REQUEST FOR QUOTATION
(RFQ)

Issue Date: 03-13-2020

RFQ# JOHNSON GYM WSHP PURCHASE-03132020RMD

Title: JOHNSON GYM WSHP PURCHASE

Issuing Agency: City of Charlottesville
Facilities Maintenance Dept.
315 4th St. NW,
Charlottesville, VA. 22903

Quotations in response to this RFQ will be received until 2:00 PM local prevailing time on Thursday March 26, 2020 for furnishing The Goods/Services Described Herein. Quotations received after the time designated for receipt will not be considered.

A non-mandatory pre-bid meeting will be held on Thursday March 19, 2020 at 10:00 AM, at Johnson Elementary School located at 1645 Cherry Avenue, Charlottesville, VA 22903. Those attending should meet at the front office to acquire hall passes. Bidders not attending the pre-bid meeting shall acknowledge on the bid form that they have or have not visited and inspected the site.

All Requests for Information Should Be Directed To: Ryan Dewyea, Project Manager; Phone: 434-531-5909; Email: dewyear@charlottesville.org

QUOTATIONS MAY BE MAILED, HAND DELIVERED, FAXED, OR EMAILED TO THE ATTENTION OF THE PROJECT MANAGER.

IF QUOTATIONS ARE MAILED, SEND DIRECTLY TO ISSUING AGENCY SHOWN ABOVE. IF QUOTATIONS ARE HAND DELIVERED, DELIVER TO:

City of Charlottesville
Facilities Maintenance Dept.
315 4th St. NW,
Charlottesville, VA. 22903

IF QUOTATIONS ARE FAXED, FAX TO: 434-970-3026

IF QUOTATIONS ARE EMAILED, EMAIL TO: dewyear@charlottesville.org

This public body does not discriminate against faith-based organizations in accordance with the Code of Virginia, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.
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I. **PURPOSE:** The City of Charlottesville is soliciting quotations from qualified vendors to furnish two (2) water source heat pump units for the Johnson Elementary School Gymnasium.

II. **COMPETITION INTENDED:** It is the City’s intent that this Request for Quotation (RFQ) permits competition. It shall be the bidder’s responsibility to advise the Purchasing Agent in writing if any language requirement, specification, etc. or any combination thereof, inadvertently restricts or limits the requirements stated in this RFQ to a single source. Such notification must be received by the Purchasing Agent not later than five (5) days prior to the date set for bids to close.

III. **MINORITY BUSINESS PROGRAM:** As part of the City of Charlottesville’s Minority Business Program, the City of Charlottesville encourages the participation of small, women, minority, veteran and micro-owned businesses (SWaM-O) in the City’s procurement transactions. In order to support and build up the capacity of SWaM-O businesses, City Council and staff have taken steps to push forward policy changes and initiatives to help reduce barriers to doing business with the City. To find out more about the current City of Charlottesville initiatives and programs please visit the Minority Business Program website at [http://www.charlottesville.org/business/minority-business-program](http://www.charlottesville.org/business/minority-business-program).

IV. **SCOPE OF WORK/SPECIFICATIONS:** The Contractor shall comply with all applicable federal, state and local laws, rules, and regulations applicable to the provision and performance by the Contractor of the work and services that are subject to any contract resulting from this solicitation. All work described herein and in the Related Documents is included as part of this solicitation unless otherwise specified. The Scope of Work generally includes, but is not necessarily limited to, the following:

1. **GOODS (FURNISH ONLY):** The Contractor shall furnish and deliver FOB destination all equipment as manufactured by Daikin Applied or an approved an accepted equal based on compliance and specifications. Any deviations must be clearly noted with the bid proposal.

   a. **Equipment Description:** Provide as specified factory assembled, charged and tested water source heat pumps (WSHPs). Each unit shall be complete with all components, accessories, required wiring and piping – including automatic flow control hose kits. Each unit shall be readily transported and ready for installation. The new equipment must be able to fit into the space allocated for the current units and maintain code required clearances. Connection to existing ducting, electrical, and piping will be taken into account when determining equipment manufacture. The bidder is responsible for site review of the project and confirmation of the correct equipment configuration to match the required set up before shipment. Provide submittal data with bid.

   b. **Equipment Schedule:** Furnish and install the following; see separate PDF for complete specifications:

      **Johnson Elementary School**

      (2) **Daikin Applied** Model ARQ Self-Contained WSHP Unit Ventilators with the following:
      (1) Nominal 24 MBH Cooling Capacity, Model UARQ9024D (Gym #3)
      (1) Nominal 40 MBH Cooling Capacity, Model UARQ9040D (Gym #2)

      - painted cabinet with 1” end panels
      - arrangement AL, 16 5/8” deep, open pipe tunnel
      - standard range (boiler/tower) operation (60°F - 90°F)
      - two-stage compressor operation
      - refrigerant to air heat exchanger
      - reversing valve and thermal expansion valve
      - refrigerant to water heat exchanger
      - double inlet forward curved modular fan deck with PSC motor
      - floor mounted configuration as indicated on the certified drawings
      - top discharge grille and bottom removable filter
      - front return air and back outside air damper
      - corrosion proof sloped drain pan
      - full charge of R-410a refrigerant and oil
      - epoxy coated indoor (evaporator) coil
      - electromechanical controls with terminal strip interface
- 460/3/60 single point power connection with on/off switch
- first year whole unit parts and labor warranty
- extended 2nd – 5th year compressor parts warranty
- color selection from manufacturer’s standard color chart
- hose kits including automatic flow control valve with P/T ports, pair of ¾” x 36” long stainless steel hoses, shut-off valves, and strainer with blow down valve

*Installation, thermostat, start-up services, field testing, balancing and commission are not included.*

**PLEASE SEE “ATTACHMENT C” FOR COMPLETE PRODUCT SPECIFICATIONS**

c. **Delivery:** All equipment shall be delivered FOB destination, **no later than Thursday May 14, 2020.** It shall be the responsibility of the Contractor to make all arrangements for delivery of the equipment to the City Yard Warehouse.

**Delivery Address:**
City Yard Warehouse  
325 4th Street NW  
Charlottesville, VA 22903  
ATTN: Ryan Dewyea

**Delivery Notification:** The City shall be notified 48 hours prior to delivery of any items so that personnel may be available to allow access to the building and verify items received. Notifications shall be made to:

**FACILITIES MAINTENANCE**
Name: Ryan Dewyea  
Phone: 434-531-5909

**CITY YARD WAREHOUSE**
Name: Matt Damasco  
Phone: 434-970-3865

**V. GENERAL TERMS AND CONDITIONS:**

A. **ANTI-DISCRIMINATION:** By submitting their quotations, bidders certify to the City that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginia’s with Disabilities Act, the Americans with Disabilities Act and sections 2.2-4311, 2.2-4311.2, and 2.2-4312 of the Virginia Public Procurement Act (VPPA). If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipients religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (**Code of Virginia** 2.2.4343.1E).

Every contract over $10,000 shall include the provisions:

1. During the performance of this contract, the Contractor agrees as follows:
   a. During the performance of this contract, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability or any other basis prohibited by law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

   b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, shall state that it is an equal opportunity employer.

   c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting these requirements of this section.
d. The requirements of these provisions 1. and 2. are a material part of the contract. If the Contractor violates one of these provisions, the City may terminate the affected part of this contract for breach, or at its option, the whole contract. Violation of one of these provisions may also result in debarment from City contracting regardless of whether the specific contract is terminated.

2. The Contractor will include the provisions of No. 1 above in every subcontract or purchase order over $10,000, so that the provision will be binding upon each subcontractor or vendor.

B. ANTI-DISCRIMINATION OF CONTRACTORS: A bidder, offeror, or Contractor shall not be discriminated against in the solicitation or award of this contract because of race, religion, color, sex, national origin, age, disability, faith-based organizational status, any other basis prohibited by state law relating to discrimination in employment or because the bidder or offeror employs ex-offenders unless the City has made a written determination that employing ex-offenders on the specific contract is not in its best interest. If the award of this contract is made to a faith-based organization and an individual, who applies for or receives goods, services, or disbursements provided pursuant to this contract objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services, or disbursements, the public body shall offer the individual, within a reasonable period of time after the date of his objection, access to equivalent goods, services, or disbursements from an alternative provider.

C. ANTI-DISCRIMINATION OF FAITH-BASED ORGANIZATIONS: The City of Charlottesville does not discriminate against faith-based organizations.

D. ANTITRUST: By entering into a contract, the Contractor conveys, sells, assigns, and transfers to the City of Charlottesville all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the City of Charlottesville under said contract.

E. APPLICABLE LAWS & COURTS: This procurement transaction, and any resulting contract, shall in all aspects be governed by the laws of the Commonwealth of Virginia, notwithstanding its conflicts of laws provisions. Any litigation with respect hereto shall be brought in the Circuit Court for the City of Charlottesville.

F. ASSIGNMENT OF CONTRACT: A contract shall not be assignable by the Contractor in whole or in part without the written consent of the City.

G. AVAILABILITY OF FUNDS: The City’s obligation under a contract awarded as a result of this procurement transaction shall be and are hereby made expressly contingent upon the availability and appropriation of public funds to support the City’s performance thereof.

H. AWARD OF CONTRACT: Awards shall be based on determination of the lowest responsive and responsible bidder. No contract may be awarded to a bidder who is determined by the Purchasing Agent to be non-responsible.

I. BID ACCEPTANCE: Bids will be date and time stamped upon receipt and retained unopened in a secure location until bid opening. No consideration will be given to date of postmark or error in delivery to incorrect address. It is the responsibility of the bidder to ensure timely and correct delivery of bid.

J. BID ACCEPTANCE PERIOD: Each bid submitted must be and remain valid for a period of at least thirty (30) days from bid opening. Erroneous quotations may be reclaimed or superseded any time prior to closing time; Modification of or corrections to quotations are not acceptable after the closing time specified. Any new quotation must be marked as in Section A with the additional notation "Supersedes all previous submissions." No bidder may withdraw his quotation from consideration after closing time due to a mistake, except as permitted by Virginia Code §2.2-4330.

