

## S T A T E O F M I C H I G A N

## BOARD OF COMMISSIONERS OF THE COUNTY OF ALLEGAN

**FACILITIES MANAGEMENT – AWARD COURTHOUSE AIR HANDLER  
REPLACEMENT BID**

**WHEREAS**, the Board of Commissioners (Board) appropriated \$200,000 in 2022 from the #401 - CIP Public Improvements Fund to fund the replacement of two air handler units; and

**WHEREAS**, consistent with the County's Purchasing Policy, a Request for Proposal process was used to solicit competitive bids of which the lowest bid with a satisfactory proposal received was for \$116,925.00.

**THEREFORE BE IT RESOLVED** that the Board awards the bid to replace the Courthouse air handlers (Project #1130-22A) to Kalamazoo Mechanical, Inc. of 5507 E. Cork St., Kalamazoo, MI 49048 for the not to exceed cost of \$116,925.00; and

**BE IT FINALLY RESOLVED** that the Board Chairperson and/or the County Administrator are authorized to sign any necessary documentation on behalf of the County.

**REQUEST FOR ACTION - PROCUREMENT OF GOODS AND/OR SERVICES**

RFA #: 211-658 RFA Date: 3/24/2022 RFA Submitted By: Kristin VanAtter

**PROJECT/SERVICE:** Courthouse Air Handler Replacements  
Project/Service: Replace two large air handler units on the Courthouse roof that are well past their life  
Description: expectancy  
Project/Contract #: 1130-22A Contact Name: Carl Chapman  
Department: Facilities Contact Info: [cchapman@allegancounty.org](mailto:cchapman@allegancounty.org)

**PROCUREMENT METHOD:** Public Solicitation / RFP  
12 Firms invited to bid and bidding opportunity posted to County Website. 3 Bids Received

**CONTRACT AWARD:** \$116,925.00  
Parties - County and: Kalamazoo Mechanical  
Contract Duration: Until scope of work is completed  
Evaluation Team: Carl Chapman and Valdis Kalnins  
References Checked: No - Current or previous vendor with satisfactory performance Debarred: No

**FUNDING SOURCE:** #401 Capital Improvement Fund  
\$ 200,000.00 Approved Appropriations to Date  
\$ - Additional Appropriation Requested through this RFA  
\$ 200,000.00 Total Funding available if this RFA is approved  
\$ - Expenditures to Date  
\$ 116,925.00 Award Amount  
\$ 83,075.00 Funds Remaining

**AWARD THRESHOLD:** BOC - Budgeted Capital Procurement over \$50,001

**BID PRESENTATION FOR PROJECT #:****1130-22A**

Date: 3/24/2022

Project Name:

**Courthouse Air Handler Replacements**

Service Area:

**Facilities Management**

Award Recommendation:

Kalamazoo Mechanical

Award Criteria:

Lowest bid with satisfactory proposal and past performance

<b>VENDOR TABLE</b>	<b>Vendor 1</b>	<b>Vendor 2</b>	<b>Vendor 3</b>
Company Name	<b>Kalamazoo Mechanical</b>	<b>Allied Mechanical Services, Inc.</b>	<b>Advantage Mechanical Refrigeration</b>
Company Address1	5507 E Cork St.	5688 East ML Ave.	4870 W River Dr NE # F
City, State, Zip	Kalamazoo, MI 49048	Kalamazoo, MI 49048	Comstock Park, MI 49321

**COST TABLE**

Equipment (Two Air Handlers)	\$ 88,250.00	\$ 91,775.00	\$ 88,524.00
Other Materials & Supplies	\$ 1,000.00	\$ 960.00	\$ 11,372.00
Total Labor	\$ 9,500.00	\$ 5,880.00	\$ 10,000.00
Roofing	\$ 5,500.00	\$ 9,640.00	\$ -
Crane Service	\$ 4,000.00	\$ 9,580.00	\$ 8,400.00
Performance & Payment Bond	\$ 784.00	\$ 1,350.00	\$ 3,282.00
Other Costs	\$ 7,891.00	\$ 5,900.00	\$ 1,800.00
<b>TOTAL</b>	<b>\$ 116,925.00</b>	<b>\$ 125,085.00</b>	<b>\$ 123,378.00</b>



## CONTRACT PACKET

Allegan County  
3283 122<sup>nd</sup> Ave  
Allegan, MI 49010

### **Courthouse Roof-top Air Handler Replacement Services Contract #1130-22A**

This contract packet incorporates the following documents:

<b>Courthouse Roof-top Air Handler Replacement Services Agreement .....</b>	<b>2</b>
<b>Agreement and Scope of Work Clarifications.....</b>	<b>8</b>
<b>Attachment A – Scope of Work .....</b>	<b>9</b>
<b>Attachment B – Cost Proposal.....</b>	<b>15</b>
<b>Attachment C – Contractor’s Proposal .....</b>	<b>17</b>

## **Courthouse Roof-top Air Handler Replacement Services Agreement**

This Agreement (“Agreement”) is made by and between the **County of Allegan**, 3283 122<sup>nd</sup> Avenue, Allegan, Michigan 49010 (“County”) and

**Contractor Name:** Kalamazoo Mechanical, Inc.

**Contractor Address:** 5507 E. Cork St., Kalamazoo, MI 49048

(“Contractor”). The parties agree as follows:

### **1. Contractor Services**

Contractor shall provide the County with the services, products and supplies described in Attachment A subject to the terms and conditions set forth in this Agreement.

