti-bacterial Air Filter, F-(71)(160)M-K2

NOTES:

- Nominal capacity is based on combinations within the VRF system and the following conditions:
 Cooling Operation Conditions
 Indoor Air Inlet Temperature: 80F DB (26.7 °C DB)
 67F WB (19.4 °C WB)
 Outdoor Air Inlet Temperature: 95F DB (35.0 °C DB)

 Heating Operation Conditions
 Indoor Air Inlet Temperature: 70F DB (21.1 °C DB)
 47F WB (8.3 °C WB)
 Outdoor Air Inlet Temperature: 43F DB (6.1 °C DB)
 Piping Length: 24.6 ft (7.5 m)
 Piping Lift: 0 ft (0 m)

- Sound Pressure level is based on conditions:
 4.9 ft (1.5m) beneath the unit.

Indoor Unit Type		4-Way Cassette
Model		(H,Y)IC4015B21S
Indoor Unit Power Supply	--	AC 1Phase, 208/230V, 60Hz
Nominal Cooling Capacity*1	Btu/h (kW)	15,000 (4.4)
Nominal Heating Capacity*1	Btu/h (kW)	17,000 (5.0)
Sound Pressure Level*2 (Overall A Scale)	dB	37-32-30-27
Outer Dimensions		
Height	in.(mm)	9-3/4 (248)
Width	in.(mm)	33-1/16 (840)
Depth	in.(mm)	33-1/16 (840)
Net Weight	lbs(kg)	46 (21)
Refrigerant	--	R410A
Indoor Fan		Multi-Blade Centrifugal Fan
Number/Unit	--	1
Outer Diameter	φ in (mm)	19-9/32 (490)
Nominal Air Flow (Hi2-Hi-Me-Lo)	cfm (m³/min)	777-600-494-388 (22-17-14-11)
Indoor Fan Motor		Drip-Proof Type Enclosure
Starting Method	--	DC Motor
Nominal Output	W	57
Electrical Data		
Min Circuit Amps	A	0.5
Maximum Fuse Size	A	15
Connections		Flare-nut Connection (with Flare Nuts)
Refrigerant Piping		
Liquid Line	in.(mm)	1/4 (6.35)
Gas Line	in.(mm)	1/2 (12.70)
Condensate Drain		VP25
OD	in.(mm)	1-1/4 (32)
ID	in.(mm)	31/32 (25)

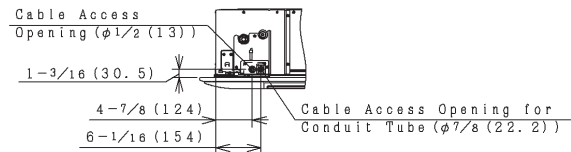
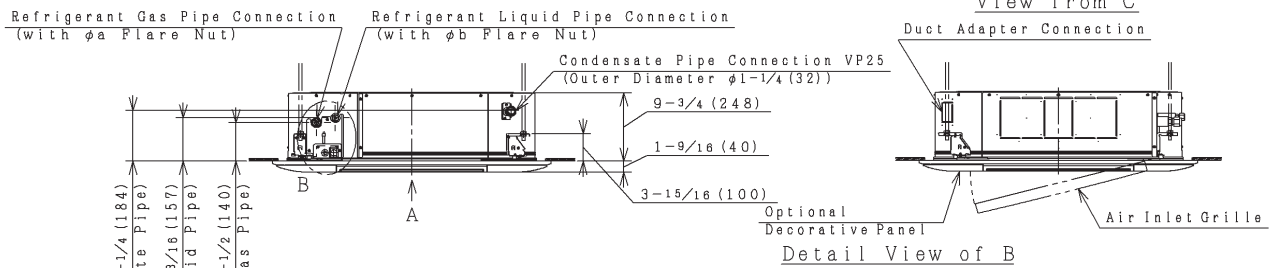
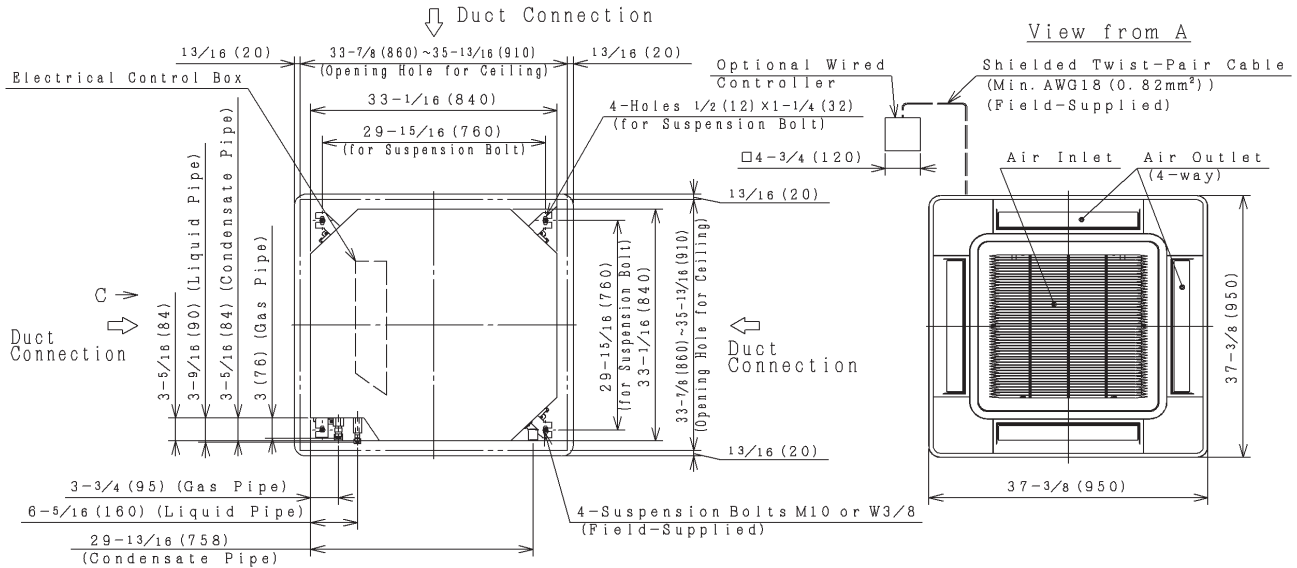
Adaptable Panel Model	P-AP160NA2 (without Motion and Radiation Sensors)	P-AP160NAE1 (with Motion and Radiation Sensors)
Color	--	Neutral White
Outer Dimensions		
Height	in.(mm)	1-9/16 (40)
Width	in.(mm)	37-13/32 (950)
Depth	in.(mm)	37-13/32 (950)
Net Weight	lbs(kg)	14 (6.5)

VERSION 201709
 Specifications subject to change.

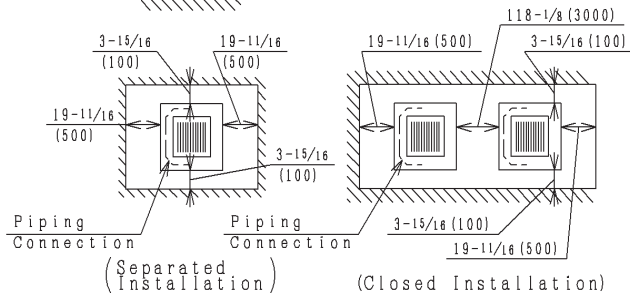
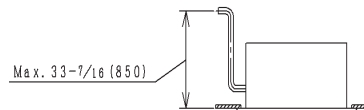
System Dimensions

Model: (Y,H)IC4015B21S with Decorative Panel P-AP160NA2

Unit: inch (mm)



Lifting Height of Condensate Pipe



Model	Dimension	a	b
(H,Y)IC4008B21S		1/2 (12.7)	1/4 (6.35)
(H,Y)IC4012B21S		1/2 (12.7)	1/4 (6.35)
(H,Y)IC4015B21S		1/2 (12.7)	1/4 (6.35)
(H,Y)IC4018B21S		5/8 (15.88)	3/8 (9.52)

NOTE:

Distance between the wall and decorative edge must be a minimum of 59-1/16 inch (1500mm) to prevent short circuiting.



version 201709

Specifications subject to change

All equipment must be installed per the Installation and Maintenance Manual and local codes. Information is subject to change without notice. Equipment models depicted are representational only. Refer to submittal documents for specifications.