K. BID TABULATIONS: Tabulations of bids are a matter of public record and are available upon request.

L. BID/PROPOSAL PRICE CURRENCY: Unless stated otherwise in the solicitation, bidders/offerors shall state bid/offer prices in US dollars.

M. BUSINESS-TO-GOVERNMENT VENDOR REGISTRATION: The City’s SAP electronic solution offers vendor self-service registration. Vendors are not required to register prior to bidding, however, purchase
orders cannot be issued and payment to vendors cannot be processed to a non-registered vendor. Go to www.charlottesville.org/purchasing to register. Complete instructions are included on the vendor registration page.

N. CHANGES TO THE CONTRACT: Changes can be made to the contract in any of the following ways per the requirements of the City’s Internal Contracts Management Policy:

a. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract. No fixed price contract may be increased by less than ten percent (10%) or $25,000 without the advance approval of the City Manager or designee, and under no circumstances may the amount of this contract be increased, without adequate consideration, for any purpose (including, but not limited to, relief of the Contractor from the consequences of an error in its bid or offer).

b. The City may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt. The contractor shall be compensated for any additional costs incurred as the result of such order and shall give the City a credit for any savings. Said compensation shall be determined by one of the following methods:

1. By mutual agreement between the parties in writing; or

2. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the contractor accounts for the number of units of work performed, subject to the City’s right to audit the contractor’s records and/or to determine the correct number of units independently; or

3. By ordering, the contractor to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The contractor shall present the City with all vouchers and records of expenses incurred and savings realized. The City shall have the right to audit the records of the contractor as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to the City within thirty (30) days from the date of receipt of the written order from the City. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or. Neither the existence of a claim nor a dispute resolution process, litigation or any other provision of this contract shall excuse the contractor from promptly complying with the changes ordered by the City or with the performance of the contract generally.

O. CLARIFICATION OF TERMS: The City will assume no responsibility for oral instructions, suggestion or interpretation of this RFQ. Any question regarding the bid documents and/or specifications shall be directed to the City representative identified on page 1 and any material change will be submitted to all bidders through issuance of an addendum. Any questions related to this RFQ MUST be submitted to the Project Manager identified on page 1 no fewer than five (5) work days prior to the quotation due date specified. Questions should be in writing and electronic transmission is preferred. Questions submitted beyond the time specified above may be left unanswered if sufficient time does not allow a response to all prospective bidders without causing an unacceptable delay in the process. Any contact with any City representative, other than that outlined within this solicitation, concerning this RFQ is prohibited. Such unauthorized contact may result in disqualification from this solicitation.

P. CONTRACTOR'S FORMS/BOILERPLATE CONTRACTS: All written agreements, contracts, service agreements, account applications, forms and other documents, of any nature, that the Bidder would require the City to sign in connection with any contract resulting from this procurement transaction, or the performance thereof by the Contractor, must be submitted along with the Contractor’s bid. Under no circumstances shall the City be required to agree to any contractual provision (i) that would materially conflict with any requirement(s) of this RFQ, (ii) that would affect the price, quality, quantity or delivery schedule for any goods or services,
(iii) that would conflict with any requirement of the Virginia Public Procurement Act or the Charlottesville City Code or (iv) that would, in the City’s sole discretion, materially alter the overall combination of quality, price and various elements of required services that in total are optimal relative to the City’s needs, and the Contractor shall not condition its performance or delivery upon any such agreement by the City.

Q. CONTRACTOR LICENSE REQUIREMENTS: State statutes and regulatory agencies require that some firms be properly registered and licensed, or hold a permit, prior to performing specific types of services. If firms provide removal, repair, improvement, renovation or construction-type services they, or a qualified individual employed by the firm, must possess and maintain an appropriate State of Virginia Class A, B, or C Contractor License (as required by applicable regulations and value of services to be performed) for the duration of the Agreement. It is the firm’s responsibility to comply with the rules and regulations issued by the appropriate State regulatory agencies. A copy of the license must be furnished upon request to the City of Charlottesville.

R. CONTRACTUAL CLAIMS: Contractual claims, whether for money or other relief, shall be submitted in writing no later than 60 days after final payment; however, written notice of the Contractor’s intention to file a claim shall be given at the time of the occurrence or beginning of the work upon which the claim is based. The City has established an administrative procedure for consideration of contractual claims, and a copy of such procedure is available upon request from the City’s Procurement Office. Contractual disputes shall also be subject to the provisions of the Code of Virginia §2.2-4363 (D) and (E) (exhaustion of administrative remedies) and §2.2-4364 (legal actions). Resolution of a claim by the City or its administrative appeals panel shall not relieve a Contractor of the requirement to submit any invoice(s) as a condition of receiving payment of specific amount(s) from the City.

S. DEBARMENT STATUS: By participating in this procurement, bidders/offerors certify that they are not currently debarred by the federal government, the Commonwealth of Virginia, or any local government or public authority from submitting bids or proposals on contracts for the type of goods and/or services covered by this solicitation. Bidder/Offeror further certifies that they are not debarred from filling any order or accepting any resulting order, or that they are an agent of any person or entity that is currently so debarred. If a bidder/offeror is created or used for the purpose of circumventing a debarment decision against another bidder/offeror, the non-debarred bidder/offeror will be debarred for the same time period as the debarred bidder/offeror.

T. DEFAULT: In case of failure to deliver goods or services in accordance with the contract terms and conditions, the City, after due oral or written notice, may procure them from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the City may have.

U. DRUG-FREE WORKPLACE CLAUSE: During the performance of this contract the Contractor agrees as follows: (i) to provide a drug-free workplace for the Contractor’s employees; (ii) to post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor’s workplace and specifying the actions that will be taken against employees for violations of such prohibition; and (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace. For the purposes of this paragraph, “drug-free workplace” means a site for the performance of work done in connection with the contract awarded to a Contractor in accordance with this procurement transaction, where the Contractor’s employees are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

V. ERROR IN EXTENSION OF PRICES: In the case of an error in the extension of prices, the unit price shall govern.

W. ETHICS IN PUBLIC CONTRACTING: Per Code of Virginia, 2.2-4367: By submitting a bid, the bidder certifies that their bid is made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other bidder, supplier, manufacturer or subcontractor in connection with their bid, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

X. EXTRA CHARGES NOT ALLOWED: Contractors will not be allowed extra compensation for conditions which could have been determined by examination of the documents and/or the site prior to submission of
quotations. The bid price shall be for complete equipment ready for the City’s use, and shall include all applicable freight charges; extra charges will not be allowed.

Y. **HEADINGS:** Section, article and paragraph headings contained within this RFQ have been inserted only as a matter of convenience and for reference, and they in no way define, limit, or describe the scope or intent of any term, condition or provision of this RFQ.

Z. **IDLING REDUCTION REQUIREMENT:** Contractors are required to comply with the City of Charlottesville’s Idling Reduction Policy for Motor Vehicles and Equipment, policy number 100-12. This policy is available at [www.charlottesville.org/purchasing](http://www.charlottesville.org/purchasing) under the Vendor Registration link.

AA. **IMMIGRATION REFORM AND CONTROL ACT OF 1986:** By entering into a written contract with the City of Charlottesville, the Contractor certifies that the Contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

BB. **INCLEMENT WEATHER/CLOSURE OF CITY OFFICES:** If the City of Charlottesville is closed for business on the date and time set by this RFQ for receipt of quotes, then quotes will be accepted on the next scheduled business day up to the time of day specified on the original date specified for receipt of quotes.

CC. **INDEMNIFICATION:** Contractor hereby assumes, and shall defend, indemnify and save the City and all of its officers, agents and employees harmless from and against any and all liability, loss, claim, suit, damage, charge or expense including attorneys fees which the City and all of its officers, agents and employees may suffer, sustain, incur or in any way be subjected to, on account of death of or injury to any person (including, without limitation, City officers, agents, employees, licensees and invitees) and for damage to, loss of, and destruction of any property whatsoever, which arises out of, results from, or is in any way connected with actions taken by the Contractor in the performance of its obligations under this Agreement, or which occurs as a consequence of any negligence, omission or misconduct of the Contractor and any of Contractor’s subcontractors, agents or employees in the performance of Contractor’s or any of its subcontractors, agents or employees in performing work under this contract, regardless of whether such loss or expense is caused in part by a party indemnified hereunder.

DD. **INSPECTION OF JOB SITE:** The Contractor is responsible for thorough examination of the documents and the project site prior to submitting a quotation.

EE. **INSURANCE:** By signing and submitting a bid under this solicitation, the offeror certifies that if awarded the contract, it will purchase and maintain, at its sole expense, and from a company or companies authorized to do business within the Commonwealth of Virginia, insurance policies containing the following types of coverages and minimum limits, protecting from claims which may arise out of or result from the Offeror’s performance or non-performance of services under this Contract, or the performance or non-performance of services under this Contract by anyone directly or indirectly employed by the Offeror or for whose acts it may be liable:

a. **Workers’ Compensation - Statutory requirements and benefits.** Contractors who fail to notify the City of increases in the number of employees that change their workers’ compensation requirements under the Code of Virginia during the course of the contract shall be in noncompliance with the contract. This policy shall specifically list Virginia as a covered state.

b. **Employer’s Liability - $100,000.** This policy shall specifically list Virginia as a covered state.

c. **Commercial General Liability - $1,000,000 per occurrence.** Commercial General Liability is to include bodily injury and property damage, personal injury, advertising injury, contractual liability, and products and completed operations coverage. The City of Charlottesville and its officers, employees, agents and volunteers must be named as an additional insured and so endorsed on the policy.

d. **Automobile Liability - $1,000,000 per occurrence.** (Only used if motor vehicle is to be used in the contract.)

All insurance coverage:

1. shall be issued by an insurance carrier authorized to do business within the Commonwealth of Virginia and rated A – VIII or better, by A. M. Best Company or equivalent rating from an alternate recognized ratings agency, and otherwise acceptable to the City;
2. shall be kept in force throughout performance of services;
3. shall be an occurrence based policy;
4. shall include completed operations coverage;
5. shall contain a cross liability or severability of interest clause or endorsement. Insurance covering the
specified additional insured shall be primary and non-contributory, and all other insurance carried by the
additional insureds shall be excess insurance;
6. where additional insured required, such policy shall not have a restriction on the limits of coverage
provided to the City as an additional insured. The City shall be entitled to protection up to the full limits of
the bidder’s policy regardless of the minimum requirements specified in the Contract.