Contractor warrants to the County that the services to be provided under this Agreement shall be of the kind and quality that meet generally accepted standards and shall be performed by qualified personnel. Contractor further warrants to the County that all products and supplies used in conjunction with the services provided under this Agreement shall be new and of acceptable quality and quantity to the County.

### **2. Payment**

The County shall pay Contractor for the services described in Attachment A based on the pricing provided by Contractor in Attachment B. Any additional work must be mutually agreed upon in writing and costs known before that work may commence. Payment shall be provided within thirty (30) days following receipt of invoice commensurate with progress towards Scope of Work completion and satisfactory performance.

### **3. Term of Agreement**

The term of this Agreement shall begin upon signature by both parties and end upon Scope of Work completion and expiration of all warranties and guarantees provided by the Contractor on the work performed, unless terminated earlier in accordance with Section 4 of this Agreement.

### **4. Termination of Agreement**

The County may terminate this Agreement for any or no reason prior to the expiration date set forth in Section 3 of this Agreement by giving thirty (30) days’ written notice to Contractor.

### **5. Insurance Requirements**

Contractor, and any and all of its subcontractors, shall not commence any services or perform any of its other obligations under this Agreement until Contractor obtains the insurance required under this Section. Contractor shall then maintain the required insurance for the full duration of this Agreement. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan. All coverages shall be with insurance carriers acceptable to the County.

Insurance policies shall not contain endorsements or policy conditions which reduce coverage provided to the County. Contractor shall be responsible to the County for all costs resulting from both financially unsound insurance companies selected by Contractor and their inadequate insurance coverage. The specified limits of liability do not limit the liability of Contractor. All deductibles and self-insured retentions are the responsibility of Contractor.

A. Worker's Compensation Insurance: Contractor shall procure and maintain during the life of this Agreement, Worker's Compensation Insurance, including Employers' Liability Coverage either in accordance with all applicable statutes of the State of Michigan or have the State of Michigan listed under Section 3 - Other States Insurance in the Contractor's insurance policy.

B. Commercial General Liability Insurance: Contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability of not less than \$1,000,000 per occurrence and/or aggregate combined single limit, Personal Injury, Bodily Injury, and Property Damage. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent, if not already included ; (E) Deletion of all Explosion, Collapse, and Underground (XCU) Exclusions, if applicable.

C. Motor Vehicle Liability Insurance: Contractor shall procure and maintain during the life of this contract Motor Vehicle Liability Insurance, including Michigan No-Fault Coverage, with limits of liability not less than \$1,000,000 per occurrence combined single limit for Bodily Injury, and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

D. Additional Insured: Commercial General Liability Insurance as described above, shall include an endorsement stating the following shall be additional insureds: "Allegan County, all elected and appointed officials, all employees and volunteers, agents, all boards, commissions, and/or authorities and board members, including employees and volunteers thereof." It is understood and agreed that, by naming Allegan County as additional insured, coverage afforded is considered to be primary and any other insurance the County may have in effect shall be considered secondary and/or excess.

E. Cancellation Notice: Worker's Compensation Insurance, Commercial General Liability Insurance, and Motor Vehicle Liability Insurance, as described above, shall be endorsed to state the following: "It is understood and agreed thirty days, ten days for non-payment of premium, Advance Written Notice of Cancellation, Non-Renewal, Reduction, and/or Material Change shall be sent to: Allegan County Administrator, 3283 122nd Avenue, Allegan, MI 49010." If any required insurance expires or is canceled during the term of this Agreement, services and related payments will be suspended and the County may terminate this Agreement immediately.

F. Proof of Insurance Coverage: Upon execution of this Agreement and at least ten business days prior to commencement of services under this Agreement, Contractor shall provide the County with a copy of its Worker's Compensation, Commercial Liability and Vehicle Liability certificates of insurance evidencing the required coverage and endorsements.

Should the need arise, the County reserves the right to request a copy of any policy mentioned above and if so requested, Contractor agrees to furnish a Certified Copy.

No payments shall be made to Contractor until current certificates of insurance have been received and approved by the County. If any of the above coverages expire during the term of this Agreement, Contractor shall deliver renewal certificates to the County at least ten days prior to the expiration date.

## **6. Reporting and Review**

Contractor shall report to the County as required by this Agreement and also upon request. Contractor shall cooperate and confer with the County as necessary to ensure satisfactory work progress and performance. All documents submitted by Contractor must be dated and bear the Contractor's name. All reports made in connection with Contractor's services are subject to review and final approval by the County. The County may review and inspect Contractor's activities during the term of this Agreement. After reasonable notice to Contractor, the County may review any of Contractor's internal records, reports or insurance policies.

## **7. Indemnification**

To the fullest extent permitted by law, Contractor shall hold harmless, defend and indemnify the County and its elected officials, agents, representatives, volunteers and employees from any and all liabilities, claims, liens, fines, demands and costs, including attorney fees, of whatsoever kind and nature, such as, but not limited to, those resulting from injury or death to any persons, including Contractor's own employees, or from loss or damage to any property, including property owned or in the care, custody or control of the County, in connection with or in any way incident to or arising out of the occupancy, use, operations or performance or non-performance of services by the Contractor or its agents, representatives and employees, or any subcontractor or its agents, representatives and employees, in connection with this Agreement. The obligations of Contractor under this Section shall survive any termination of this Agreement or completion of Contractor's performance under this Agreement.