SUBMITTAL DATA SHEET

1.3 RT (H,Y)ICS015B22S

Ceiling Suspended Indoor Unit

FEATURES:

- Motion sensor for improved energy efficiency
- New fan runner for high efficiency and low noise
- Flexible installation for high ceilings

ACCESSORIES:

- Filter Box, B-56MP-K1
- IR Receiver Kit, CSIRK01
- Motion Sensor Kit, SOR-NEP
- Duct Adapter, PD-100
- Condensate Pump Kit, DUPC-63K1

Model		(H,Y)ICS015B22S
Indoor Unit Power Supply		AC 1Phase, 208/230V, 60Hz
Nominal Cooling Capacity *1	Btu/h (kW)	15,000 (4.4)
Nominal Heating Capacity *1	Btu/h (kW)	17,000 (5.0)
Sound Pressure Level *2 (Overall A Scale) (Hi2-Hi-Me-Lo)	dB	38-35-31-28
Outer Dimensions		
Height	in.(mm)	9-1/4 (235)
Width	in.(mm)	37-13/16 (960)
Depth	in.(mm)	27-3/16 (690)
Net Weight	lbs(kg)	59 (27)
Refrigerant		R410A
Indoor Fan		
Air Flow Rate (Hi2-Hi-Me-Lo)	cfm (m ³ /min)	530-459-388-318 (15-13-11-9)
Motor Nominal Output	W	50
Connections		
Refrigerant Piping		Flare-Nut Connection (with Flare Nuts)
Liquid Line	in.(mm)	1/4 (6.35)
Gas Line	in.(mm)	1/2 (12.70)
Condensate Drain		
OD	in.(mm)	1-1/4 (32)

NOTES:

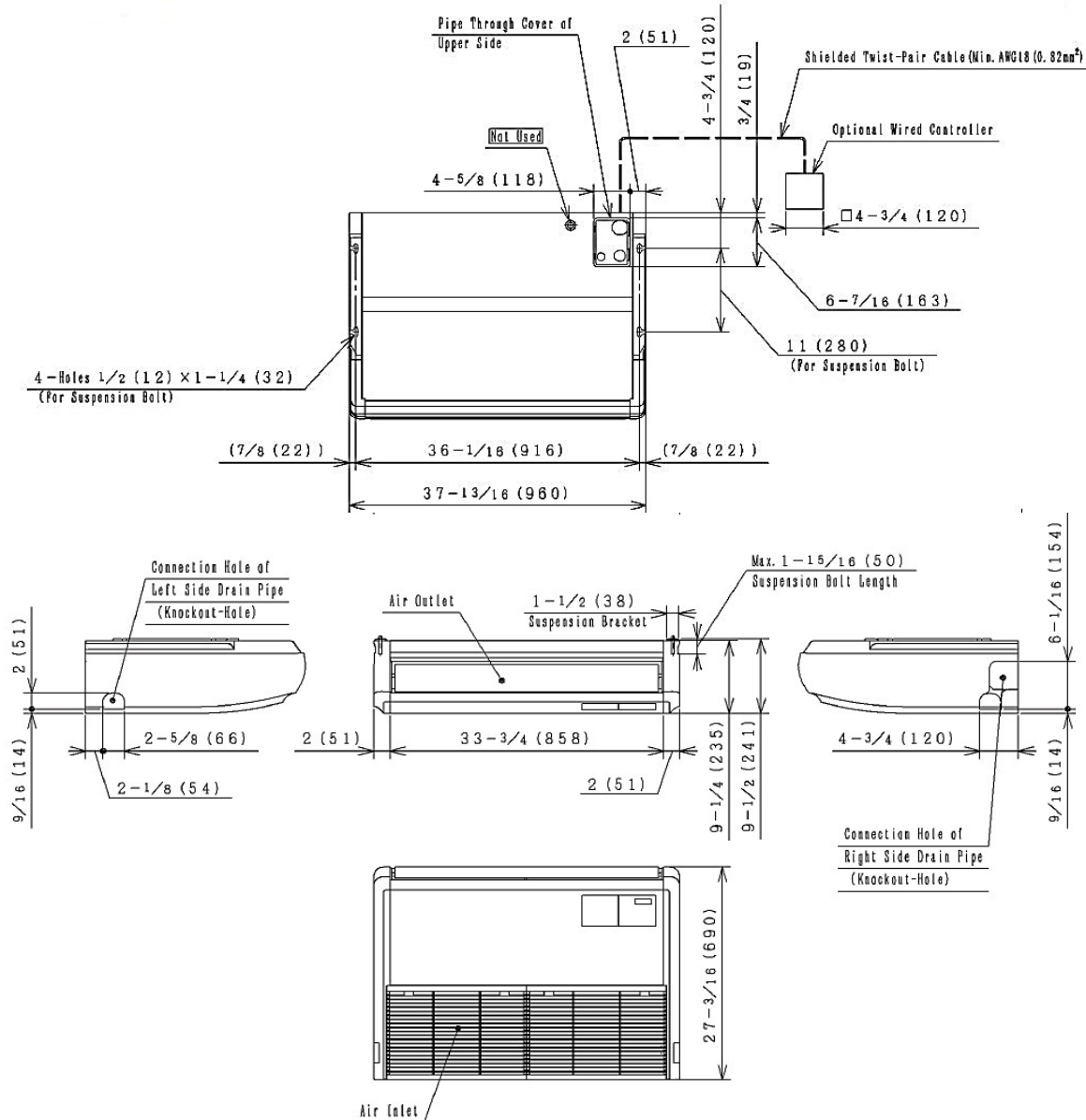
1. Nominal capacity is based on combinations within the VRF system under the following conditions;
 - Cooling: Indoor 80°F DB / 67°F WB, Outdoor: 95°F DB
 - Heating: Indoor 70°F DB, Outdoor 47°F DB / 43°F WB
2. The sound pressure level is based on the following conditions; 4.9 ft. (1.5m) beneath the units.
 The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field

version 202104

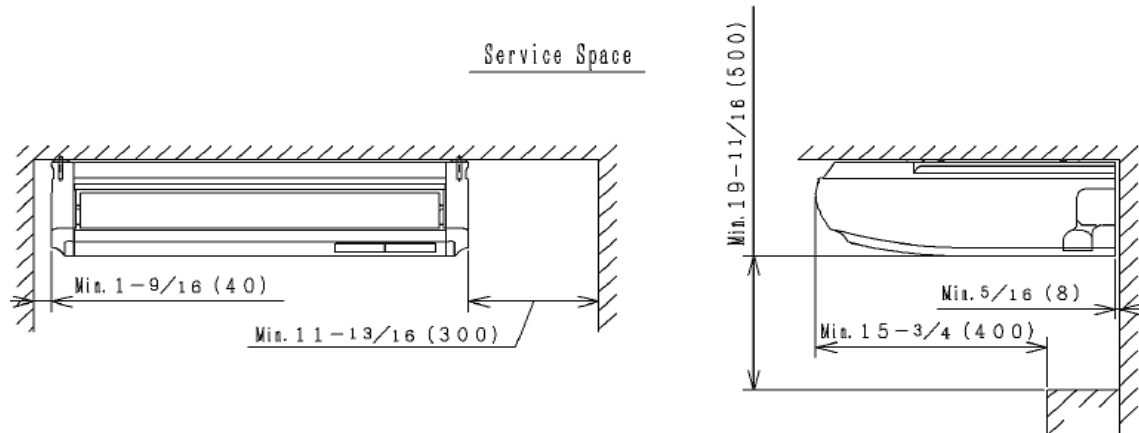
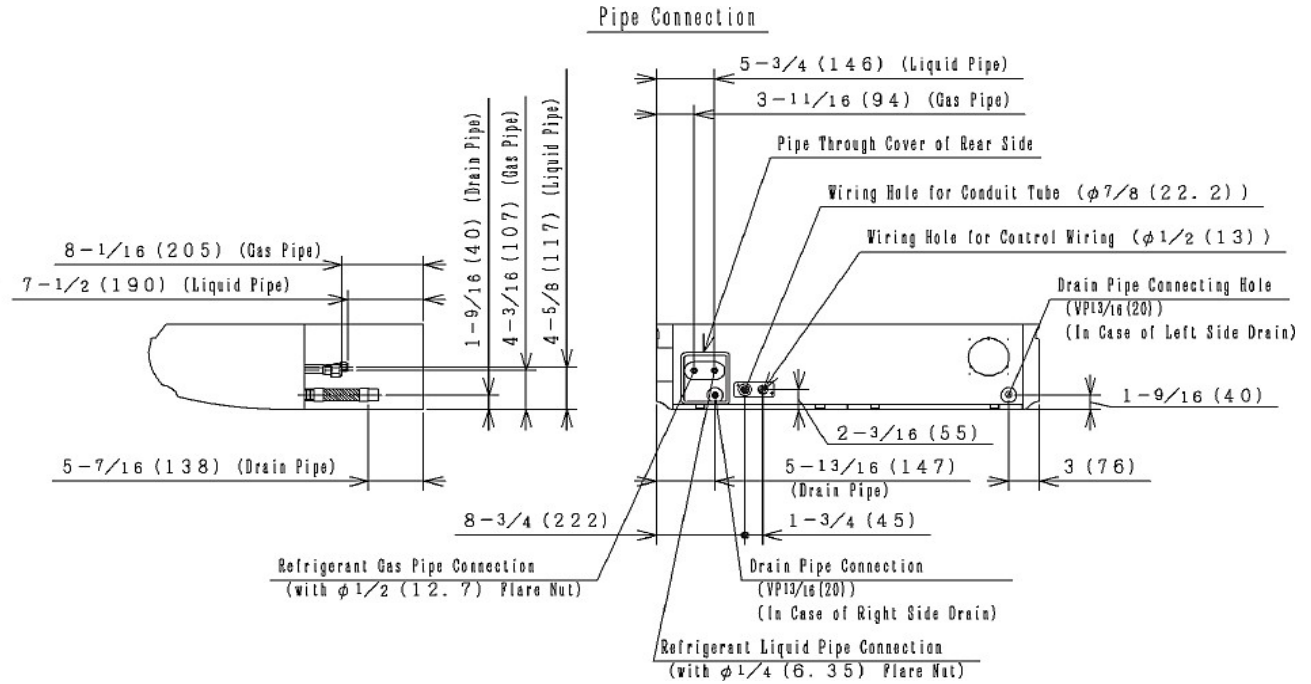
System Dimensions

Ceiling Suspended Model:
 (H,Y)CS015B22S

inch (mm)



version 202104



version 202104

SUBMITTAL DATA SHEET

(H,Y)IDH015B23S

Ducted High Static Indoor Unit

FEATURES:

- High-efficiency DC fan motor
- Multiple fan speed settings
- Up to .8 in WG static pressure
- Bottom access for easy service and troubleshooting
- Built-in condensate pump

ACCESSORIES:

- Long-life Filter: F-56LI
- Filter Box for Long-life Filter: B-56LI
- Motion Sensor Kit: SOR-NEZ
- Relay and 3-pin Connector Kit: PSC-5RA
- 3-pin Connector Cable: PCC-1A
- IR Receiver Kit: CWDIRK01
- Remote Sensor: THM-R2A

NOTES:

1. Nominal capacity is based on combinations within the VRF system and conditions, as follows:

Cooling Operation Conditions

Indoor Air Inlet Temperature:
 80F DB (26.7 °C DB)
 67F WB (19.4 °C WB)

Outdoor Air Inlet Temperature:
 95F DB (35.0 °C DB)

Heating Operation Conditions

Indoor Air Inlet Temperature:
 47F WB (8.3 °C WB)

Outdoor Air Inlet Temperature: 43F DB (6.1 °C DB)
 Piping Length: 24.6 ft (7.5 m)
 Piping Lift: 0 ft (0 m)

2. Sound Pressure level is based on conditions:

4.9 ft (1.5m) beneath the unit.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

2. The data for external pressure 3 indicates Standard Pressure Setting (High Pressure Setting 1 - High Pressure Setting 2) values when a filter is not used. The sound pressure level is based on the Standard Pressure Setting.