Proof Of Insurance: Prior to performance of any services or delivery of goods, the Offeror shall (i) have all
required insurance coverage in effect; (ii) the Offeror shall deliver to the City certificates of insurance for
all lines of coverage, or other evidence satisfactory to the City in its sole discretion. The Offeror shall be
responsible that such coverage evidenced thereby shall not be substantially modified or canceled without
30 days prior written notice to the City; and (iii) the Offeror shall deliver to the City endorsements to the
policies which require the City and its officials, officers, employees, agents and volunteers be named as
“additional insured”. Policies which require this endorsement include: Commercial General Liability and
Auto Liability. Such endorsements must be approved by the City, and (iv) upon the request of the City,
provide any other documentation satisfactory to the City in its sole discretion, evidencing the required
insurance coverage, including but not limited to a copy of the insurance policy and evidence of payment of
policy premiums. The Offeror shall require each of its subcontractors and suppliers to have coverage per
the requirements herein in effect, prior to the performance of any services by such subcontractors and
suppliers. Further, the Offeror shall ensure that all Required Insurance coverages of its subcontractors and
suppliers is and remains in effect during performance of their services on the Project and certifies by
commencement of the Work that this insurance and that of subcontractors is in effect and meets the
requirements set forth herein. The City shall have no responsibility to verify compliance by the Offeror or
its subcontractors and suppliers.

Effect Of Insurance: Compliance with insurance requirements shall not relieve the Bidder of any
responsibility to indemnify the City for any liability to the City, as specified in any other provision of this
contract, and the City shall be entitled to pursue any remedy in law or equity if the Bidder fails to comply
with the contractual provisions of this contract. Indemnity obligations specified elsewhere in this Contract
shall not be negated or reduced by virtue of any insurance carrier’s denial of insurance coverage for the
occurrence or event which is the subject matter of the claim, or by any insurance carrier’s refusal to defend
any named insured.

Waiver Of Subrogation: The Bidder agrees to release and discharge the City of and from all liability to the
Bidder, and to anyone claiming by, through or under the Bidder, by subrogation or otherwise, on account of
any loss or damage to tools, machinery, equipment or other property, however caused.

Sovereign Immunity: Nothing contained within this RFQ shall effect, or shall be deemed to affect, a waiver
of the City’s sovereign immunity under law. No contract awarded as a result of this procurement
transaction shall contain any provisions requiring the City to waive or limit any sovereign or governmental
immunity to which it may be entitled.

Right to Revise or Reject: The City reserves the right, but not the obligation, to revise any insurance
requirement not limited to limits, coverages and endorsements, or reject any insurance policies which fail to
meet the criteria stated herein. Additionally, the City reserves the right, but not the obligation, to review
and reject any insurer providing coverage due to its poor financial condition or failure to operate legally.

FF. MANDATORY USE OF CITY FORM AND TERMS AND CONDITIONS FOR RFQs: Failure to submit a
bid on the official City form provided for that purpose may be a cause for rejection of the bid. Modification of
or additions to any portion of the Request for Quotations may be cause for rejection of the bid; however, the
City reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a bid as
nonresponsive. As a precondition to its acceptance, the City may, in its sole discretion, request that the bidder
withdraw or modify nonresponsive portions of a bid which do not affect quality, quantity, price, or delivery. No
modification of or addition to the provisions of the contract shall be effective unless reduced to writing and
signed by the parties.

GG. NEW EQUIPMENT: Unless otherwise noted any equipment bid shall be new, unused, of current production
and standard to the manufacturer. Where any part or nominal appurtenances of equipment are not described it
shall be understood that all equipment and appurtenances standard to or recommended by the manufacturer for
complete and safe use shall be included as part of this bid.
HH. OSHA STANDARDS: All Contractors and subcontractors performing services for the City are required and shall comply with all Occupational Safety and Health Administration (OSHA), State and City Safety and Occupational Health Standards and any other applicable rules and regulations. Also, all Contractors and subcontractors shall be held responsible for the safety of their employees and any unsafe acts or conditions that may cause injury or damage to any persons or property within and around the work site area under this contract.

II. OWNERSHIP OF DOCUMENTS: All information, documents, and electronic media furnished by the City to the Contractor belong to the City, are furnished solely for use in connection with the Contractor’s performance of Services required by this Agreement, and shall not be used by the Contractor on any other project or in connection with any other person or entity, unless disclosure or use thereof in connection with any matter other than Services rendered to the City hereunder is specifically authorized in writing by the City in advance. All documents or electronic media prepared by or on behalf of the Contractor for the City are the sole property of the City, free of any retention rights of the Contractor. The Contractor hereby grants to the City an unconditional right of use, for any purpose whatsoever, documents or electronic media prepared by or on behalf of the Contractor pursuant to this Agreement, free of any copyright claims, trade secrets, or any other proprietary rights with respect to such documents.

JJ. PAYMENT:

a. To Prime Contractor:

1. The City shall promptly pay for completed delivered goods or services by the required payment date. The required payment date shall be either: (i) the date on which payment is due under the terms of a contract for the provision of goods or services, or (ii) if a date is not established by contract, not more than 45 days after goods or services are received or not more than 45 days after an invoice is rendered, whichever is later. Separate payment dates may be specified for contracts under which goods or services are provided in a series of partial executions or deliveries to the extent that the contract provides for separate payment for partial execution or delivery. Within 20 days after the receipt of an invoice for goods or services, the City shall notify the supplier of any defect or impropriety that would prevent payment by the required payment date. In the event that the City fails to make payment by the required payment date, the City shall pay any finance charges assessed by the supplier that shall not exceed one percent per month. In cases where payment is made by mail, the date of postmark shall be deemed to be the date payment is made.

2. Individual Contractors shall provide their social security numbers, and proprietorships, partnerships, and corporations shall provide the City with a federal employer identification number, prior to receiving any payment from the City.

3. Invoices for items ordered, delivered and accepted shall be submitted by the Contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the city contract number and/or purchase order number.

4. All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the Contractor at the contract price, regardless of which city department is being billed.

5. Unreasonable Charges. Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, Contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the City shall promptly notify the Contractor, in writing, as to those charges which it considers unreasonable and the basis for the determination. A Contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification. The provisions of this section do not relieve any city department of its prompt payment obligations with respect to those charges which are not in dispute (Code of Virginia, § 2.2-4363).

b. To Subcontractors:

a. A Contractor awarded a contract under this solicitation is hereby obligated:
1. To pay the subcontractor(s) within seven (7) days of the Contractor’s receipt of payment from the City for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or

2. To notify the City and the subcontractor(s), in writing, of the Contractor’s intention to withhold payment and the reason.

b. The Contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the Contractor that remain unpaid seven (7) days following receipt of payment from the City, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A Contractor’s obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the City.

KK. PERMITS AND FEES: All quotations submitted shall have included in price the cost of any business or professional licenses, permits or fees required by the City of Charlottesville or the Commonwealth of Virginia. The bidder must have all necessary licenses to perform the services in Virginia and, if practicing as a corporation, be authorized to do business in the Commonwealth of Virginia.

LL. PRECEDENCE OF TERMS: The following General Terms and Conditions: APPLICABLE LAWS AND COURTS, ANTI-DISCRIMINATION, ETHICS IN PUBLIC CONTRACTING, IMMIGRATION REFORM AND CONTROL ACT OF 1986, DEBARMEMENT STATUS, ANTITRUST, MANDATORY USE OF CITY FORM AND TERMS AND CONDITIONS, CLARIFICATION OF TERMS, PAYMENT shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special Terms and Conditions in this solicitation, the Special Terms and Conditions shall apply.

MM. PUBLIC INSPECTION OF CERTAIN RECORDS: Except as otherwise provided, and in accordance with VA Code §2.2-4342, all proceedings, records, contracts and other public records relating to the City’s procurement transactions shall be open to the inspection of any citizen, or any interested person, firm or corporation, in accordance with the Virginia Freedom of Information Act (Va. Code §2.2-3700 et seq). Any bidder, upon request, shall be afforded the opportunity to inspect bid records within a reasonable time after the opening of all bids but prior to award, except in the event the City decides not to accept any of the bids and to reopen the contract. Otherwise, bid records shall be open to public inspection only after award of the contract. Trade secrets or proprietary information submitted by a bidder in connection with this procurement transaction shall not be subject to the Virginia Freedom of Information Act, but only if the bidder (i) invokes the protections of Virginia Code §2.2-4342 prior to or upon submission of the data or other materials; (ii) identifies the specific data or other materials to be protected, and (iii) states the reasons why protection is necessary. A general designation of a Contractor’s entire bid submission as being “confidential” shall not be sufficient to invoke the protections referenced above.

NN. QUALIFICATIONS OF BIDDERS/OFFERORS: The City may make such reasonable investigations as deemed proper and necessary to determine the ability of the bidder/offeror to perform the services/furnish the goods and the bidder/offeror shall furnish to the City all such information and data for this purpose as may be requested. The City reserves the right to inspect bidder’s/offeror’s physical facilities prior to award to satisfy questions regarding the bidder’s/offeror’s capabilities. The City further reserves the right to reject any bid if the evidence submitted by, or investigations of, such bidder/offeror fails to satisfy the City that such bidder/offeror is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.

OO. RIGHT TO ACCEPT OR REJECT BIDS: The City reserves the right to accept or reject any or all bids in whole or in part and to waive any informalities in the bid. Informality shall be defined as a minor defect or variation from the exact requirements which does not affect the price, quality, quantity or delivery schedule.

PP. SCHOOL CONTRACTOR CERTIFICATION: Contractor acknowledges that any contract resulting from this solicitation for services may require Contractor, Contractor’s employees or other persons within Contractor’s control to have direct contact with City of Charlottesville Public School students on school property during regular school hours or during school-sponsored activities. As evidenced by the authorized signature below, Contractor hereby certifies to the City of Charlottesville and to the Charlottesville City School Board that all persons who will provide such services for or on behalf of the Contractor on public school property have not
been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child.