## **8. Independent Contractor**

To the fullest extent permitted by law, the parties agree that Contractor is an independent contractor; that Contractor and its employees shall in no way be deemed, nor hold themselves out to be, an employee, agent or joint venture partner of the County for any purpose, and shall not be entitled to any fringe benefits of the County, such as, but not limited to, health and accident insurance, life insurance, paid sick or vacation leave, or longevity pay; and that Contractor shall be responsible for withholding and payment of all applicable taxes, including, but not limited to, income, social security and unemployment taxes, to the proper federal, state and local governments, and maintaining the required workers' compensation insurance, in connection with services rendered by its employees pursuant to this Agreement, and agrees to protect, defend and indemnify the County against such liability.

## **9. Subcontracting**

Contractor shall provide all services covered by this Agreement and shall not subcontract, assign or delegate any of the services without written authorization from the County unless the intent to use subcontractors is clearly stated in the Contractor's Proposal with details provided on the names of the agencies and portion of work to be subcontracted.

Contractor assumes all risk, liability and supervisory responsibility for the actions and / or inactions and performance of all subcontractors used by Contractor in providing services under this Agreement. In choosing to use subcontractors, Contractor shall ensure that all subcontractors comply with, and perform services in manner consistent with, all the terms and conditions set forth in this Agreement. Contractor shall also verify that subcontractors have insurance coverage that matches or exceeds the coverage detailed in Section 5 and make certain that subcontractors do not operate outside the required scope of work.

This Agreement is solely between County and Contractor and County shall have no relationships or obligations to any subcontractors used by Contractor in performing work under this Agreement.

**10. County Employees**

Contractor shall not hire any County employee to perform any of the services covered by this Agreement without written authorization from the County.

**11. Default**

In the event of default by Contractor, the County may procure the products or services from other sources and hold Contractor responsible for any excess costs incurred, in addition to all other available remedies.

**12. Endorsement Prohibition**

Contractor shall not use in any form or medium the name of the County, or supportive documentation or photographs of County projects, facilities, equipment or employees, for public advertising or promotional purposes unless authorized in writing by the County.

**13. Compliance with Laws**

Contractor shall observe and comply with all applicable federal, state and local laws, ordinances, rules, and regulations including, but not limited to OSHA/MIOSHA requirements, the Elliot-Larsen Civil Rights Act and the Persons with Disabilities Civil Rights Act. Contractor agrees to protect, defend and indemnify the County against liability for loss, cost or damage resulting from actual or alleged violations of law by Contractor.

**14. Nondiscrimination**

Contractor shall adhere to all applicable federal, state and local laws, ordinances, rules and regulations prohibiting discrimination. Contractor, as required by law, shall not discriminate against a person to be served or any employee or applicant for employment because of race, color, religion, national origin, age, sex, disability, height, weight, marital status, or any other factor legally prohibited by applicable law.

**15. Equal Opportunity Employer**

In signing this Agreement, Contractor certifies that it is an Equal Opportunity Employer.

**16. Confidentiality**

Contractor acknowledges that during the performance of its obligations under this Agreement, it or its personnel may become aware of or receive confidential information relating to or kept by the County, and therefore Contractor agrees that all such information shall be kept confidential and shall not be disclosed without the written authorization of the County.

**17. Contractor Personnel**

Contractor's employees may be subject to an approved criminal background check prior to entering County property to perform work under this Agreement. Employees of Contractor must wear apparel or other means of identification while performing services under this Agreement.

**18. Amendment**

This Agreement shall not be modified, nor may compliance with any of its terms be waived, except by written instrument executed by a duly authorized representative from each party.

**19. Binding Effect**

This Agreement is binding upon and shall inure to the benefit of Contractor and the County and their respective legal representatives, successors and authorized assigns.

**20. Waiver**

No provision of this Agreement shall be deemed waived and no breach excused, unless such waiver or consent is in writing and signed by the party claimed to have waived or consented. Any consent by any party to, or waiver of, a breach of the other party, whether express or implied, shall not constitute consent to, waiver of, or excuse for any different or subsequent breach.

**21. Counterparts**

This Agreement may be executed simultaneously in one or more counterparts each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

**22. Severability**

If any provision of this Agreement is held to be invalid or unenforceable, it shall be considered to be deleted, and the remainder of the Agreement shall remain in full force and effect. Where the deletion of the invalid provision would result in the illegality and/or unenforceability of this Agreement, this Agreement shall be considered to have terminated as of the date on which the provision was declared invalid.

**23. Section Titles**

Section titles used in this Agreement are inserted for the convenience of reference only and shall be disregarded when construing or interpreting the provisions in this Agreement.

**24. Choice of Law and Forum**

This Agreement is governed by and interpreted according to the laws of the State of Michigan. The parties agree that the proper forum and venue for litigation arising out of this Agreement is in Allegan County, Michigan.

**25. Royalties and Patents**

Contractor shall pay all royalties and license fees and shall defend all suits or claims for infringement of any copyright or patent rights and shall hold and save the County and its officers, agents, servants and employees harmless from any and all loss and liability of any nature or kind whatsoever, including costs and expenses of defense, for or on account of any copyrighted, patented or unpatented invention, process, article or appliance manufactured or used in the performance of the contract, including its use by Contractor and/or Contractor's subcontractors and agents.

**26. Debarment or Suspension Status**

In signing this Agreement, Contractor certifies that it is not suspended, debarred or ineligible from entering into contracts with the Executive Branch of the Federal Government, or in receipt of a notice of proposed debarment from any State agency or local public body.

**27. Conflicts of Interest**

In signing this Agreement, Contractor certifies that it has no interest which would conflict with its performance of services under this Agreement. If a possible conflict of interest arises, Contractor shall immediately inform County regarding same.