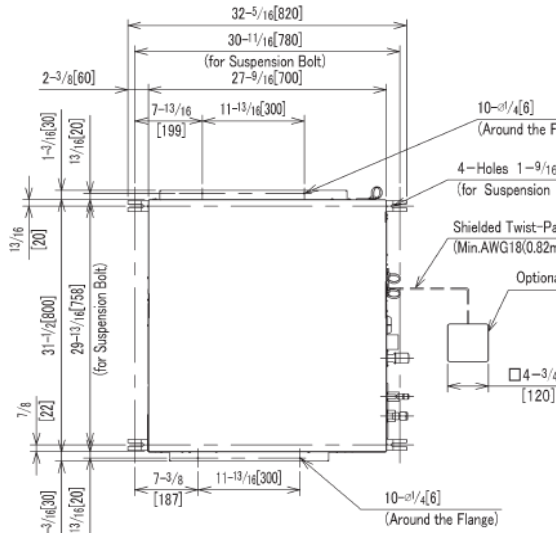
Version 202104

Model		(H,Y)IDH015B23S
Indoor Unit Power Supply		AC 1Phase, 208/230V, 60Hz
Nominal Cooling Capacity ¹	Btu/h (kW)	15,000 (4.4)
Nominal Heating Capacity ¹	Btu/h (kW)	17,000 (5.0)
Sound Pressure Level ² (Overall A Scale) (Hi2-Hi-Me-Lo)	dB	41-38-35-32
Outer Dimensions		
Height	in. (mm)	11-13/16 (300)
Width	in. (mm)	27-9/16 (700)
Depth	in. (mm)	31-1/2 (800)
Net Weight	lbs. (kg)	64 (29)
Refrigerant		R410A
Indoor Fan		
Airflow Rate (Hi2-Hi-Me-Lo)	cfm (m ³ /min)	512-459-388-335 (14.5-13-11-9.5)
External Pressure ³	in.W.G (Pa)	0.2 (0.4-0.8) (50 (100-200))
Motor Nominal Output	W	157
Electrical Data	--	
Min Circuit Amps	A	2.4
Maximum Fuse Size	A	15
Connections		Flare-Nut Connection (with Flare Nuts)
Refrigerant Piping		
Liquid Line	in. (mm)	1/4 (6.35)
Gas Line	in. (mm)	1/2 (12.7)
Condensate Drain		VP25
OD	in. (mm)	1-1/4 (32)
ID	in. (mm)	31/32 (25)

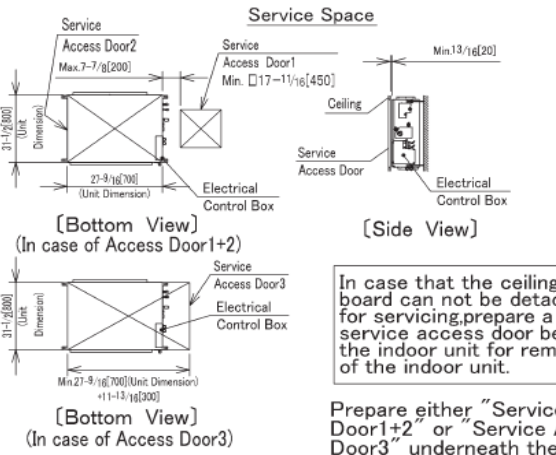
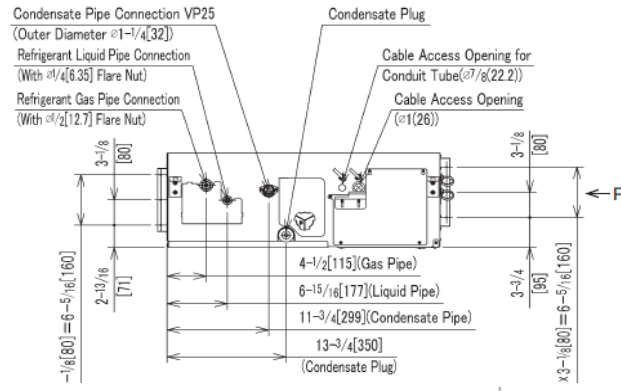
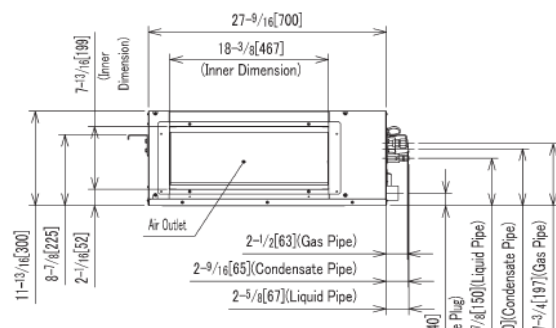
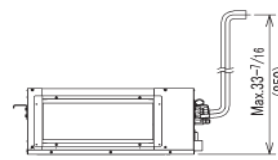
Ducted High Static Indoor Unit Model:
 (H,Y)IDH015B23S

System Dimensions

Unit: inch [mm]

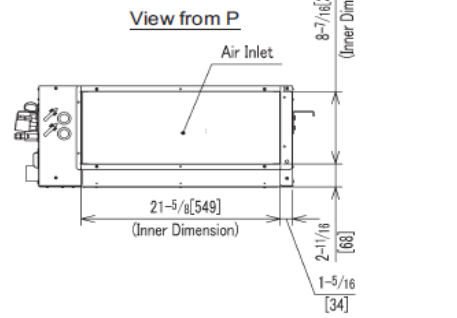


Lifting Height of Condensate Pipe



In case that the ceiling board can not be detached for servicing, prepare a service access door below the indoor unit for removal of the indoor unit.

Prepare either "Service Access Door1+2" or "Service Access Door3" underneath the unit.

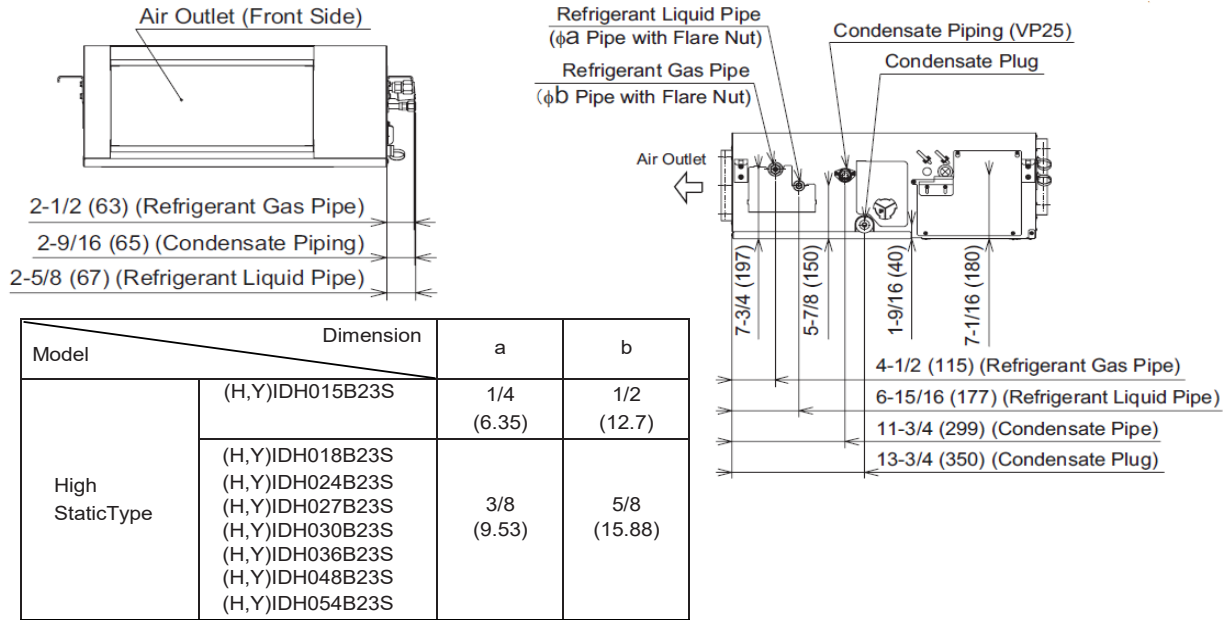


NOTE:
 1. Attach the vibration proof rubber to the suspension bolt in order to avoid abnormal sound vibration.
 Operating frequency of this unit is 9Hz~29Hz.