Contractor hereby acknowledges that, pursuant to Virginia Code section 22.1-296.1, any person making a materially false statement regarding any such offense shall be guilty of a Class I misdemeanor and, upon conviction, the fact of such conviction shall be grounds for the revocation of the contract to provide such services and, when relevant, the revocation of any license required to provide such services.

Contractor hereby agrees that this Certification shall be binding throughout the contract term, and that it will provide immediate notice to the City of Charlottesville and the Charlottesville City School Board of any event that renders this certification untrue.

QQ. SMALL BUSINESS SUBCONTRACTING AND EVIDENCE OF COMPLIANCE: It is the policy of the City of Charlottesville to facilitate the establishment, preservation and strengthening of small businesses and businesses owned by women and minorities and service disabled veterans and to encourage their participation in the City's procurement activities. Toward that end the City of Charlottesville encourages these firms to compete and encourages other firms to provide for the participation of these firms through partnerships, joint ventures, subcontracts or other contractual opportunities. **Bidders are asked, as part of their submission, to describe any planned use of such business in fulfilling this contract.**

RR. STATE CORPORATION COMMISSION IDENTIFICATION NUMBER: Pursuant to the Code of Virginia §2.2-4311.2 subsection B, a bidder/offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder/offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid/proposal a statement describing why the bidder/offeror is not required to be so authorized. Any business entity described above that enters into a contract with a public body pursuant to the Code of Virginia, Virginia Public Procurement Act shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required by Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. A public body may void a contract with a business entity if the business entity fails to remain in compliance with the provisions of this section. Link to the Virginia State Corporation Commission site: [http://www.scc.virginia.gov/](http://www.scc.virginia.gov/).

SS. TAXES: Include only taxes applicable to the project in this bid. The City is exempt from State Sales Tax and Federal Excise Tax. Tax Exemption Certificate indicating the City’s tax exempt status will be furnished by the City of Charlottesville upon request.

TT. TESTING AND INSPECTION: The City reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.

UU. TRANSPORTATION AND PACKAGING: All prices submitted must be FOB destination - Freight Prepaid and Allowed. By submitting their quotations, all bidders certify and warrant that the price offered for FOB destination includes only the actual freight rate costs at the lowest and best rate and is based upon the actual weight of the goods to be shipped. Except as otherwise specified herein, standard commercial packaging, packing and shipping containers shall be used. All shipping containers shall be legibly marked or labeled on the outside with purchase order number, commodity description, and quantity.

VV. USE OF BRAND NAMES: Unless otherwise provided in this solicitation, the name of a certain brand, make or manufacturer does not restrict bidders/offerors to the specific brand, make or manufacturer named, but conveys the general style, type, character, and quality of the article desired. Any article that the City, in its sole discretion, determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted. The bidder/offeror is responsible to clearly and specifically identify the product being offered and to provide sufficient descriptive literature, catalog cuts and technical detail to enable the City to determine if the product offered meets the requirements of the solicitation. This is required even if offering the exact brand, make or manufacturer specified. Normally in competitive sealed bidding only the information furnished with the bid will be considered in the evaluation. Failure to furnish adequate data for evaluation purposes may result in declaring a bid nonresponsive. Unless the bidder clearly indicates in its bid/proposal that the product offered is an equal product, such bid, proposal will be considered to offer the brand name product referenced in the solicitation.
WW. VIRGINIA GOVERNMENTAL FRAUDS ACT: Each bidder/offeror is and shall be subject to the provisions of the Virginia Governmental Frauds Act, Code of Virginia, Title 18.2, Chapter 12, Article 1.1. In compliance with this law, each bidder/offeror is required to submit a certification that its bid/proposal, or any claim resulting there from, is not the result of, or affected by, any act of collusion with another person engaged in the same line of business or commerce, or any act of fraud punishable under the Act. Any bidder/offeror who knowingly makes a false statement on the Certificate of No Collusion shall be guilty of a felony, as provided in the Code of Virginia §18.2-498.5. As part of this bid/proposal a notarized Certificate of No Collusion must be submitted with the bid/proposal.

XX. The terms and conditions set forth within this Request for Quotation shall be deemed incorporated into any contract resulting from this procurement transaction, as if set forth therein verbatim.

VI. SPECIAL TERMS AND CONDITIONS:

A. CANCELLATION OF CONTRACT: The City reserves the right to cancel and terminate any resulting contract for cause or convenience, in part or in whole, without penalty, upon 30 days written notice to the Contractor.

B. SDS: A Safety Data Sheet is required for all chemicals proposed to be furnished as a result of this bid. The MSDS must; list all ingredients which constitute more than 1% of the product (.1% for known or suspected carcinogens); identify the product by common or chemical name; provide physical and chemical characteristics of any hazardous components; list any known acute or chronic health effects; specify exposure limits, precautionary measures, and emergency and first aid procedures.

C. COMPETITION INTENDED: It is the City’s intent that this Request for Quotation (RFQ) permits competition. It shall be the bidder’s responsibility to advise the Purchasing Agent in writing if any language requirement, specification, etc. or any combination thereof, inadvertently restricts or limits the requirements stated in this RFQ to a single source. Such notification must be received by the Purchasing Agent not later than five (5) days prior to the date set for bids to close.

D. MAINTENANCE MANUALS: The Contractor/Vendor shall provide with each piece of equipment an operations and maintenance manual with wiring diagrams, parts list, and a copy of all warranties.

E. PRODUCT INFORMATION: The bidder shall clearly and specifically identify the product being offered and enclose complete and detailed descriptive literature, catalog cuts and specifications with the RFQ to enable the City to determine if the product offered meets the requirements of the solicitation. Failure to do so may cause the RFQ to be considered nonresponsive.

F. EQUIPMENT: The Contractor/Vendor shall ensure that items to be furnished fit the space available. Contractor/Vendor shall make necessary field measurements to ascertain space requirements, including those for connections and shall furnish such sizes and shapes that fit the final installation. Equipment shall suit the true intent and meaning of the installation manuals and industry standards. If Contractor/Vendor concludes that there is insufficient space for installation of specified materials, he shall immediately notify the City of Charlottesville (COC) Project Manager of the conflict and work to resolve the issues.

G. WARRANTY (COMMERCIAL): The Contractor agrees that the goods or services furnished under any award resulting from this RFQ shall be covered by the most favorable commercial warranties the Contractor gives any customer for such goods or services and that the rights and remedies provided therein are in addition to and do not limit those available to the City by any other clause of this solicitation. A copy of this warranty should be furnished with the bid.

H. PRODUCT AVAILABILITY/SUBSTITUTION: Substitution of a product, brand or manufacturer after the award of contract is expressly prohibited unless approved in writing by the City representative identified on page 1. The Agency may, at its discretion, require the Contractor to provide a substitute item of equivalent or better quality subject to the approval of the City representative identified on page 1, for a price no greater than the contract price, if the product for which the contract was awarded becomes unavailable to the Contractor.

I. The terms and conditions set forth within this Request for Quotation shall be deemed incorporated into any contract resulting from this procurement transaction, as if set forth therein verbatim.

VII. PRICING SCHEDULE: Award will be made to the lowest responsive/responsible bidder based on the PRICING SCHEDULE, SEE “ATTACHMENT B”.

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VII. PRICING SCHEDULE: Award will be made to the lowest responsive/responsible bidder based on the PRICING SCHEDULE, SEE “ATTACHMENT B”.
VIII. ATTACHMENTS:

A. SMALL-, WOMEN-, MINORITY-, MICRO, EMPLOYMENT SERVICES ORGANIZATIONS, AND VETERAN-OWNED BUSINESS OBJECTIVES

B. PRICING SCHEDULE

C. EQUIPMENT SPECIFICATIONS
SMALL-, WOMEN-, MINORITY-, MICRO, EMPLOYMENT SERVICES ORGANIZATIONS, AND VETERAN-OWNED BUSINESS OBJECTIVES

It is an important business objective of the City of Charlottesville to promote the economic enhancement of small businesses (SBE) and micro businesses (O), women-owned businesses (WBE), minority-owned businesses (MBE), employment services organization (ESO) and veteran-owned businesses (VBE). The success of the City to track the amount of business received by SBE, WBE, MBE and VBE businesses, whether as a prime contractor or a subcontractor, is dependent upon the business community partnering with us in this important endeavor.

If you anticipate sub-contracting to any of these businesses in the performance of this contract, you are requested to individually report the total dollars for each business classification. Failure to report the dollars in the categories below may result in the application of stronger requirements being placed on bidders to assure that SBE, O, WBE, MBE, ESO and VBE businesses receive benefits from City contracts.

Complete the following information, and return this form with your bid.

1. If you are a SBE, O, WBE, MBE, ESO or VBE, please check one or more of the following boxes:

   _____ SBE  _____ O  _____ WBE  _____ MBE  _____ ESO  _____ VBE
   Certification #: ____________________  Expiration Date: ______________
   If certified by other than the Virginia Department of Small Business and Supplier Diversity provide the name and contact information, including phone number and website of certifying agency:

   ___________________________________________________________________
   ___________________________________________________________________

2. In the spaces below, report the anticipated dollars that you intend to subcontract to each business type if a contract is awarded to your company. If you do not intend to sub-contract any work to others, even if you are a SBE, O, WBE, MBE, ESO or VBE, put zeros in the spaces below.

   Total SBE Dollars to be Sub-contracted $__________________________
   Total O Dollars to be Sub-contracted $__________________________
   Total WBE Dollars to be Sub-contracted $__________________________
   Total MBE Dollars to be Sub-contracted $__________________________
   Total ESO Dollars to be Sub-contracted $__________________________
   Total VBE Dollars to be Sub-contracted $__________________________

3. If you are not a SBE, O, WBE, MBE, ESO or VBE, and you do not plan to utilize such firms in this contract, please state your reasons:

   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________

I certify the accuracy of this information.