**28. Anti-Collusion Statement**

In signing this Agreement, Contractor certifies that it has not divulged to, discussed or compared its bid with other contractors and has not colluded with any other bidder, with the exception of

qualified subcontractors, or parties to the bid. No premiums, rebates or gratuities to employees or officials of the County are permitted either with, prior to, or after delivery of any product(s) or service(s). Any such violation will result in the termination of this Agreement, the cancellation and/or return of any item(s), as applicable, and possible exclusion of Contractor from future bidding opportunities.

**29. Performance and Payment Bonds**

The following bonds or securities shall be secured by the Contractor upon full execution of this Agreement. These bonds or securities shall be included in this Agreement and become binding on the parties.

A. A performance bond satisfactory to the County, executed by a surety company authorized to do business in the State of Michigan or otherwise secured in a manner satisfactory to the County, in an amount equal to 100% of the price specified in this Agreement; and

B. A payment bond satisfactory to the County, executed by a surety company authorized to do business in the State of Michigan or otherwise secured in a manner satisfactory to the County, for the protection of all persons supplying labor and material to the Contractor or its subcontractors for the performance of the work provided for in this Agreement. The bonds shall be an amount equal to 100% of the price specified in this Agreement.

**30. Entire Agreement**

This Agreement, including and incorporating the documents listed below, constitutes the entire Agreement. In the event of any conflict or inconsistency in the terms and conditions between these documents, the documents shall govern in following order:

1. This Courthouse Roof-top Air Handler Replacement Services Agreement
2. Agreement and Scope of Work Clarifications
3. Attachment A – County’s Scope of Work issued with RFP on 3/1/2022
4. Attachment B – Cost Proposal Form completed and submitted with Contractor’s Proposal
5. Attachment C – Contractor’s Proposal received and opened by County on 3/22/2022

This Agreement contains all the terms and conditions agreed upon by the parties, and no other negotiations, representations, understandings or agreements, written, oral, or otherwise, regarding the subject matter of this Agreement or any part thereof shall have any validity or bind the parties in any way.

The Parties hereby cause this Agreement to be executed by their duly authorized representatives.

Contractor:

County:

Sign:



Sign:

\_\_\_\_\_

Name:

Carson Cornish

Name:

Robert J. Sarro

Title:

President

Title

Allegan County Administrator

Date:

3/22/22

Date:

\_\_\_\_\_

## **Agreement and Scope of Work Clarifications**

This Agreement hereby incorporates the following County decisions between Scope of Work alternatives, clarifications noticed during the open bid process, the County's acceptance of clarifications requested by Contractor in its proposal, and any additional negotiated terms, conditions or clarifications not incorporated elsewhere in this Agreement:

The current Roof-Top Units are supported by steel rails that sit on a small existing curb. Both the rails and the existing curb should be removed with the removal of the units. The installation of a new roof curb and any structural supports that may be needed should be included in the base bid.

Contractor confirms it has included some costs in its bid for after hours work. Contractor understands the near-by bank has a functioning drive-through that cannot be blocked, thus planned to do the hoisting work outside of the hours of 8-5. Contractor is flexible on working hours on the project. Contractor will be allowed to do most of the interior work such as duct and electrical modifications, and start up during normal business hours in close coordination with Facilities Management so as not to disrupt jury trials and other occasional activities that can't be disrupted. Contractor will have no added cost unless the entire project needs to be performed after hours.

Contractor intends to subcontract the electrical work to Esper Electric.

The County opts to include the vibration isolation curbs for the two units at a cost of \$7,250.