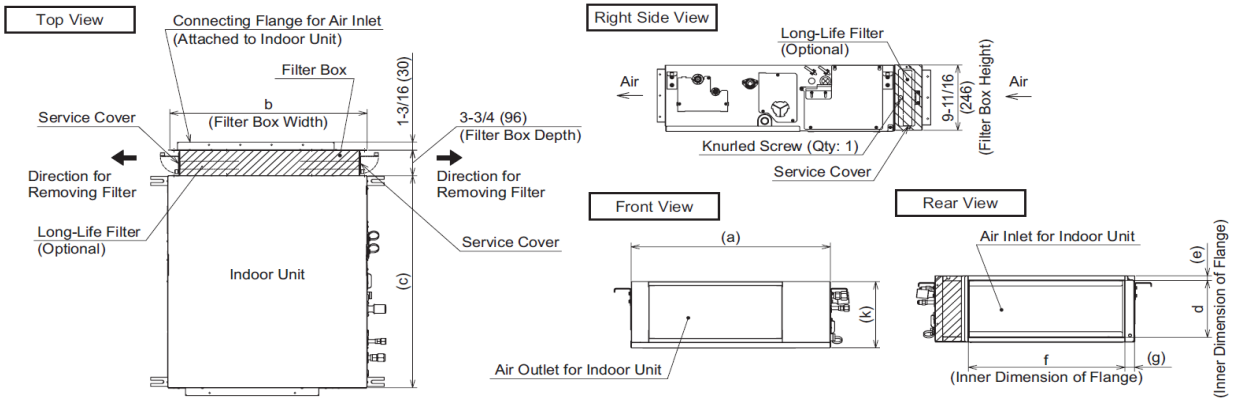
Version 202104

Ducted High Static Indoor Unit Model: **Piping Connections**
 (H,Y)IDH015B23S

Unit: inch (mm)



Air Filter Dimensions



Unit: Inch (mm)

Model	Dimension	a	b	c	d	e	f	g	h	j
B-56LI		27-9/16 (700)	27 (686)	31-1/2 (800)	8-7/16 (215)	11/16 (17)	21-5/8 (549)	1-5/16 (34)	29-1/2 (750)	17-11/16 (450)
B-90LI		41-5/16 (1050)	40-13/16 (1036)	31-1/2 (800)	8-7/16 (215)	11/16 (17)	35-3/8 (899)	1-5/16 (34)	23-5/8 (600)	17-11/16 (450)
B-160LI		55-1/8 (1400)	54-9/16 (1386)	31-1/2 (800)	8-7/16 (215)	11/16 (17)	49-3/16 (1249)	1-5/16 (34)	29-1/2 (750)	17-11/16 (450)



Version 202104

0.7 RT (Y,H)IDS008B21S

Ducted Slim Indoor Unit

FEATURES:

- High-efficiency DC fan motor
- Multiple fan speed settings
- Up to .20 WG static pressure
- Bottom access for easy service and troubleshooting
- Built-in condensate pump

ACCESSORIES:

- Relay and 3 Pin Connector Kit PSC-5RA
- 3 Pin Connector Cable PCC-1A R1
- Air Filter KW-PP5Q for Model (H,Y) IDS006 - 012B21S
- Air Filter KW-PP6Q for Model (H,Y) IDS015 - 018B21S

Ton				0.7RT	
Model Name				(Y,H)IDS008B21S	
Power Supply				208/230V 1PH 60Hz	
Nominal Capacity	Cooling	Btu/h	(kW)	8000	(2.3)
	Heating	Btu/h	(kW)	9000	(2.6)
Dimension	Height	in	(mm)	7-9/16	(192)
	Width	in	(mm)	35-3/4	(908)
	Depth	in	(mm)	17-19/32	(447)
Net Weight		lb	(kg)	44	(20)
Refrigerant				R410A	
Refrigerant Piping	Gas Line	in	(ϕ mm)	1/2	(12.7)
	Liquid Line	in	(ϕ mm)	1/4	(6.35)
Fan Motor Drive				DC x 1	
Air Flow Rate	Hi2	cfm	(m3/min)	318	(9)
	Hi	cfm	(m3/min)	289	(8.2)
	Me	cfm	(m3/min)	244	(6.9)
	Lo	cfm	(m3/min)	205	(5.8)
Sound Pressure Level	Hi2	dB(A)		32	
	Hi	dB(A)		30	
	Me	dB(A)		29	
	Lo	dB(A)		27	
Static Pressure	High Pressure	in WG	(Pa)	0.12	(30)
	Standard	in WG	(Pa)	0.04	(10)
	Low Pressure	in WG	(Pa)	0.00	(0)

NOTES:

*1. Nominal capacity is based on combinations within the VRF system and the following:

Cooling Operation Conditions

Indoor Air Inlet Temperature: 80°F DB (26.7°C DB)
 67°F WB (19.4°C WB)
 Outdoor Air Inlet Temperature: 95°F DB (35.0°C DB)

Heating Operation Conditions

Indoor Air Inlet Temperature: 70°F DB (21.1°C DB)
 Outdoor Air Inlet Temperature: 47°F DB (8.3°C DB)
 43°F WB (6.1°C WB)

Piping Length: 24 ft. 7-3/16 in. (7.5m)

Piping Lift: 0 ft. (0m)

*2. The sound pressure level is based on the following.

4.9 ft. (1.5m) beneath the unit.

With Discharge Duct 6.6 ft. (2.0m) and Return Duct 3.3 ft. (1.0m)

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

*3. The data for external pressure *3) indicates "Standard Pressure Setting (High Pressure Setting - Low Pressure Setting)" values when a filter is not used. The sound pressure level is based on the Standard Pressure Setting.

System Dimensions

Ducted Slim Indoor Unit
 Model: (Y,H)IDS008B21S

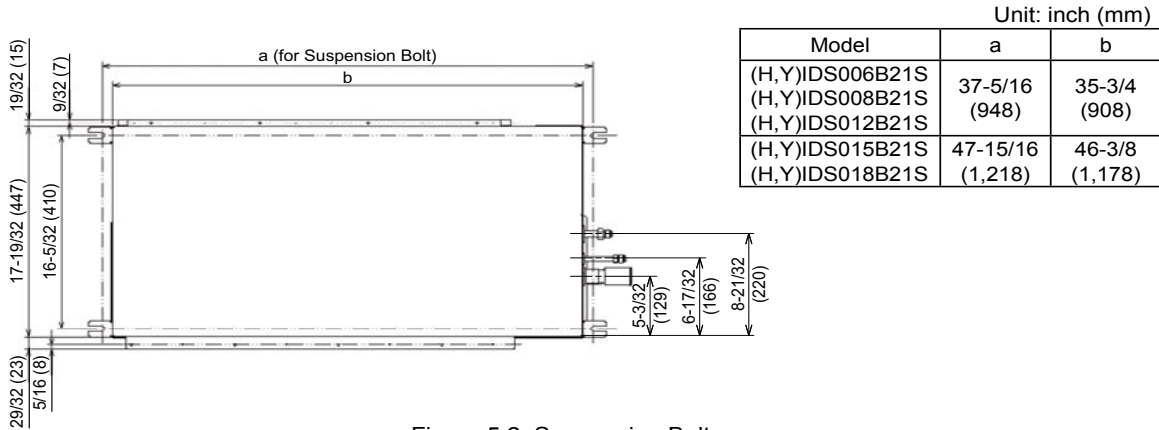
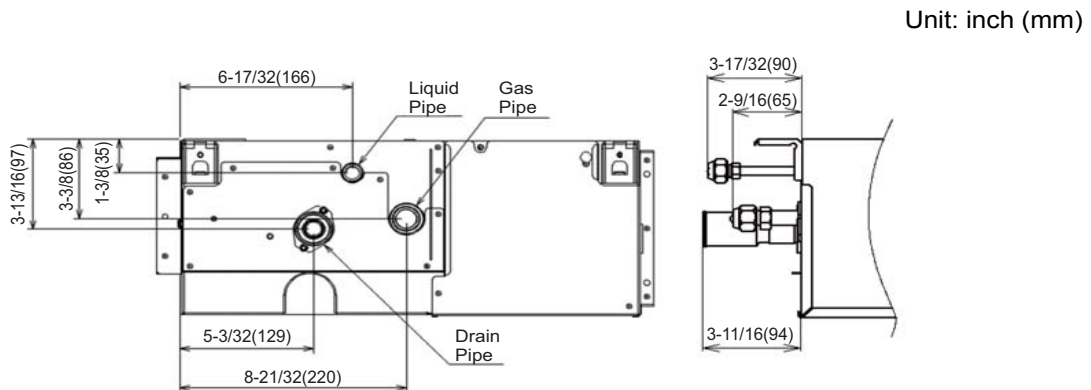


Figure 5.2 Suspension Bolts

Piping Connection Dimensions



Submittal Data Sheet

0.5 RT (Y, H) IFE006B21S

Floor Exposed



FEATURES

- 8.7 in (220mm) depth preserves room space
- 24.8 in height leaves ample window space
- Ideal for perimeter zone air conditions