Signed: ______________________ Title: ______________________ Date: ______________

RFQ# JOHNSON GYM WSHP PURCHASE-03132020RMD
ATTACHMENT B

PRICING SCHEDULE

RFQ# JOHNSON GYM WSHP PURCHASE-03132020RMD

Title: JOHNSON GYM WSHP PURCHASE
(This is an equipment purchase only. This solicitation does not include installation.)

Bidders not attending the pre-bid meeting shall acknowledge on the bid form that they have or have not visited and inspected the site (circle one).
I acknowledge that I have / have not visited and inspected the site. ____________________ (initial)

<table>
<thead>
<tr>
<th>Qty</th>
<th>UOM</th>
<th>Description</th>
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<th>Extended Price</th>
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<tbody>
<tr>
<td>1</td>
<td>EA</td>
<td><strong>Johnson Elementary School</strong> Daikin Applied Model ARQ Self-Contained WSHP Unit Ventilator, Nominal 24 MBH Cooling Capacity, Model UARQ9024D (Gym #3) as specified herein or an approved and accepted equal based on compliance with specifications. If quoting an approved equivalent: Manufacturer:</td>
<td>$ __________</td>
<td>$ __________</td>
</tr>
<tr>
<td>1</td>
<td>EA</td>
<td><strong>Johnson Elementary School</strong> Daikin Applied Model ARQ Self-Contained WSHP Unit Ventilator, Nominal 40 MBH Cooling Capacity, Model UARQ9040D (Gym #2) as specified herein or an approved and accepted equal based on compliance with specifications. If quoting an approved equivalent: Manufacturer:</td>
<td>$ __________</td>
<td>$ __________</td>
</tr>
</tbody>
</table>

TOTAL (Basis of Award) AS PER ALL TERMS, CONDITIONS AND SPECIFICATIONS HEREIN. $ __________

Delivery: _____ calendar days from receipt of City Purchase Order.
PRICING SCHEDULE (CONTINUED)

In Compliance With This Request for Quotations And To All The Conditions Imposed Therein, The Undersigned Offers And Agrees To Furnish The Goods/Services At The Price(s) Indicated above.

By my signature on this solicitation, I certify that this firm/individual and subcontractor is properly licensed for providing the goods/services specified.

Name and Address of Firm:
____________________________________________
DBA________________________________________
____________________________________________ Zip Code: ________
Date:   ________________________________________
By:     _________________________________________
(Signature In Ink)
Name:  ________________________________________
(Please Print)
Title:  _________________________________________
I have the authority to bind the corporation.

Virginia Contractor License No. ________________
Class: __________ Specialty Codes: ______________
SEE EQUIPMENT SPECIFICATIONS BELOW
Mechanical Specifications
McQuay Model UARQ Self Contained Water Source Heat Pump Unit Ventilator

Unit Construction
All internal sheet metal parts must be made of galvanized steel to inhibit corrosion. The entire frame must be welded construction to provide strength and rigidity. Hidden reinforced top panel support shall be integral with the frame and support the fan assembly. Unit shall be of a draw-through design. Unit shall have a built-in metal wire raceway from one end compartment to the other.

Cabinets
Exterior cabinet panels shall be constructed of heavy gauge steel. All sheet metal panels must be cleaned and phosphatized, then painted electrostatically with an oven baked environmentally friendly thermosetting urethane powder finish. Opening or removing the unit Unit discharge grille shall be constructed of continuous round edged steel bars to provide a 10-degrees vertical deflection. Adjustable side deflection vanes shall be provided beneath the discharge grille to provide optimum lateral air distribution. Cabinet depth shall not exceed 16-5/8”. Unit shall have gall fiber blanket insulation. This shall act as an outdoor air seal on the units.

Fan and Motor
The motor and fan assembly shall be low speed designed to assure maximum quietness and efficiency. Fans shall be double inlet, forward curved centrifugal type. Fan wheels shall be constructed of dark, high density, injection molded polypropylene having high impact strength, chemical resistance and thermal stability. Assembly shall be statically and dynamically balanced. Fan housings shall be of steel construction. Fan shaft shall be 1-1/4” diameter, hollow steel with 1-1/4” bearing. Fan and motor shall be direct drive type. Motor speed be controlled by factory furnished and mounted multi-tap transformer through High-Off-Low switch. Fan/coil arrangement shall be draw-thru design for uniform coil face velocity and discharge air temperature in addition to providing the kinetic energy for optimum air distribution. Motors shall be permanent split capacitor (PSC), plug-in type designed specifically for unit ventilator operation. Motors shall be located out of the airstream and have an internal thermal overload device (auto-reset). Fan motors and controls shall have each hot line protected by factory installed cartridge type fuse(s). All components of the fan/motor assembly shall be removable from the front of the unit. The motor and fan shaft shall have sleeve type bearings with precision tolerances and shall not require oiling more than once annually.

Outdoor/Room Air Dampers
No outdoor air or room air dampers are provided.

Drain Pan
All units shall have a drain pan constructed of corrosion resistant composite. A drain outlet shall be provided on both ends of the pan. The drain hand of connection shall be easily field reversed to the opposite end. The drain pan shall be able to be sloped in either direction for proper condensate removal.

Agency Listing
Unit ventilators shall be listed by Underwriters Laboratories Inc. (U.L.) for the United States and Canada. Unit ventilation rated per AHRI standard 840. Motors shall conform to the latest applicable requirements of NEMA, IEEE, ANSI, NEC standards.

Refrigerant System
The refrigeration section shall be constructed of galvanized steel and shall include a factory sealed compressor, a water-to-refrigerant coil, air-to-refrigerant coil and a reversing valve. The
Mechanical Specifications
McQuay Model UARQ Self Contained Water Source Heat Pump Unit Ventilator

reversing valve shall have a replaceable external solenoid coil which is energized only when space heating is required. The equipment manufacturer is to be fully responsible for the integrity of the refrigerant piping and the entire refrigeration circuit, including compressor, water-to-refrigerant coil and air-to-refrigerant coil, shall be fully assembled and tested prior to shipment. The motor compressor unit shall be vibration isolated internally and externally and shall be connected in such a manner as to prevent transmission of vibration to other components within the section.

Units with three phase power shall utilize three-phase compressors for balanced electrical compressor loads.

The condenser coil shall be constructed of copper tubes mechanically expanded to embossed aluminum plate fins. The unit shall be so designed as to allow access to the entering side of the condenser coil for cleaning without opening the sealed refrigeration circuit. The evaporator coil shall be constructed of copper tubing having embossed aluminum plate fins mechanically bonded thereto and shall be positioned above a plastic drain pan. Refrigerant shall be metered by a thermostatic expansion valve to achieve evaporator performance and to protect the compressor from flood back of liquid refrigerant. The refrigerant section shall be adequately insulated to prevent “sweating”. The unit shall be furnished and wired with compressor thermal/current overload and high pressure cutout. Gauge ports shall be provided to allow reading of refrigerant pressures at the suction and discharge of the compressor. Compressors shall be equipped with internal pressure relief valve to protect against excessive pressure buildup.

Filter
Filter shall be one-piece type. Throwaway filter shall be factory furnished initially installed in the unit.

Acoustical Features
The compressor shall be mounted on compressor isolators for external vibration isolation. Compressor enclosure panels shall be 16-gauge minimum. Complete interior of compressor compartment shall be lined with a multi-functional material that serves as a sound barrier, an absorber of sound and also must act as a decoupler to the compressor enclosure. This multi-functional material shall have a mylar coating on the face to act as a sound reflector and to increase the strength of the material. Damping material shall be textured foam type. The exterior of the compressor compartment shall be coated with a high density damping material to eliminate impact noise and vibration. The right-hand front panel and the hinged top access door shall be coated with a high density material to minimize noise and vibration.

Temperature Controls
Each unit ventilator shall be furnished with electro-mechanical controls. Please refer to attached wiring diagram for additional details.

Thermostat
The thermostat shall be provided by the Owner.

Automatic Balancing Hose Kit
The automatic flow device kit shall be a Hays Mesurflo® automatic flow control valve with P/T ports, two ball valves, two 36” flexible fire rated hoses, a high flow Y-strainer with blow-down valve and P/T ports. The fire rated hoses, with ASTM ratings of Flame Spread 25, Fuel Contribution 25 and Smoke Density 50, for connection to unit and field piping. Hose shall be covered with stainless steel. The automatic flow control valve shall be factory set to a rated
Mechanical Specifications
McQuay Model UARQ Self Contained Water Source Heat Pump Unit Ventilator

flow, and shall automatically control the flow to within 10% of the rated value over a 40 to 1 differential pressure, operating range (2 to 80 PSID). Operational temperature shall be rated from fluid freezing, to 225°F. The valve body shall be constructed from hot forged brass UNS C37700 per ASTM B-283 latest revision.
## Job Information

<table>
<thead>
<tr>
<th>Job Name</th>
<th>Johnson ES Gym Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>3/4/2020</td>
</tr>
<tr>
<td>Submitted By</td>
<td>Randy Smith</td>
</tr>
<tr>
<td>Software Version</td>
<td>07.00</td>
</tr>
<tr>
<td>Unit Tag</td>
<td>WSHIP-GYM#2</td>
</tr>
</tbody>
</table>

## Unit Overview

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Model Type</th>
<th>Cooling Coil Type</th>
<th>Heating Coil Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>UARQ9040</td>
<td>Self-Contained, WSHP Standard Range</td>
<td>DX</td>
<td>Refrigerant Heating Only</td>
</tr>
</tbody>
</table>

### Arrangement

- Vertical, Floor Mounted, Bottom Front Return Air, Rear OA
- Electromech w/2-Pos Damper for Remote T'Stat
- Cooling Coil Hand: N/A
- Heating Coil Hand: N/A

## Physical

<table>
<thead>
<tr>
<th>Unit Length</th>
<th>Unit Depth</th>
<th>Unit Height</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>98.00 in</td>
<td>16.62 in</td>
<td>30.00 in</td>
<td>720 lb</td>
</tr>
</tbody>
</table>

## Electrical

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Minimum Voltage</th>
<th>Maximum Voltage</th>
<th>Total Unit MCA</th>
<th>Maximum Fuse Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>460/60/3 V/Hz/Phase</td>
<td>414 V</td>
<td>506 V</td>
<td>10.8 A</td>
<td>15 A</td>
</tr>
</tbody>
</table>