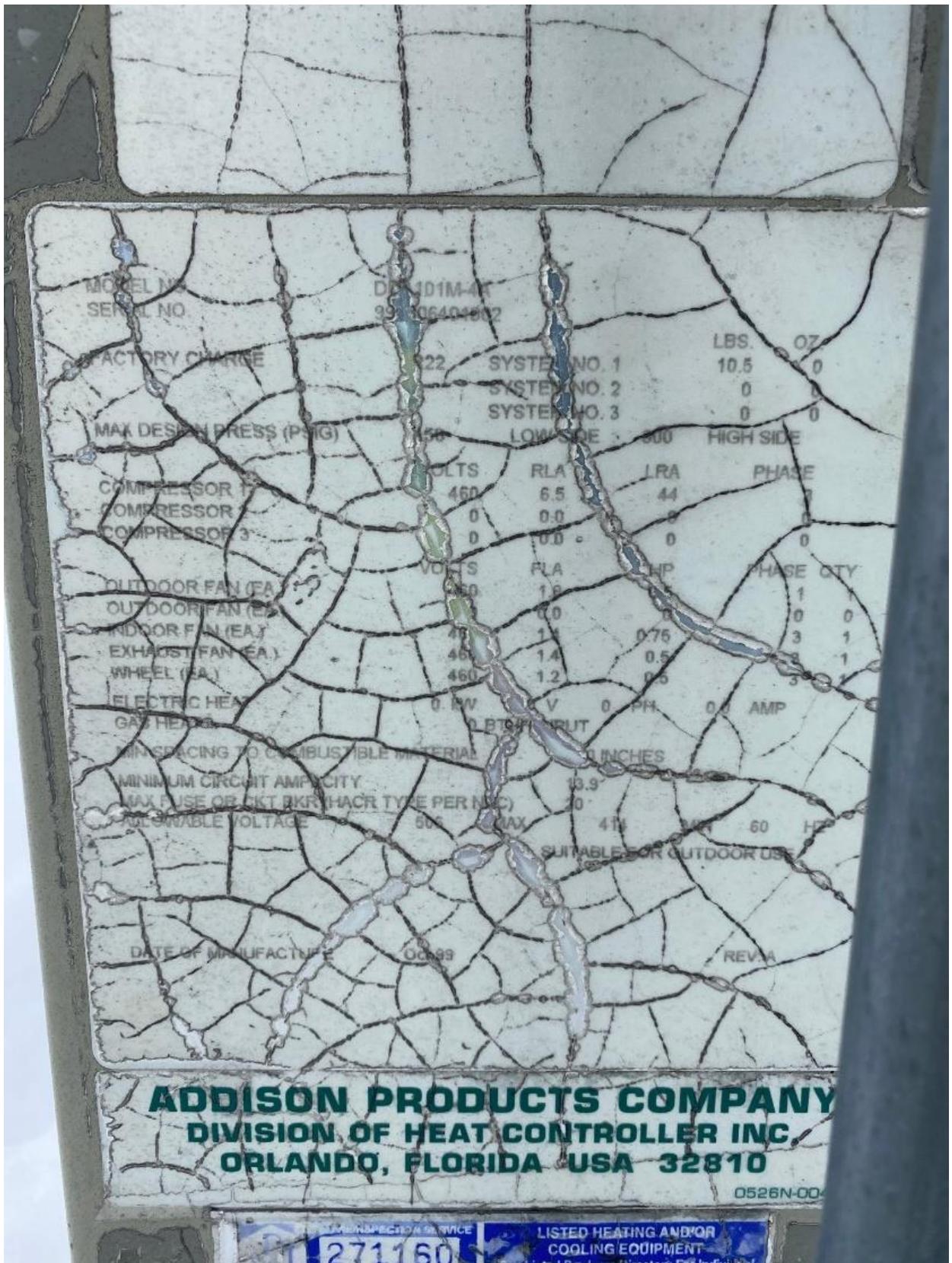
## Attachment A – Scope of Work

### 1. PROJECT OVERVIEW

- 1.1 Contractor shall replace two aging roof-top air handlers at the Allegan County Courthouse which is located at 113 Chestnut Street, Allegan, Michigan 49010.
- 1.2 The location of both air handlers is identified in the following aerial image of the Courthouse roof:



- 1.3 The section of roof on which the air handlers rests is approximately 36 feet above street level.
- 1.4 The next two pages show the faceplates of the current Addison brand air handlers. Although the current faceplates are worn and deteriorated, it is believed both models numbers are either DDA101M-4A or DDA1D1M-4A and they appear to have the sequential serial numbers 990806401001 and 002. It is the Contractor's responsibility to verify actual equipment needs and replace these units with an appropriate equivalent.



MODEL NO. D11101M-41  
 SERIAL NO. 991306404802  
 FACTORY CHARGE 222 SYSTEM NO. 1 LBS. 07  
 10.5 0  
 SYSTEM NO. 2 0 0  
 SYSTEM NO. 3 0 0  
 MAX DESIGN PRESS (PSIG) 50 LOW SIDE 300 HIGH SIDE  
 COMPRESSOR 1 VOLTS RLA LRA PHASE  
 460 6.5 44 1  
 COMPRESSOR 2 0 0.0 0 0  
 COMPRESSOR 3 0 0.0 0 0  
 OUTDOOR FAN (EA) VOLTS FLA LRA PHASE QTY  
 460 1.8 0 1  
 OUTDOOR FAN (EB) 460 1.0 0 0 0  
 INDOOR FAN (EA) 460 1.4 0.75 3 1  
 EXHAUST FAN (EA) 460 1.4 0.5 3 1  
 WHEEL (EA) 460 1.2 0.5 3  
 ELECTRIC HEAT 0.1W V 0 PH 0.1 AMP  
 GAS HEAD 0 BTU/HOUR  
 MIN SPACING TO COMBUSTIBLE MATERIAL 1 INCHES  
 MINIMUM CIRCUIT AMPACITY 13.9  
 MAX FUSE OR CKT BKR TYPE PER NEC 20  
 ALLOWABLE VOLTAGE 50V MAX 41W NET 60 HP  
 SUITABLE FOR OUTDOOR USE

DATE OF MANUFACTURE 00/99 REV A

**ADDISON PRODUCTS COMPANY**  
**DIVISION OF HEAT CONTROLLER INC.**  
**ORLANDO, FLORIDA USA 32810**

0526N-00





## **2. SCOPE OF SERVICES**

### **2.1 General Conditions, Site Protection and Safety Requirements**

Contractor shall:

- 2.1.1 Secure, coordinate and pay for any necessary permits (including road closure if necessary) and inspections.
- 2.1.2 Block off work areas from vehicular and pedestrian traffic while conducting work.
- 2.1.3 Remove temporary signs and barriers as soon as work is completed.
- 2.1.4 Remove all debris and trash generated in performing the work under this contract from the site and dispose of properly in a manner consistent with all applicable Local, State and Federal laws. Contractor shall not use County dumpsters for disposal.
- 2.1.5 Existing facilities, including but not limited to grounds, structures, vehicles, utilities, landscaping, fixtures, furnishings, equipment and surfaces and building systems in the vicinity of Contractor's work shall be protected by Contractor. Any damage to existing facilities shall be reported to the County on the day such damage occurs. Contractor shall promptly repair damage with like materials when ordered to do so by the County at Contractor's expense. All repairs of damage to existing facilities shall be made to the satisfaction of the County. Failure to repair damage shall be just cause for withholding payment for work, which becomes due.
- 2.1.6 Any damage of public or private property caused by the Contractor's operations shall be resolved with the property owner within ten days after damage occurs to the satisfaction of the County. The Contractor shall inform the County of any damage caused by the Contractor's operation on the day such damage occurs. Should the damage not be rectified within the time frame agreed upon or to the satisfaction of the County, the County reserves the right to repair or replace that which was damaged or assess the Contractor such cost as may be reasonable and related to damage caused by the Contractor.
- 2.1.7 Contractor shall arrange for work to be done during regular business hours which are 8:00 am to 5:00 pm, Monday through Friday excluding holidays unless otherwise approved by the County.
- 2.1.8 On scheduled days of installation, a representative from Facilities Management will meet the Contractor at a designated location to provide access to the facility. The Facilities Management representative will remain available during installation as needed to provide assistance.