Model		(H,Y)IFE006B21S
Indoor Unit Power Supply		AC 1Phase, 208/230V, 60Hz
Nominal Cooling Capacity *1	Btu/h	6,000
	(kW)	(1.8)
Nominal Heating Capacity *1	Btu/h	6,700
	(kW)	(2.0)
Sound Pressure Level *2 (Overall A Scale)	dB	39-33-29
Outer Dimensions		
Height	in. (mm)	24-13/16 (630)
Width	in. (mm)	41-1/8 (1045)
Depth	in. (mm)	8-11/16 (220)
Net Weight	lbs (kg)	61 (28)
Refrigerant		R410A
Indoor Fan		
Air Flow Rate (Hi-Me-Lo)	cfm	300-247-212
	(m ³ /min)	(8.5-7-6)
External Pressure	in.W.G (Pa)	0.0 (0)
Motor Nominal Output	W	20
Min Circuit Amps	A	0.4
Maximum Fuse Amps	A	15
Connections		
Refrigerant Piping		Flare-Nut Connection (with Flare Nuts)
Liquid Line	in. (mm)	1/4 (6.35)
Gas Line	in. (mm)	1/2 (12.70)
Condensate Drain		
OD	in. (mm)	1-1/4 (32)
ID	in. (mm)	31/32 (25)

NOTES:

*1. Nominal capacity is based on combinations within the VRF system under the following conditions:

Cooling Operation Conditions

Indoor Air Inlet Temperature: 80°F DB (26.7°C DB)
 67°F WB (19.4°C WB)
 Outdoor Air Inlet Temperature: 95°F DB (35.0°C DB)

Heating Operation Conditions

Indoor Air Inlet Temperature: 70°F DB (21.1°C DB)
 Outdoor Air Inlet Temperature: 47°F DB (8.3°C DB)
 43°F WB (6.1°C WB)

Piping Length: 24 ft 7-3/16 in. (7.5m) Piping Lift: 0ft (0m)

*2. Sound pressure level is based on the following conditions.

4.9 ft (1.5m) beneath the units.

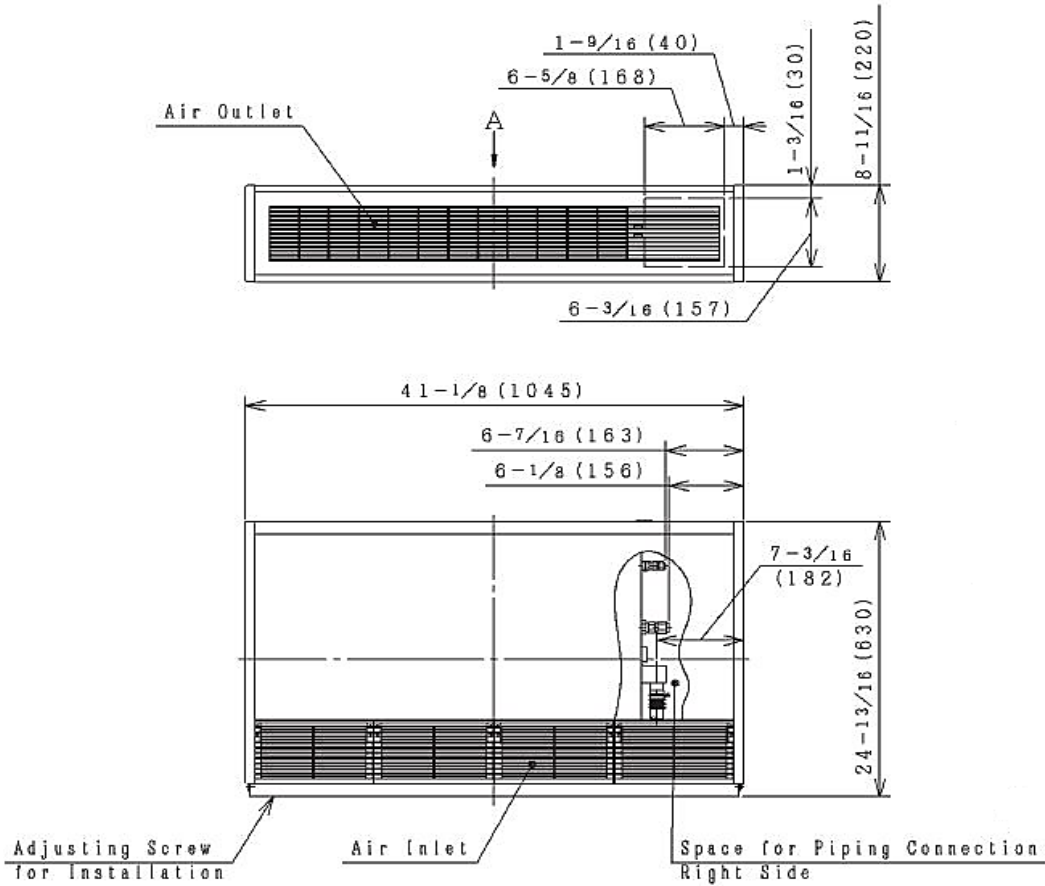
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

System Dimensions

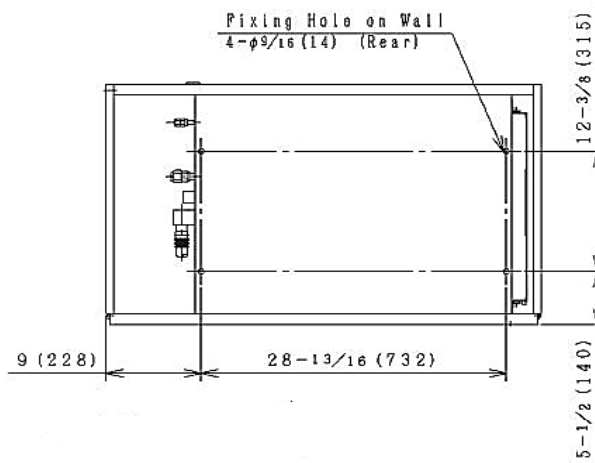
Floor Exposed

Model: (Y, H) IFE006B21S

inch (mm)



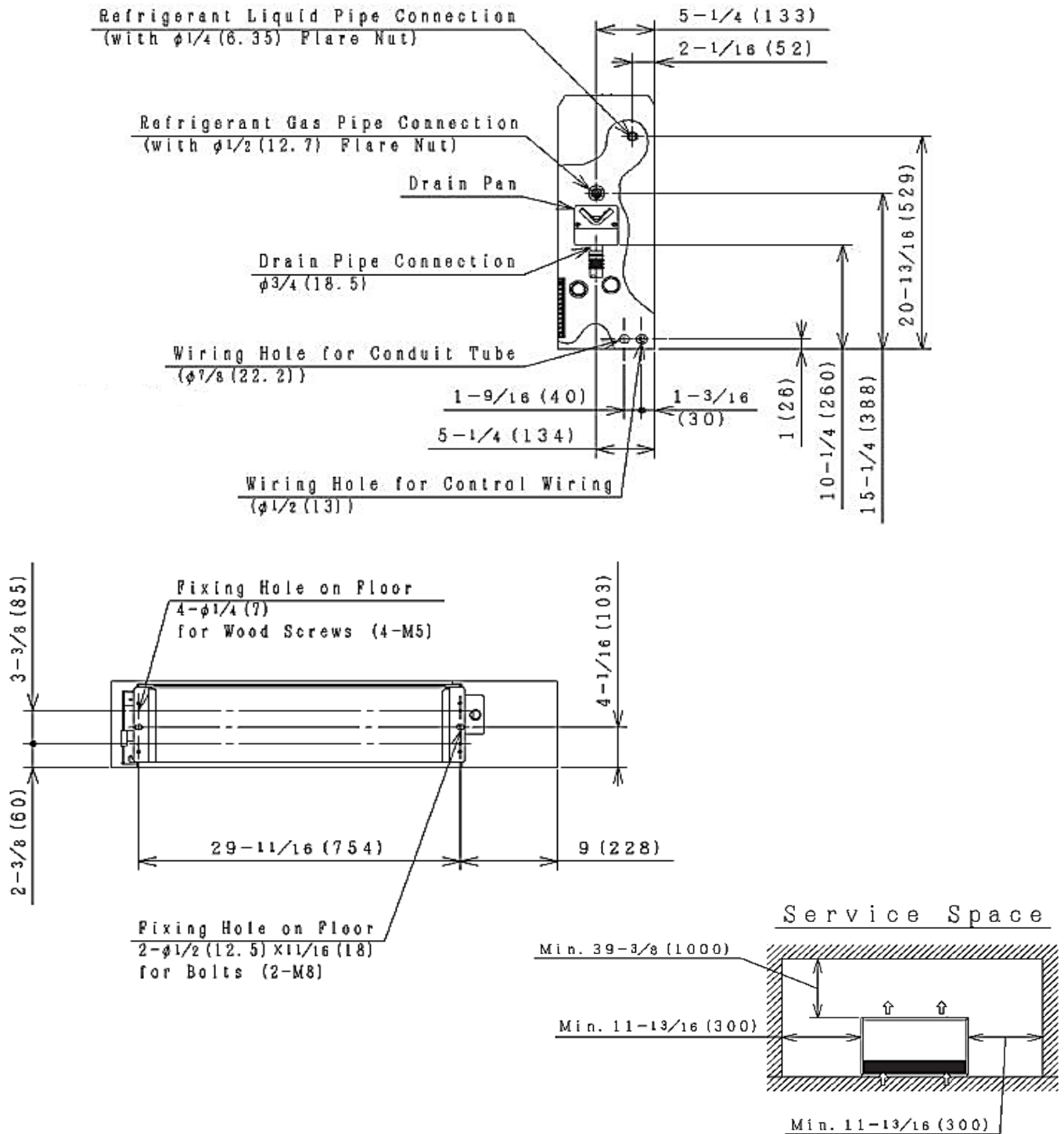
View from A



All equipment must be installed per the Installation and Maintenance Manual and local codes.