## Fan

<table>
<thead>
<tr>
<th>Fan Motor</th>
<th>Speed</th>
<th>Air Volume CFM</th>
<th>External Static Pressure inH₂O</th>
<th>Motor Power HP</th>
<th>Fan Full Load Current A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSC, 3-Speed</td>
<td>High</td>
<td>1250</td>
<td>0.00</td>
<td>0.250</td>
<td>2.70</td>
</tr>
</tbody>
</table>

## Evaporator Coil

### Cooling Performance

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Sensible Btu/hr</th>
<th>Entering Temperature</th>
<th>Dry Bulb °F</th>
<th>Wet Bulb °F</th>
<th>Leaving Temperature</th>
<th>Dry Bulb °F</th>
<th>Wet Bulb °F</th>
<th>Total Heat of Rejection Btu/hr</th>
<th>EER @ design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>39404</td>
<td>26223</td>
<td>80.0</td>
<td>67.0</td>
<td>60.7</td>
<td>57.2</td>
<td>53329</td>
<td>9.66</td>
<td></td>
</tr>
</tbody>
</table>

### Heating Performance

<table>
<thead>
<tr>
<th>Total Capacity Btu/hr</th>
<th>Air Temperature Dry Bulb</th>
<th>Entering °F</th>
<th>Leaving °F</th>
<th>Total Heat of Absorption Btu/hr</th>
<th>COP @ design</th>
</tr>
</thead>
<tbody>
<tr>
<td>46863</td>
<td>70.0</td>
<td>104.6</td>
<td>37714</td>
<td>5.12</td>
<td></td>
</tr>
</tbody>
</table>
### Condenser Coil

<table>
<thead>
<tr>
<th>Refrigerant Type</th>
<th>Performance</th>
<th>Fluid Temperature</th>
<th>Refrigerant Type</th>
<th>Fluid Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cooling</td>
<td>Heating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entering Loop °F</td>
<td>Leaving Loop °F</td>
<td>Entering Loop °F</td>
</tr>
<tr>
<td>R-410A</td>
<td></td>
<td>90.0</td>
<td>100.0</td>
<td>60.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fluid Type</th>
<th>Fluid Flow Rate gpm</th>
<th>Fluid Pressure Drop ft H₂O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>10.00</td>
<td>8.74</td>
</tr>
</tbody>
</table>

### Specials

<table>
<thead>
<tr>
<th>Unit</th>
<th>Specials Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Epoxy Coated Indoor (Evaporator) Coil</td>
</tr>
</tbody>
</table>

### Warranty

| Type        | Extended: 4 Year Extended Compressor Only Parts Warranty |

### Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>106046892</td>
<td>1&quot;EndPnl,Putty Beige,16-5/8D,Solid,Acoustic(AZ,AQ,or *RQ)</td>
</tr>
<tr>
<td>910186434</td>
<td>Hose, Kit Auto Flow, Strainer, Ball Vlv 0.75&quot; x 3ft, 10.0 GPM</td>
</tr>
</tbody>
</table>
Daikin Classroom Floor Unit Ventilator Model ARQ Self-Contained, Standard Range Water Source Heat Pump

Standard Range WSHP 60°F EWT, Ultra Quiet

**Standard Features**

- Non-corrosive plastic drain pan. An optional stainless steel indoor drain pan is also available.
- Low speed room air fan constructed of injection molded polypropylene for precise, smooth, quiet performance.
- Room air motor speed controlled by multi-tap transformer (High, Medium, Low).
- Energy efficient, permanent split capacitor (PSC) plug-in, room air fan motor. Located out of airstream.
- Compressor with relief switch protects against excessive pressure.
- Two-stage compressor with lower compression used in medium and low fan speed.
- U.L. listed individual fusing of compressor, fan motors and controls.
- “On-Off” switch for main power.
- “State-of-the-Art” MicroTech® Unit Controller is a stand-alone microprocessor based DDC control device that is pre-engineered, pre-programmed, pre-tested and factory installed. It provides correct sequence of operation and the advantage of “one source responsibility.”

Refer to the certified drawing for control component description and location. For a description of unit and control operation refer to the appropriate Installation (IM) and Operation (OM) manuals.

---

**Model ARQ Water Source Heat Pump**

1. Raceway for Factory Wiring
2. Electric Heat Control Box
3. Indoor Refrigerant Coil
   - U.L. listed/CUL certified.
   - Institutional quality cabinet with durable textured charcoal bronze paint finish on top surface. Oven baked powder paint finish on all other exterior panels.
   - Welded chassis constructed of galvanized steel.
   - Removable bar discharge grille.
   - Three individual front access panels provided for ease of maintenance and service.
   - All access panels have positive positioning threaded fasteners operating with 5/32” (3.97mm) hex wrench.
   - Rigid, double wall, insulated outdoor air damper made from welded galvanized steel, with mohair end and damper seals in turned over edges.
   - Anti-blow through room air damper.
Table 1: Letter Dimensions for Figure 1 (in inches)

<table>
<thead>
<tr>
<th>Unit Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>7-3/16</td>
<td>10-15/16</td>
<td>14-1/16</td>
<td>86</td>
<td>55</td>
<td>48</td>
</tr>
<tr>
<td>040</td>
<td>8-15/16</td>
<td></td>
<td>8-3/8</td>
<td>98</td>
<td>67</td>
<td>60</td>
</tr>
<tr>
<td>048</td>
<td></td>
<td>17</td>
<td></td>
<td>110</td>
<td>79</td>
<td>72</td>
</tr>
</tbody>
</table>

Note: If wall is chased, wall opening for outdoor air must be within:

- **Unit Size 024 = 55" x 21" (Open Pipe Tunnel) or 55" x 28" (Closed Pipe Tunnel)**
- **Unit Size 040 = 67" x 21" (Open Pipe Tunnel) or 67" x 28" (Closed Pipe Tunnel)**
- **Unit Size 048 = 79" x 21" (Open Pipe Tunnel) or 79" x 28" (Closed Pipe Tunnel)**

Daikin Classroom Floor Unit Ventilator Model ARQ Self-Contained, Standard Range Water Source Heat Pump

**Ultra-Quiet Operation**

- Compressor mounted on neoprene compressor isolators
- Compressor connected by attenuation loops in both the suction and discharge lines to prevent transmission of vibration.
- Refrigerant piping includes braided copper tubing in the suction and discharge lines to reduce the transmission of compressor pulsations.
- Compressor enclosure panels are 16-gauge min. and crossbroken for additional rigidity to dampen vibration.
- Compressor compartment lined with a multifunctional material that serves as a sound barrier, an absorber of sound and acts as a decoupler to the compressor enclosure.

Table 2: ARQ General Data

<table>
<thead>
<tr>
<th>Fan Data</th>
<th>Nominal CFM (L/s)</th>
<th>024</th>
<th>040</th>
<th>048</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Speed</td>
<td>1000 (472)</td>
<td>1250 (590)</td>
<td>1500 (708)</td>
</tr>
<tr>
<td></td>
<td>Medium speed</td>
<td>750 (354)</td>
<td>1000 (472)</td>
<td>1150 (543)</td>
</tr>
<tr>
<td></td>
<td>Low Speed</td>
<td>650 (307)</td>
<td>800 (378)</td>
<td>950 (448)</td>
</tr>
<tr>
<td>Number of Fans</td>
<td></td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Diameter - in (mm)</td>
<td></td>
<td>8.12 (208mm)</td>
<td>8.12 (208mm)</td>
<td>8.12 (208mm)</td>
</tr>
<tr>
<td>Width - in (mm)</td>
<td></td>
<td>8.25 (210mm)</td>
<td>8.25 (210mm)</td>
<td>8.25 (210mm)</td>
</tr>
<tr>
<td>Room Fan Motor Horsepower</td>
<td></td>
<td>1/4</td>
<td>1/4</td>
<td>1/4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filter Data</th>
<th>Nominal Size</th>
<th>in</th>
<th>10 x 48½ x 1</th>
<th>10 x 60½ x 1</th>
<th>(2) 10 x 36½ x 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mm)</td>
<td>254 x 1232 x 25</td>
<td>254 x 1537 x 25</td>
<td>(2) 254 x 927 x 25</td>
<td></td>
</tr>
<tr>
<td>Area - ft² (m²):</td>
<td></td>
<td>3.37 (.31)</td>
<td>4.2 (.39)</td>
<td>5.08 (.47)</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Refrigerant Charge oz

| 81          | 132          | 109          |
Crating and Shipping Data

Unit comes encased in plastic bag. Ensure bag is disposed of properly.

- Units are shipped in trucks. See table for loading, truckload quantities, weights and dimensions.
- Unloading difficulties at the job site can be minimized by having the necessary equipment and manpower available when the shipment arrives on the job site.

- Forklift type vehicles should be used to unload the units. When using a forklift, it is very important that the unit be lifted only from the end designated on the carton.
- Forks on the forklift should be minimum of 72 inches long.
- Strap type sling of nylon or other material should be used rather than wire rope to prevent damage to the unit.

**Important:**

- Move only one unit at a time.
- Do not drop unit.
- Store in a clean dry environment.
- Lift only from designated end.
- Do not stack packaged units more than two (2) high.

**Table 3: Shipping Carton Dimensions & Weights**

<table>
<thead>
<tr>
<th>Model ARQ</th>
<th>“A”</th>
<th>“B”</th>
<th>“C”</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>103“</td>
<td>25“</td>
<td>40“</td>
<td>690 lbs.</td>
</tr>
<tr>
<td>040</td>
<td>119“</td>
<td>31“</td>
<td>36“</td>
<td>720 lbs.</td>
</tr>
<tr>
<td>048</td>
<td>119“</td>
<td>31“</td>
<td>36“</td>
<td>750 lbs.</td>
</tr>
</tbody>
</table>

**Note:** All dimensions are approximate only and are subject to change without notice. Refer to approved submittal prints for rough-in details and construction purposes and for recommended wall opening size.
Daikin Classroom Floor Self-Contained Water Source Heat Pump Unit Ventilator, 16-5/8" Deep Unit
Arrangement AL with Open Refrigerant Piping for Models ARQ & GRQ

**Figure 1: Chased Wall Unit Installation with Floor-Level Outdoor Air Intake:**

Arrangement AL units are 16-5/8" deep with open refrigerant piping (Figure 3). This arrangement is often used when there is a chased wall for water supply and return piping.