## 2.2 Equipment Procurement, Delivery and Installation

Upon contract award, Contractor shall:

- 2.2.1 Procure the specified equipment with all necessary options and accessories to integrate it into the existing HVAC system and controls (controls to be supplied by Grand Valley Automation - GVA).

*It is Contractor's responsibility to have verified during the mandatory site visit – the specifications and dimensions for the new equipment, amount of space available at each location to install the new equipment, and what accessories are required to integrate the new units and have accounted for any special conditions in its bid.*

*It is also Contractor's responsibility to have discussed equipment controls with GVA to ensure HVAC equipment is quoted and ordered with any necessary options and/or accessories that are needed to integrate each unit into the building's automated control system.*

*Lastly, it is also Contractor's responsibility to have discussed equipment controls with GVA to have a clear understanding of the components and services that each party will be providing to integrate the equipment controls.*

- 2.2.2 Secure and coordinate all aspects of crane service (assuming it is required) for the removal of both existing air handlers from the roof and the placement of both new air handlers on the roof. Contractor shall coordinate with the crane service provider and the County, and shall have necessary personnel on-site during unit removal and placement to manage the process.

*It is the Contractor's responsibility to have verified during the mandatory site visit - the site conditions at the building and to determine any necessary crane service requirements and have accounted for any special conditions in its bid.*

*Contractor shall coordinate with the City of Allegan if traffic flow along any streets will be impacted by crane service and Contractor shall ensure all necessary traffic and pedestrian control barriers, fencing and personnel are provided and included in its bid.*

*Unless noted in Contractor's proposal, new air handler units shall not be delivered and stored on County premises prior to installation and existing air handler units shall not be stored overnight on County premises pending removal and disposal.*

- 2.2.3 Coordinate equipment control disconnection and reconnection with Grand Valley Automation (GVA), the County's contractor for its building automation system.

*The digital controls for the new air handlers are to be replaced by GVA and are not to be included in this scope of services or Contractor's bid.*

- 2.2.4 Disconnect, remove and dispose of the existing HVAC equipment and any associated equipment that is no longer needed.

- 2.2.5 Install the new HVAC equipment and any equipment controls needed and not being provided by GVA.
- 2.2.6 Contractor is responsible for furnishing and installing a curb and flashing for the new HVAC units and making necessary roof patching and sealing around the installations.
- 2.2.7 Reconnect all ducts, vents, gas, electricity, controls (with assistance / in coordination with GVA), etc. to integrate the new equipment to render it fully functional.
- 2.2.8 Conduct a system start-up test to demonstrate and confirm correct installation and proper functioning of the new equipment. Testing shall be conducted with a Facilities Management representative present to verify proper functioning necessary for system for acceptance.

### **2.3 Scheduling**

- 2.3.1 All work is to be scheduled at least five business days in advance and coordinated through:

Carl Chapman  
Director of Facilities Management  
(269) 673-0207  
[cchapman@allegancounty.org](mailto:cchapman@allegancounty.org)

## Attachment B – Cost Proposal

### **3. COST PROPOSAL**

Unless otherwise noted by the Contractor and agreed to in writing by the County, all costs associated with the scope of work outlined in Attachment A are itemized in this Cost Proposal taking the following into consideration:

#### **3.1 Taxes**

The County is exempt from Federal Excise Tax and Michigan Sales Tax. Neither shall be added to the costs presented in this cost proposal or added by the Contractor to any invoice billing the County.

#### **3.2 Variances**

Where a variance exists or other discrepancies are noted between prices on this Cost Proposal Form and prices specified elsewhere in Contractor's proposal, the pricing shown on this Cost Proposal Form shall prevail.

#### **3.3 Quality**

All materials used for the manufacture or construction of any items to be provided under this Agreement shall be new. Pricing shall be for items in new condition representing the latest model of the best quality and highest grade of workmanship, unless the option to include supplemental proposals for pre-owned, or demonstrator equipment or materials has been specified by the County.

#### **3.4 Delivery Provisions**

All goods procured through this Agreement by the Contractor for the County shall be delivered by the Contractor under the terms Free on Board 113 Chestnut St., Allegan, Michigan. Title and risk of loss to the purchased goods does not pass to the County until the items are received by County / installed and accepted as functioning by the County.

#### **3.5 Invoices:**

All invoices must reference contract #1130-22A, itemize services rendered and be sent by email to [projects@allegancounty.org](mailto:projects@allegancounty.org) or mailed to:

Project Management - Accounts Payable  
Allegan County Information Services  
3283 122<sup>nd</sup> Avenue  
Allegan, MI 49010

**3.6 Cost Table**

Once completed, the following cost shall establish the pricing to be charged unless otherwise negotiated in writing.