Information is subject to change without notice.

Equipment models depicted are representational only. Refer to submittal documents for specifications.



Submittal Data Sheet

(Y, H)MAHPB21S (1.5 to 5 ton)**

Multi position Air Handler for VRF systems



FEATURES

DX kit - The DX kit (Control box and EEV box) provides easy installation to convert the AP air handler to part of the VRF system. No brazing is required to install the DX kit.

RC² - Rigid Case Construction interior endoskeleton for structural support, smooth side, and locks in insulation.

Powder-painted - G30 galvanized steel case provides a coated edge that resists corrosion and rust creep.

MaxAlloy™ Coil - Long life aluminum coils built to deliver lasting performance, efficiency and reliability.

Quality Construction - Structural components are made of aluminum or G90 galvanized steel to prevent corrosion.

Improved Insulation Design - Single piece with no external screws to reduce thermal transmission paths and prevent sweating. Foil faced insulation for ease of cleaning.

Case Depth - These models have 20.5" casing which provides ease of access to attic and tight applications.

Thermoset Drain Pan - Positive slope for drainage to reduce potential for mold or contaminants.

Factory Sealed - Achieves 2% or less total airflow leakage rate at duct leakage test conditions in positive and negative pressure for system airflow verification.

Enhanced Filter Rack - All models have integrated internal filter racks provided for use with 1" thick standard size filters.

Electric Heat Kits - 6HK series of field installed electric heat kits are available for installation-friendly and easy service applications.

Blowers - All models use direct-drive, multi-speed PSC motors.

ACCESSORIES

- DX Kit (Required)
- Electric Heater (optional)

CLEARANCES (Air handler)

Front	24"
Rear	0"*
Sides	0"*

* 0 Clearance allowed with or without Electric Heater.

Multi position Air Handler Compatibility Chart

DX-Kit and Air Handler Combined Model	DX-Kit	Air Handler Model
(H, Y) MAHP18B21S	EXV-018E	AP18BX21
(H, Y) MAHP24B21S	EXV-024E	AP24BX21
(H, Y) MAHP30B21S	EXV-030E	AP30BX21
(H, Y) MAHP36B21S	EXV-036E	AP36BX21
(H, Y) MAHP36C21S	EXV-036E	AP36CX21
(H, Y) MAHP48C21S	EXV-048E	AP48CX21
(H, Y) MAHP48D21S	EXV-048E	AP48DX21
(H, Y) MAHP60C21S	EXV-060E	AP60CX21
(H, Y) MAHP60D21S	EXV-060E	AP60DX21

**All equipment must be installed per the Installation and Maintenance Manual and local codes.
 Information is subject to change without notice.**

Equipment models depicted are representational only. Refer to submittal documents for specifications.



Project Name: Waubesa CC VRF System
Project Number:
Submitter Name: Eric Veit
Revision: 1

Multi position Air Handler Model	(Y, H)M(A)HP18B21S	(Y, H)M(A)HP24B21S	(Y, H)M(A)HP30B21S	(Y, H)M(A)HP36B21S	(Y, H)M(A)HP36C21S	(Y, H)M(A)HP48C21S	(Y, H)M(A)HP48D21S	(Y, H)M(A)HP60C21S	(Y, H)M(A)HP60D21S
AP Handler Model	AP18BX21	AP24BX21	AP30BX21	AP36BX21	AP36CX21	AP48CX21	AP48DX21	AP60CX21	AP60DX21
Indoor Unit Power Supply	AC 1 Phase, 208/230V, 60Hz								
Nominal Cooling Capacity *1	18,000 (5.3)	24,000 (7.0)	30,000 (8.8)	36,000 (10.5)	36,000 (10.5)	48,000 (14.1)	48,000 (14.1)	60,000 (17.6)	60,000 (17.6)
Nominal Heating Capacity *1	20,000 (5.9)	27,000 (7.9)	34,000 (10.0)	40,000 (11.7)	40,000 (11.7)	54,000 (15.8)	54,000 (15.8)	64,000 (18.8)	64,000 (18.8)
Outer Dimensions									
Height	41 (104.1)	41 (104.1)	47-1/2 (1207)	47-1/2 (1207)	51-1/2 (1308)	51-1/2 (1308)	55-1/2 (1410)	55-3/4 (1416)	55-1/2 (1410)
Width	17-1/2 (445)	17-1/2 (445)	17-1/2 (445)	17-1/2 (445)	21 (533)	21 (533)	24-1/2 (622)	21 (533)	24-1/2 (622)
Depth	12-7/8 (327)	12-7/8 (327)	19-1/2 (495)	19-1/2 (495)	22-5/8 (575)	22-5/8 (575)	26-5/8 (676)	26-7/8 (683)	26-5/8 (676)
Net Weight	85 (39)	87 (40)	113 (51)	113 (51)	114 (52)	150 (68)	153 (69)	146 (66)	170 (77)
Refrigerant	R410A								
Indoor Fan Air Flow Rate *2 (HL-o)	674-490 (19-14)	763-593 (22-17)	874-685 (25-19)	1155-1036 (33-29)	1186-974 (34-28)	1451-1233 (41-35)	1451-1233 (41-35)	1743-1661 (49-47)	1743-1661 (49-47)
External Pressure *2 (HL-Lo)	0.4 (99)	0.7 (174)	0.7 (174)	0.7 (174)	0.7 (174)	0.7 (174)	0.7 (174)	0.4 (99)	0.4 (99)
Refrigerant Piping									
Liquid Line	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
Gas Line*3	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	3/4 (19.05)	3/4 (19.05)
Condensate Drain									
OD	1-1/16 (26.7)	1-1/16 (26.7)	1-1/16 (26.7)	1-1/16 (26.7)	1-1/16 (26.7)	1-1/16 (26.7)	1-1/16 (26.7)	1-1/16 (26.7)	1-1/16 (26.7)
ID	13/16 (20.9)	13/16 (20.9)	13/16 (20.9)	13/16 (20.9)	13/16 (20.9)	13/16 (20.9)	13/16 (20.9)	13/16 (20.9)	13/16 (20.9)

All equipment must be installed per the Installation and Maintenance Manual and local codes. Information is subject to change without notice. Equipment models depicted are representational only. Refer to submittal documents for specifications.

Multi position Air Handler Model	(Y, H)MAHP18B21S	(Y, H)MAHP24B21S	(Y, H)MAHP30B21S	(Y, H)MAHP36B21S (Y, H)MAHP36C21S	(Y, H)MAHP48C21S (Y, H)MAHP48D21S	(Y, H)MAHP60C21S (Y, H)MAHP60D21S
Adaptable DX-Kit Model	EXV-018E	EXV-024E	EXV-030E	EXV-036E	EXV-048E	EXV-060E

Control Box Part

Power Supply - AC 1 Phase, 208/230V, 60Hz

Outer Dimensions	AC 1 Phase, 208/230V, 60Hz					
Height	in. (mm)	3-3/16 (81.0)	3-3/16 (81.0)	3-3/16 (81.0)	3-3/16 (81.0)	3-3/16 (81.0)
Width	in. (mm)	12-9/16 (319.6)	12-9/16 (319.6)	12-9/16 (319.6)	12-9/16 (319.6)	12-9/16 (319.6)
Depth	in. (mm)	7-3/8 (187.2)	7-3/8 (187.2)	7-3/8 (187.2)	7-3/8 (187.2)	7-3/8 (187.2)
Net Weight	lbs. (kg)	6.57 (2.98)	6.57 (2.98)	6.57 (2.98)	6.57 (2.98)	6.57 (2.98)

Expansion Valve Box Part

Power Supply - DC 12V

Outer Dimensions	DC 12V					
Height	in. (mm)	4-5/16 (109)	4-5/16 (109)	4-5/16 (109)	4-5/16 (109)	4-5/16 (109)
Width	in. (mm)	17-1/16 (433)	17-1/16 (433)	17-1/16 (433)	17-1/16 (433)	17-1/16 (433)
Depth	in. (mm)	5-5/16 (151)	5-5/16 (151)	5-5/16 (151)	5-5/16 (151)	5-5/16 (151)
Net Weight	lbs. (kg)	8.84 (4.01)	8.84 (4.01)	8.84 (4.01)	8.84 (4.01)	11.05 (4.01)

Refrigerant - R410A

Refrigerant Piping	R410A					
Liquid Line In	in. (mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
Liquid Line Out	in. (mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)

Notes:

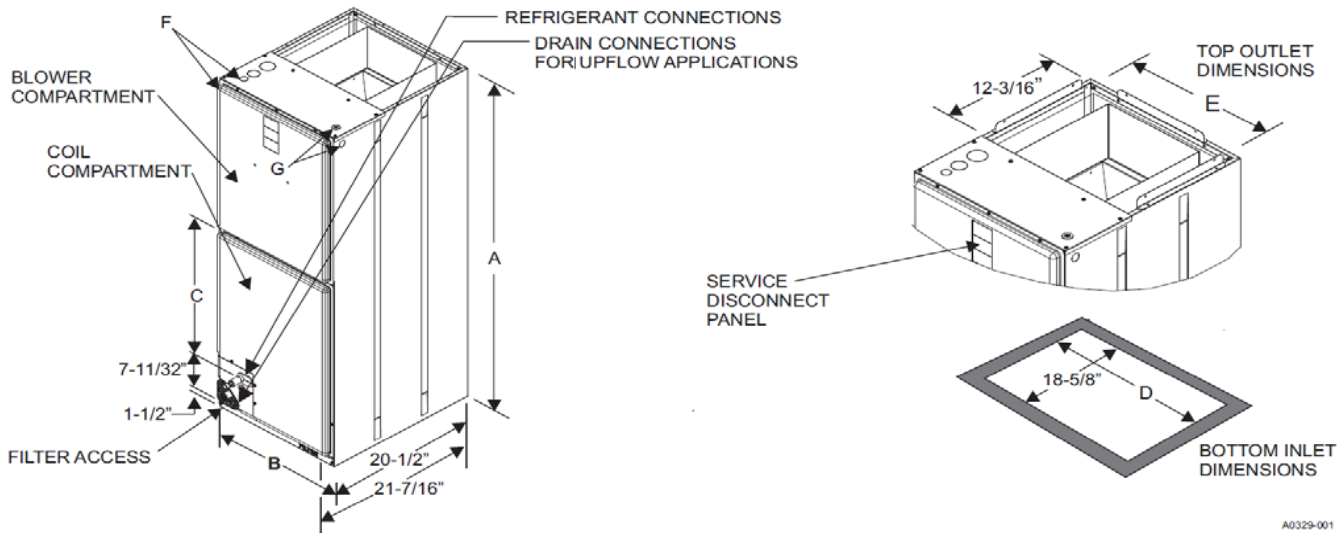
- Nominal capacity is based on combination with VRF system and following conditions:
 Cooling Operation Conditions
 Indoor Air Inlet Temperature: 80 F DB (26.7°C DB)
 67F WB (19.4°C WB)
 Outdoor Air Inlet Temperature: 95 F DB (35.0°C DB)
 Piping Length: 24.6ft (7.5m); Piping Lift: 0ft (0m)
 Heating Operation Conditions
 Indoor Air Inlet Temperature: 70 F DB (21.1°C DB)
 Outdoor Air Inlet Temperature: 47 F DB (8.3°C DB)
 43F WB (6.1°C WB)
- Hi and Lo setting on the wired controller. (Hi = VAH's High tap and Lo = VAH's Medium tap)
- Gas line attached with reducer (accessory of DX-Ki)

Electrical Data – Cooling only

Models	Motor FLA ¹	Minimum Circuit Ampacity
18B (208/230V)	1.1	1.23/1.4
24B (208/230V)	1.4	1.67/1.8
30B (208/230V)	2.3	2.49/2.9
36B (208/230V)	2.6	2.85/3.3
36C (208/230V)	2.2	2.34/2.8
48C/48D (208/230V)	2.9	2.43/3.6
60C/60D (208/230V)	4.1	3.25/3.6

1. FLA = Full Load Amps.

DIMENSIONS & DUCT CONNECTION DIMENSIONS



A0329-001

DIMENSIONS

Models	Dimensions ¹					Wiring Knockouts ²		Refrigerant Connections Line Size	
	A	B	C	D	E	F	G	Liquid	Vapor
	Height	Width				Power (Conduit)	Control (Conduit)		
AP18BX21	41	17-1/2	12-7/8	14-1/4	16-1/2	7/8 (1/2) 1-3/8 (1) 1-23/32 (1-1/4)	7/8 (1/2)	3/8	3/4
AP24BX21	41	17-1/2	12-7/8	14-1/4	16-1/2				
AP30BX21	47-1/2	17-1/2	19-1/2	14-1/4	16-1/2				
AP36BX21	47-1/2	17-1/2	19-1/2	14-1/4	16-1/2				
AP36CX21	51-1/2	21	22-5/8	17-3/4	20			7/8	
AP48CX21	51-1/2	21	22-5/8	17-3/4	20				
AP48DX21	55-1/2	24-1/2	26-5/8	21-1/4	23-1/2				
AP60CX21	55-3/4	21	26-7/8	17-3/4	20				
AP60DX21	55-1/2	24-1/2	26-5/8	21-1/4	23-1/2				

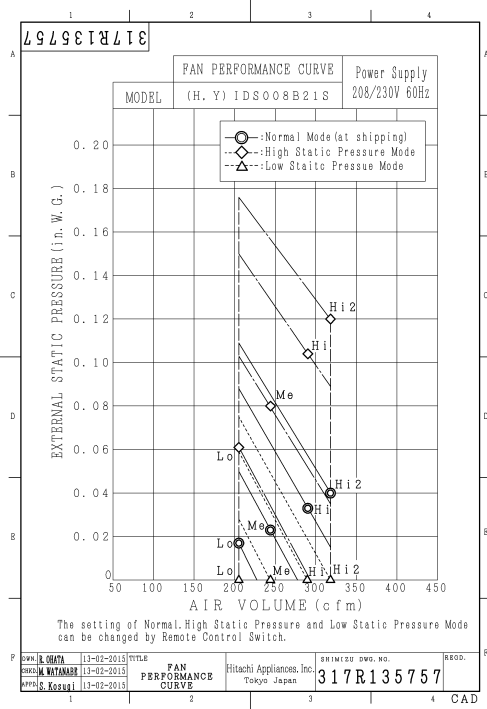
- All dimensions are in inches.
- Knockout size (conduit size in parentheses).

All equipment must be installed per the Installation and Maintenance Manual and local codes.
 Information is subject to change without notice.

Equipment models depicted are representational only. Refer to submittal documents for specifications.

Fan curve data

YIDS008B21S



All equipment must be installed per the Installation and Maintenance Manual and local codes.

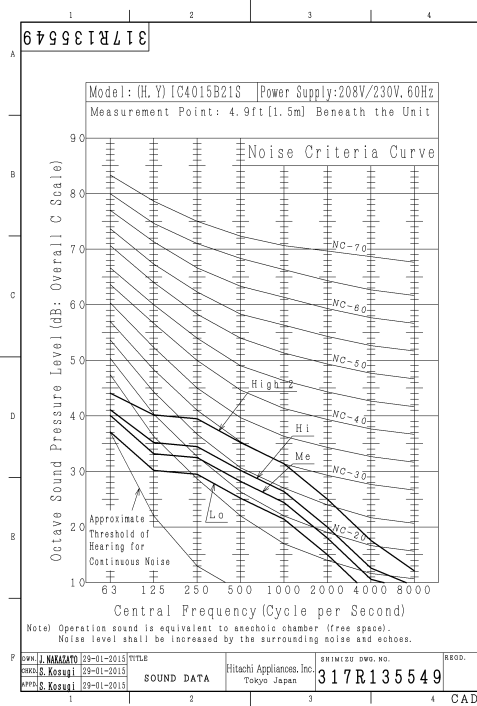
Information is subject to change without notice.

Equipment models depicted are representational only. Refer to submittal documents for specifications.

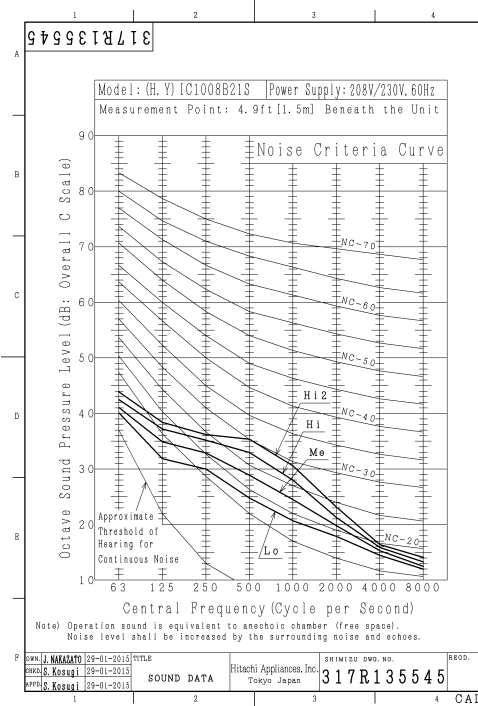
Outdoor unit sound data

Indoor unit sound data

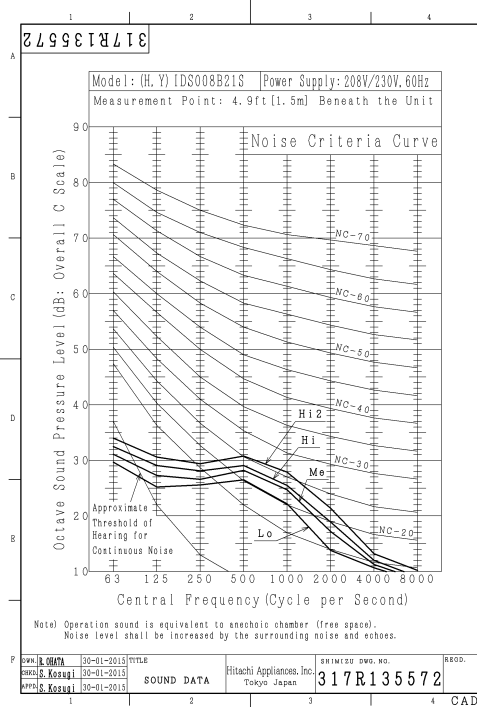
YIC4015B21S



YIC1008B22S



YIDS008B21S



All equipment must be installed per the Installation and Maintenance Manual and local codes.
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4 port (Y,H) COB04M132B22S Multiple Port Change-over Box

FEATURES:

- Extended range of Change-over Box offerings with single, 4, 8, and 12 port options
- Ultimate flexibility – Choose multi- port or single-port Change-over Boxes to customize your design
- Reduced electrical and mechanical installation costs
- No drain or condensate consideration required

NOTES:

3. In case of 60, 72 or 96 type indoor unit connection:

Only single unit per branch is allowed to be connected.