**Figure 2: Chased Wall Unit Installation with Above-Floor-Level Outdoor Air Intake:**

Top of intake louver up to 21" (533mm) above floor. (With adapter back available as an accessory)

**Figure 3: 16¾" Arrangement AL with Open Refrigerant Piping**

*Note: If wall is chased, wall opening for outdoor air must be within:
Unit Size 024 = "55"w × 21"h
Unit Size 040 = "67"w × 21"h
Unit Size 048 = "79"w × 21"h*
Daikin Classroom Floor Self-Contained Unit Ventilators 1” End Panel
Models AE, AZ, ARQ, GRQ

End panels are fabricated from 16-gauge furniture grade steel with no sharp edges (top corners are welded) and no unsightly screw heads. They receive an electrostatically applied powder paint that is oven baked with environmentally friendly thermosetting urethane powder finish to provide a high quality appearance.

The 1” right end panel includes an acoustic treatment of high-density sound barrier material to minimize compressor noise and vibration.

End panels ship separately from the unit, are field installed and come individually wrapped in plastic as a set, with one left and one right end panel.

Finish color is selected by Architect from standard or optional colors indicated below.

**Available in:** (Choose one that applies)
- [ ] Antique Ivory (Standard)
- [ ] Soft Gray (Optional)
- [ ] Off-White (Optional)
- [ ] Putty Beige (Optional)
- [ ] Cupola White (Optional)

**Figure 1: 1” (25mm) End Panel Dimensions**

<table>
<thead>
<tr>
<th>All Dim, in inches</th>
<th>15¾” (422mm) Deep End Panels</th>
<th>19¾” (498mm) Deep End Panels</th>
<th>21¾” (556mm) Deep End Panels</th>
<th>28” (711mm) Deep End Panels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top View</strong></td>
<td>16 1/4” (422mm)</td>
<td>19 1/4” (498mm)</td>
<td>21 7/8” (556mm)</td>
<td>28” (711mm)</td>
</tr>
<tr>
<td></td>
<td>(25mm)</td>
<td>(25mm)</td>
<td>(25mm)</td>
<td>(25mm)</td>
</tr>
<tr>
<td><strong>End View</strong></td>
<td>27 7/8” (708mm)</td>
<td>27 7/8” (708mm)</td>
<td>27 7/8” (708mm)</td>
<td>27 7/8” (708mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** All dimensions are approximate only and are subject to change without notice. Dotted line indicates kickplate.
## Job Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Name</td>
<td>Johnson ES Gym Units</td>
</tr>
<tr>
<td>Date</td>
<td>3/4/2020</td>
</tr>
<tr>
<td>Submitted By</td>
<td>Randy Smith</td>
</tr>
<tr>
<td>Software Version</td>
<td>07.00</td>
</tr>
<tr>
<td>Unit Tag</td>
<td>WSHP-GYM#3</td>
</tr>
</tbody>
</table>

## Unit Overview

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number</td>
<td>UARQ9024</td>
</tr>
<tr>
<td>Model Type</td>
<td>Self-Contained, WSHP</td>
</tr>
<tr>
<td></td>
<td>Standard Range</td>
</tr>
<tr>
<td>Cooling Coil Type</td>
<td>DX</td>
</tr>
<tr>
<td>Heating Coil Type</td>
<td>Refrigerant Heating Only</td>
</tr>
<tr>
<td>Arrangement</td>
<td>Vertical, Floor Mounted,</td>
</tr>
<tr>
<td></td>
<td>Bottom Front Return Air,</td>
</tr>
<tr>
<td></td>
<td>Rear OA</td>
</tr>
<tr>
<td>Control Type</td>
<td>Electromech w/2-Pos Damper</td>
</tr>
<tr>
<td></td>
<td>for Remote T'Stat</td>
</tr>
<tr>
<td>Cooling Coil Hand</td>
<td>N/A</td>
</tr>
<tr>
<td>Heating Coil Hand</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## Physical

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Length</td>
<td>86.00 in</td>
</tr>
<tr>
<td>Unit Depth</td>
<td>16.62 in</td>
</tr>
<tr>
<td>Unit Height</td>
<td>30.00 in</td>
</tr>
<tr>
<td>Weight</td>
<td>690 lb</td>
</tr>
</tbody>
</table>

## Electrical

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>460/60/3 V/Hz/Phase</td>
</tr>
<tr>
<td>Minimum Voltage</td>
<td>414 V</td>
</tr>
<tr>
<td>Maximum Voltage</td>
<td>506 V</td>
</tr>
<tr>
<td>Total Unit MCA</td>
<td>7.4 A</td>
</tr>
<tr>
<td>Maximum Fuse Size</td>
<td>15 A</td>
</tr>
</tbody>
</table>

## Fan

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fan Motor</td>
<td>PSC, 3-Speed</td>
</tr>
<tr>
<td>Speed</td>
<td>High</td>
</tr>
<tr>
<td>Air Volume CFM</td>
<td>1000</td>
</tr>
<tr>
<td>External Static Pressure</td>
<td>0.00</td>
</tr>
<tr>
<td>Motor Power</td>
<td>0.250</td>
</tr>
<tr>
<td>Fan Full Load Current A</td>
<td>2.70</td>
</tr>
</tbody>
</table>

## Evaporator Coil

### Cooling Performance

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Capacity Btu/hr</td>
<td>22950</td>
</tr>
<tr>
<td>Sensible Btu/hr</td>
<td>17172</td>
</tr>
<tr>
<td>Entering Dry Bulb °F</td>
<td>80.0</td>
</tr>
<tr>
<td>Wet Bulb °F</td>
<td>67.0</td>
</tr>
<tr>
<td>Leaving Dry Bulb °F</td>
<td>64.2</td>
</tr>
<tr>
<td>Wet Bulb °F</td>
<td>60.0</td>
</tr>
<tr>
<td>Total Heat of Rejection Btu/hr</td>
<td>29857</td>
</tr>
<tr>
<td>EER @ design</td>
<td>11.34</td>
</tr>
</tbody>
</table>

### Heating Performance

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Capacity Btu/hr</td>
<td>25084</td>
</tr>
<tr>
<td>Air Temperature Entering</td>
<td>70.0</td>
</tr>
<tr>
<td>Leining</td>
<td>93.1</td>
</tr>
<tr>
<td>Total Heat of Absorption Btu/hr</td>
<td>19790</td>
</tr>
<tr>
<td>COP @ design</td>
<td>4.74</td>
</tr>
</tbody>
</table>
# Condenser Coil

<table>
<thead>
<tr>
<th>Refrigerant Type</th>
<th>Fluid Temperature</th>
<th>Heating</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cooling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-410A</td>
<td>Entering Loop °F</td>
<td>Leaving Loop °F</td>
<td>Entering Loop °F</td>
</tr>
<tr>
<td></td>
<td>90.0</td>
<td>99.5</td>
<td>60.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fluid Type</th>
<th>Fluid Flow Rate gpm</th>
<th>Fluid Pressure Drop ft H₂O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>6.00</td>
<td>1.29</td>
</tr>
</tbody>
</table>

## Specials

**Specials Description:** Epoxy Coated Indoor (Evaporator) Coil

## Warranty

**Extended:** 4 Year Extended Compressor Only Parts Warranty

## Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>106046892</td>
<td>1&quot;EndPnl,Putty Beige,16-5/8D,Solid,Acoustic(AZ,AQ,or *RQ)</td>
</tr>
<tr>
<td>910157029</td>
<td>Hose, Kit Auto Flow, Strainer, Ball Vlv 0.75&quot; x 3ft, 6.0 GPM</td>
</tr>
</tbody>
</table>
Daikin Classroom Floor Unit Ventilator Model ARQ Self-Contained, Standard Range Water Source Heat Pump

Standard Range WSHP 60°F EWT, Ultra Quiet

Standard Features

- Non-corrosive plastic drain pan. An optional stainless steel indoor drain pan is also available.
- Low speed room air fan constructed of injection molded polypropylene for precise, smooth, quiet performance.
- Room air motor speed controlled by multi-tap transformer (High, Medium, Low).
- Energy efficient, permanent split capacitor (PSC) plug-in, room air fan motor. Located out of airstream.
- Compressor with relief switch protects against excessive pressure.
- Two-stage compressor with lower compression used in medium and low fan speed.
- U.L. listed individual fusing of compressor, fan motors and controls.
- “On-Off” switch for main power.
- “State-of-the-Art” MicroTech® Unit Controller is a stand-alone microprocessor based DDC control device that is pre-engineered, pre-programmed, pre-tested and factory installed. It provides correct sequence of operation and the advantage of “one source responsibility.”

Refer to the certified drawing for control component description and location. For a description of unit and control operation refer to the appropriate Installation (IM) and Operation (OM) manuals.
Table 1: Letter Dimensions for Figure 1 (in inches)

<table>
<thead>
<tr>
<th>Unit Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>7-3/16</td>
<td>10-15/16</td>
<td>14-1/16</td>
<td>86</td>
<td>55</td>
<td>48</td>
</tr>
<tr>
<td>040</td>
<td>8-15/16</td>
<td>17</td>
<td>8-3/8</td>
<td>98</td>
<td>67</td>
<td>60</td>
</tr>
<tr>
<td>048</td>
<td></td>
<td></td>
<td></td>
<td>110</td>
<td>79</td>
<td>72</td>
</tr>
</tbody>
</table>

**Note:** If wall is chased, wall opening for outdoor air must be within:
- **Unit Size 024** = 55” × 21” (Open Pipe Tunnel) or 55” × 28” (Closed Pipe Tunnel)
- **Unit Size 040** = 67” × 21” (Open Pipe Tunnel) or 67” × 28” (Closed Pipe Tunnel)
- **Unit Size 048** = 79” × 21” (Open Pipe Tunnel) or 79” × 28” (Closed Pipe Tunnel)

**Daikin Classroom Floor Unit Ventilator**
**Model ARQ Self-Contained, Standard Range Water Source Heat Pump**

**Ultra-Quiet Operation**
- Compressor mounted on neoprene compressor isolators
- Compressor connected by attenuation loops in both the suction and discharge lines to prevent transmission of vibration.
- Refrgerant piping includes braided copper tubing in the suction and discharge lines to reduce the transmission of compressor pulsations.
- Compressor enclosure panels are 16-gauge min. and crossbroken for additional rigidity to dampen vibration.
- Compressor compartment lined with a multifunctional material that serves as a sound barrier, an absorber of sound and acts as a decoupler to the compressor enclosure.