Item	Total Cost
Equipment (Two Air Handlers)	\$ 81,000.00
Other Materials and Supplies	\$ 1,000.00
Total Labor	\$ 9,500.00
Roofing	\$ 5,500.00
Crane Service	\$ 4,000.00
Performance & Payment Bond	\$ 784.00
Other Costs (specify): TAB, PERMIT, ELECTRICAL, CEILINGS, CLEANUP	\$ 7,891.00
<b>Total Cost (Not to Exceed)</b>	<b>\$ 109,675.00</b>

**3.7 Cost Proposal Certification**

Bid is firm for 60 days (60 days minimum) and signed by the following individual authorized to certify pricing and enter into agreements.

Contractor Name:	Kalamazoo Mechanical, Inc.
Contractor Address:	5507 E Cork St
City, State, Zip:	Kalamazoo, MI 49048
Representative Name (Print):	Carson Cornish
Representative Signature:	
Representative Title:	President

# Attachment C - Contractor's Proposal



5507 EAST CORK STREET • KALAMAZOO, MI 49048 • P 269-343-5351 • KALAMAZOOMECHEMICAL.COM

March 22, 2022

Allegan County Facilities Management  
Attn: Kristin VanAtter  
3283 122nd Avenue  
Allegan, MI 49010

RE: Allegan County Roof-top Air Handler Replacement (RFP #1130-22A)

## 8.1 Company Information

- 8.1.1 Legal Name: Kalamazoo Mechanical, Inc. – Year Incorporated: 1985 – Total Employees: 29
- 8.1.2 Office Location: 5507 E. Cork Street, Kalamazoo, MI 49048
- 8.1.3 Carson Cornish, President – Phone: 269.343.5351 – Email: Carson@kalamazoomechanical.com
- 8.1.4 Disciplinary or Legal Action in past five years - None

## 8.2 Company Experience

8.2.1 List three commercial clients for whom our firm has installed similar equipment:

Name	Work Performed	Contact	Phone #	Email
Bronson Properties	Replace Air Handlers, RTUs, etc.	Tara Long	269.341.8198	LongT@bronsonhg.com
Owen-Ames-Kimball Co.	Replace Unit Ventilators, A/C Units, Hydronic Piping	Bill Cox	269.366.6427	BillC@oakmi.com
The CSM Group	Replace RTUs, Unit Ventilators, and Ductwork	Bruce Zache	269.366.7313	Bruce.Zache@csmgroup.com

## 8.3 Equipment

8.3.1 Equipment Description: Manufacturer, model, etc. and include spec sheet. AAON RQ005.

8.3.2 Manufacture Warranty on Equipment: 1<sup>ST</sup> YEAR ENTIRE PARTS, 5-YEAR COMPRESSOR.

## 8.4 Delivery and Installation

8.4.1 Note whether crane service will be needed and the company your firm expects to use to provide it. YES, BUCKS CRANE.

8.4.2 Confirm that your firm will coordinate and manage all aspects of crane service including on-site operations. WE CONFIRM THIS STATEMENT.

8.4.3 Note whether any disruption is expected to County operations during crane service. PARKING LOT MAY NEED TO BE CLOSED FOR 2-3 HOURS. SOME OCCUPANTS MAY NEED TO VACATE DURING THIS TIME AS WELL.

8.4.4 Confirm you have discussed the project with Grand Valley Automation and understand what each party is responsible for. WE CONFIRM THIS STATEMENT.

8.4.5 Note whether you will be using a roofing subcontractor and who it is. The County doesn't have a required roofing contractor that bidders must use, but Excel Roofing of 966 Valley Ave NW, Grand Rapids, MI 49504 has been maintaining the Courthouse roof for the County and would be the County's preferred roofing contractor. Please contact Juan Munoz at (616) 446-5430 or [juan@excelroofs.com](mailto:juan@excelroofs.com). YES, WE PLAN TO WORK WITH EXCELL ROOFING TO FLASH CURBS.

8.4.6 Attach a schematic of the proposed curb detail. ATTACHED.

8.4.7 If your firm intends to use any additional subcontractors not already mentioned in the proposal to assist with this project, name the subcontractor and describe the work to be performed. AIR ECONOMICS: AIR BALANCING.

8.4.8 Note any proposed variances from the County's scope of work. NO NEW STRUCTURAL STEEL IS ANTICIPATED, OR INCLUDED IN THIS PRICING.

8.4.9 Describe the standard labor warranty on the equipment being proposed including any limitations or exclusions. 1-YEAR LABOR WARRANTY. SEE STANDARD WARRANTY LANGUAGE.

## **8.5 Scheduling and Timeline**

8.5.1 State the approximate number of days of on-site work being anticipated to complete the replacement. TEN (10) DAYS.

8.5.2 State the current anticipated lead time for procuring both units (assuming they are not in stock and need to be ordered and manufactured). CURRENTLY, TWELVE WEEK LEAD TIME FOR EQUIPMENT.