Up to two 60, 72 or 96 type indoor units can be connected to the change-over box within the "Maximum Total Capacity of All Connected Indoor Units" shown in above table.

Make sure to increase the pipe connection size by using the appropriate accessory pipe.

4. Apply reducer (accessory pipe) for changing the pipe size to $\phi 7/8$ inch (22.2mm) for field pipe

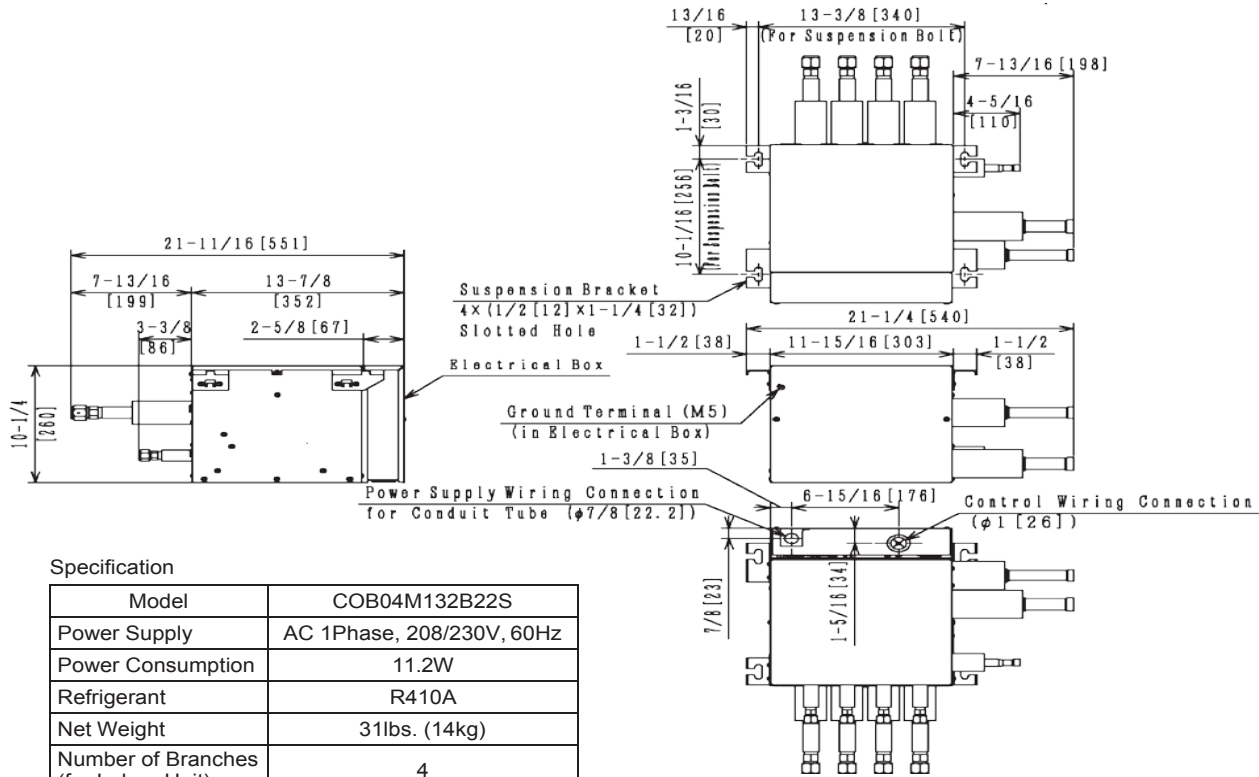
Type		Multiple Branch	
Model		COB04M132B22S	
Power Supply		AC 1Phase, 208/230V, 60Hz	
Power Consumption	W	11.2	
Number of Branches (for Indoor Unit)		4	
Single Unit Per Branch	Maximum Total Capacity of All Connected Indoor Units	MBH	≤ 132
	Indoor Units Per Branch	MBH	$\leq 96^1$
Multiple Units Per Branch	Maximum Number of Connected Indoor Units Per Branch	-	6
	Maximum Total Capacity of All Connected Indoor Units	MBH	≤ 114
	Maximum Total Capacity of Connected Indoor Units Per Branch	MBH	≤ 41
Outer Dimensions	Height	in. (mm)	10-1/4 (260)
	Width	in. (mm)	11-15/16 (303)
	Depth	in. (mm)	13-7/8 (352)
Net Weight		lbs. (kg)	31 (14)
Refrigerant		-	R410A
Minimum Circuit Ampacity		A	0.2
Recommended Fuse/Breaker Size		A	15
Maximum Fuse Size		A	15
Refrigerant Piping (from Outdoor Unit)	Gas Line (High/Low Pressure)	in. (mm)	7/8 (22.2)
	Gas Line (Low Pressure)	in. (mm)	$1^2 (25.4)^2$
	Liquid Line	in. (mm)	1/2 (12.7)
Refrigerant Piping (from Indoor Unit)	Gas Line	in. (mm)	5/8 (15.88)
	Liquid Line	in. (mm)	3/8 (9.53)

Specifications subject to change

version 201705

COB04M132B22S

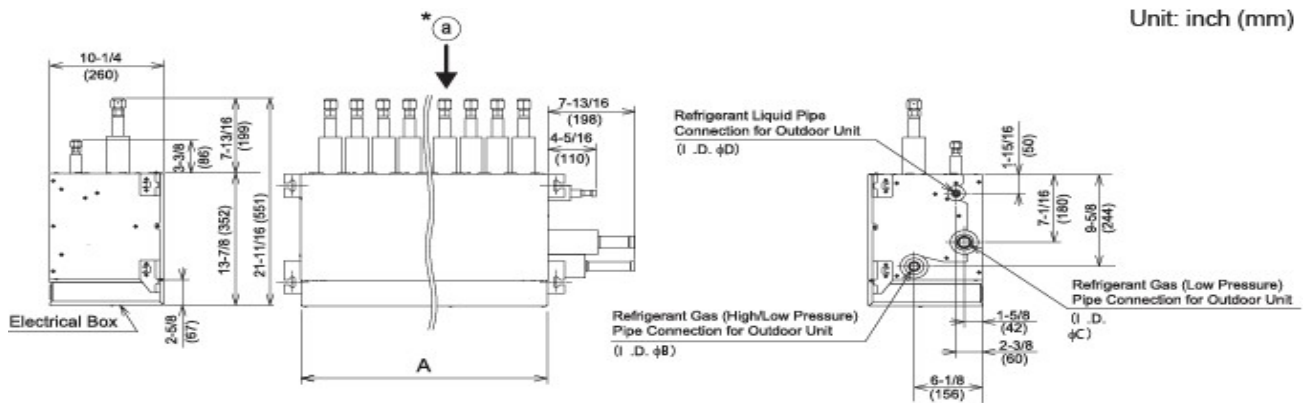
System Dimensions



Specification

Model	COB04M132B22S
Power Supply	AC 1Phase, 208/230V, 60Hz
Power Consumption	11.2W
Refrigerant	R410A
Net Weight	31lbs. (14kg)
Number of Branches (for Indoor Unit)	4

Piping Connection Dimensions



Model	Dimension A	Dimension B	Dimension C	Dimension D
COB04M132B22S	11-15/16 (303)	7/8 (22.2)	1 (25.4) ¹	1/2 (12.7)
COB08M264B22S	21-3/8 (543)	7/8 (22.2)	1-1/8 (28.6)	1/2 (12.7)
COB12M264B22S	30-13/16 (783)	1 (25.4) ²	1-1/8 (28.6)	5/8 (15.88)

1. Ensure to apply reducer (accessory pipe) for changing the pipe size to φ7/8 inch (22.2mm) for field pipe connection.
2. Ensure to apply reducer (accessory pipe) for changing the pipe size to φ1-1/8 inch (28.6mm) for field pipe connection.



Specifications subject to change

version 201705

Submittal Data Sheet

CIW01

Wired Zone Controller



FEATURES AND BENEFITS

- Backlit display
- Built-in thermistor
- Standard wall controller
- Controls temperature, mode, fan speed
- Seven-day timer with multiple setpoints
- Controls up to 16 indoor units
- Built-in 23-hour timer
- Room name and service company name programmable
- Help menus and error code diagnosis
- Large LCD display permits users to see the operating conditions and settings
- The timer can be set at half-hour intervals
- Monitors the operating conditions in the system and an alarm is issued if a problem occurs
- A “self-diagnosis function” checks for problems on printed boards in indoor and outdoor units
- Temperature range limit
- Individual function lockout. (mode, temperature, fan speed)

Model Number	CIW01
Model Type	Wired Controller
Control Functions	On/Off
	Mode
	Temperature
	Fan Speed
	Louver Angle
	Automatic Reset of Temp. Setpoint
	Temperature Setpoint Limit
	Individual Function Lockout
	On/Off Timer
	Weekly Schedule
	Holiday Off
	Filter Sign Reset
	Power Saving Operation
	Noise Reduction Schedule
	Individual Louver Control
	Adjusting Date/Time
	Daylight Saving Time
	Display Adjustment
	Multiple Language Support
	Temperature Unit (°F/°C)
Priority Setting (Main/Sub Function)	

Wiring Specifications	
Type	2-Conductor, Stranded Copper
Size	AWG 22 to AWG 18
Max. total Length	98 ft. 4-13/16 in. (30m)

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CIW01