Table 2: ARQ General Data

<table>
<thead>
<tr>
<th>Fan Data</th>
<th>Nominal CFM (L/s)</th>
<th>High Speed</th>
<th>Medium speed</th>
<th>Low Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1000 (472)</td>
<td>750 (354)</td>
<td>650 (307)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1250 (590)</td>
<td>1000 (472)</td>
<td>800 (378)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500 (708)</td>
<td>1150 (543)</td>
<td>950 (448)</td>
</tr>
<tr>
<td>Number of Fans</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>Diameter • in (mm)</td>
<td>8.12 (208mm)</td>
<td>8.12 (208mm)</td>
<td>8.12 (208mm)</td>
</tr>
<tr>
<td>Width • in (mm)</td>
<td>8.25 (210mm)</td>
<td>8.25 (210mm)</td>
<td>8.25 (210mm)</td>
<td></td>
</tr>
<tr>
<td>Room Fan Motor Horsepower</td>
<td>1/4</td>
<td>1/4</td>
<td>1/4</td>
<td></td>
</tr>
<tr>
<td>Filter Data</td>
<td>Nominal Size</td>
<td>in</td>
<td>10 x 48½ x 1</td>
<td>10 x 60½ x 1</td>
</tr>
<tr>
<td></td>
<td>(mm)</td>
<td>254 x 1232 x 25</td>
<td>254 x 1537 x 25</td>
<td>(2) 254 x 2372 x 25</td>
</tr>
<tr>
<td>Area - Ft² (m²):</td>
<td>3.37 (.31)</td>
<td>4.2 (.39)</td>
<td>5.08 (.47)</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Refrigerant Charge</td>
<td>oz</td>
<td>81</td>
<td>132</td>
<td>109</td>
</tr>
</tbody>
</table>
Crating and Shipping Data

Unit comes encased in plastic bag. Ensure bag is disposed of properly.

- Units are shipped in trucks. See table for loading, truckload quantities, weights and dimensions.
- Unloading difficulties at the job site can be minimized by having the necessary equipment and manpower available when the shipment arrives on the job site.

- Forklift type vehicles should be used to unload the units. When using a forklift, it is very important that the unit be lifted only from the end designated on the carton.
- Forks on the forklift should be minimum of 72 inches long.
- Strap type sling of nylon or other material should be used rather than wire rope to prevent damage to the unit.

Important:

- Move only one unit at a time.
- Do not drop unit.
- Store in a clean dry environment.
- Lift only from designated end.
- Do not stack packaged units more than two (2) high.

Table 3: Shipping Carton Dimensions & Weights

<table>
<thead>
<tr>
<th>Model ARQ</th>
<th>&quot;A&quot;</th>
<th>&quot;B&quot;</th>
<th>&quot;C&quot;</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>103&quot;</td>
<td>25&quot;</td>
<td>40&quot;</td>
<td>690 lbs.</td>
</tr>
<tr>
<td>040</td>
<td>119&quot;</td>
<td>31&quot;</td>
<td>38&quot;</td>
<td>720 lbs.</td>
</tr>
<tr>
<td>048</td>
<td>119&quot;</td>
<td>31&quot;</td>
<td>38&quot;</td>
<td>750 lbs.</td>
</tr>
</tbody>
</table>

Note: All dimensions are approximate only and are subject to change without notice. Refer to approved submittal prints for rough-in details and construction purposes and for recommended wall opening size.
Daikin Classroom Floor Self-Contained Water Source Heat Pump Unit Ventilator, 16-5/8" Deep Unit

Arrangement AL with Open Refrigerant Piping for Models ARQ & GRQ

Figure 1: Chased Wall Unit Installation with Floor-Level Outdoor Air Intake:
Arrangement AL units are 16-5/8" deep with open refrigerant piping (Figure 3). This arrangement is often used when there is a chased wall for water supply and return piping.

Figure 2: Chased Wall Unit Installation with Above-Floor-Level Outdoor Air Intake:
Top of intake louver up to 21" (533mm) above floor. (With adapter back available as an accessory)

Figure 3: 16¼" Arrangement AL with Open Refrigerant Piping

Note: If wall is chased, wall opening for outdoor air must be within:
Unit Size 024 = *55"w x 21"h
Unit Size 040 = *67"w x 21"h
Unit Size 048 = *79"w x 21"h
Daikin Classroom Floor Self-Contained Unit Ventilators 1" End Panel Models AE, AZ, ARQ, GRQ

End panels are fabricated from 16-gauge furniture grade steel with no sharp edges (top corners are welded) and no unsightly screw heads. They receive an electrostatically applied powder paint that is oven baked with environmentally friendly thermosetting urethane powder finish to provide a high quality appearance.

The 1" right end panel includes an acoustic treatment of high-density sound barrier material to minimize compressor noise and vibration.

End panels ship separately from the unit, are field installed and come individually wrapped in plastic as a set, with one left and one right end panel.

Finish color is selected by Architect from standard or optional colors indicated below.

**Available in:** (Choose one that applies)
- □ Antique Ivory (Standard)
- □ Soft Gray (Optional)
- □ Off-White (Optional)
- □ Putty Beige (Optional)
- □ Cupola White (Optional)

**Figure 1: 1" (25mm) End Panel Dimensions**

<table>
<thead>
<tr>
<th>All Dim, in inches</th>
<th>18%&quot; (422mm) Deep End Panels</th>
<th>19%&quot; (498mm) Deep End Panels</th>
<th>21%&quot; (556mm) Deep End Panels</th>
<th>28&quot; (711mm) Deep End Panels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 7/8&quot; (422mm)</td>
<td>19 7/8&quot; (498mm)</td>
<td>21 7/8&quot; (556mm)</td>
<td>28&quot; (711mm)</td>
</tr>
<tr>
<td></td>
<td>(25mm)</td>
<td>(25mm)</td>
<td>(25mm)</td>
<td>(25mm)</td>
</tr>
<tr>
<td>End View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>27 7/8&quot; (708mm)</td>
<td>27 7/8&quot; (708mm)</td>
<td>27 7/8&quot; (708mm)</td>
<td>27 7/8&quot; (708mm)</td>
</tr>
</tbody>
</table>

**Note:** All dimensions are approximate only and are subject to change without notice. Dotted line indicates kickplate.
NOTE: For troubleshooting, refer to unit-mounted schematic. See Table 16 for wiring diagram legend and notes.

Table 16: Figure 43 Wiring Diagram Legend

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Line No.</th>
<th>Symbol</th>
<th>Description</th>
<th>Line No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Actuator- Outdoor Air</td>
<td>18</td>
<td>R4M</td>
<td>Relay– Medium Fan Speed (Coil 24 VAC)</td>
<td>8</td>
</tr>
<tr>
<td>C1</td>
<td>Contactor– Compressor</td>
<td>17</td>
<td>R4L</td>
<td>Relay– Low Fan Speed (Coil 24 VAC)</td>
<td>8</td>
</tr>
<tr>
<td>FA/FB</td>
<td>Fuse– Control</td>
<td>6</td>
<td>R7</td>
<td>Relay Compressor Lockout</td>
<td>18</td>
</tr>
<tr>
<td>F1A/F1C</td>
<td>Fuse– Compressor</td>
<td>1.3</td>
<td>RV</td>
<td>Reversing Valve</td>
<td>14</td>
</tr>
<tr>
<td>HP</td>
<td>Switch– High Pressure (600 psi)</td>
<td>17</td>
<td>SW1</td>
<td>Switch– Disconnect</td>
<td>1</td>
</tr>
<tr>
<td>M</td>
<td>Motor - Room Fan</td>
<td>7</td>
<td>SW2</td>
<td>Switch– ON-OFF, Fan Speeds</td>
<td>5.10</td>
</tr>
<tr>
<td>M1</td>
<td>Compressor (2 Stage)</td>
<td>2</td>
<td>TB1</td>
<td>Terminal Board– Control</td>
<td>19</td>
</tr>
<tr>
<td>M2</td>
<td>Condensing Motor</td>
<td>2</td>
<td>T2</td>
<td>Thermostat Low Temp (28°F)</td>
<td>18</td>
</tr>
<tr>
<td>R2S</td>
<td>Relay High (2nd) Stage Compressor</td>
<td>18</td>
<td>X1</td>
<td>Transformer– Motor</td>
<td>6</td>
</tr>
<tr>
<td>R4</td>
<td>Relay– Fan (Coil 24 VAC)</td>
<td>14</td>
<td>X2</td>
<td>Transformer– Control (75VA)</td>
<td>10</td>
</tr>
<tr>
<td>R4H</td>
<td>Relay– High Fan Speed (Coil 24 VAC)</td>
<td>8</td>
<td>X4</td>
<td>Transformer– 460V/120V</td>
<td>4</td>
</tr>
</tbody>
</table>

Notes:
1. All electrical installation must be in accordance with national and local electrical codes and job wiring schematic.
2. NEC Class 1 wiring factory mounted night controls connect to Blk & Wht wires. When remote night controls are used, they must be connected to Blk & Wht wires shown capped, and the Blk & Wht wires in the main control box must be disconnected and individually capped.
3. Numbers along right side of schematic designate the location of the contacts by line number.
4. See control and thermostat drawing for additional controls.
5. SW2 contact 5, 6 and 7, 8 open only when SW2 is in OFF position.
6. SW2 contacts H, M and L.
7. High (2nd Stage) compressor rectifier energized when compressor is ON and fan speed is on HIGH.