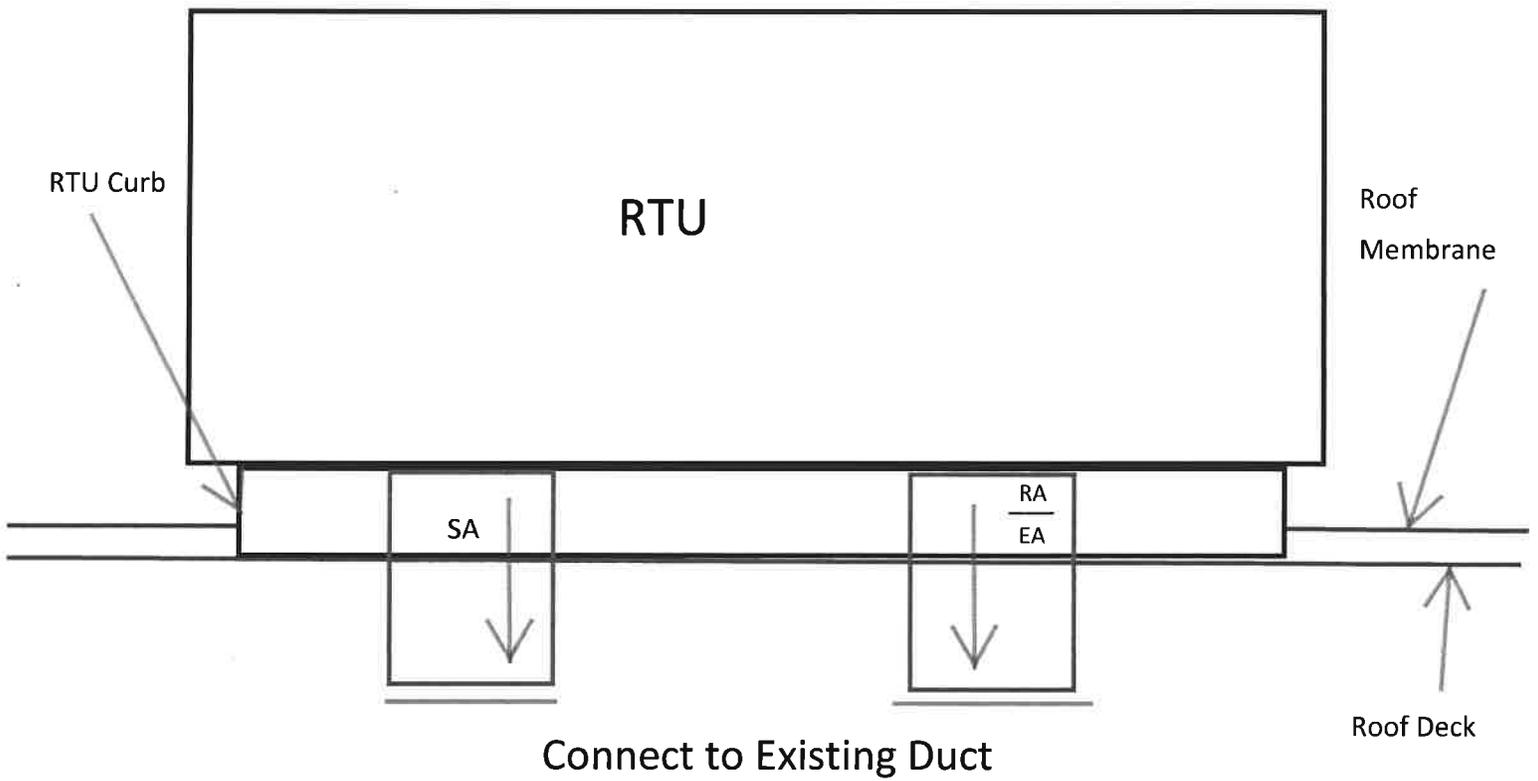
8.5.3 As both air handlers are currently functioning, the County has some flexibility in scheduling the work and would prioritize any cost savings over an aggressive replacement schedule but would like the project completed by 9/30/2022. Considering an anticipated award notification by 5/2/2022, state when your firm would anticipate completion of this project given a flexible scheduling ability. ANTICIPATED FINAL COMPLETION BY 10/30/2022. POSSIBLE EARLY COMPLETION BY 9/30/2022 – DETAILED SCHEDULE CAN BE DISCUSSED AFTER AWARD. CURRENT LEAD TIME FROM DATE OF ORDER IS 12 WEEKS.

## **8.6 Contract Agreement and Costs**

8.6.1 Review and sign the Courthouse Roof-top Air Handler Replacement Services Agreement containing the County's standard terms and conditions.

8.6.2 To ensure an accurate cost proposal, please contact Tony Savickas (616) 581-0880, the County's contact person at Grand Valley Automation (GVA) to discuss any equipment configurations, options or







# RN/RQ Series



## PACKAGED ROOFTOP UNITS, AIR-SOURCE HEAT PUMPS, WATER-SOURCE / GEOTHERMAL HEAT PUMPS, & OUTDOOR AIR HANDLING UNITS



RQ Series



RN Series

### Features:

- Air-cooled or water-cooled condenser, with unit capacities from 2-140 tons
- Available as a chilled water or non-compressorized DX air handling unit, from 800-49,100 cfm
- Air-source, water-source, and geothermal heat pump options
- R-410A scroll compressors - one, two, or four compressor systems
- Variable capacity and variable speed scroll compressors for load matching cooling and improved part load efficiency
- Electric, gas, steam, or hot water heating
- AMCA certified and labeled low leakage economizer dampers
- Direct drive backward curved plenum fans
- Power exhaust and power return options
- Factory installed AAONAIRE® total and sensible energy recovery wheels
- Double wall rigid polyurethane foam panel construction with a minimum R-value of 13
- Service access doors with full length stainless steel piano hinges and lockable handles
- Double sloped stainless steel drain pans

Application Flexibility  
Minimizes Installation Time and Reduces Cost

○ Makeup Air Applications  
Up to 100% Outside Air

○ Dehumidification and  
Filtration Capabilities

○ Large Tonnage Rooftops  
with Small Footprints

○ Factory Installed or Customer  
Specific Controls Options

Allegan County Contract #1130-22A Courthouse Air Handler Replacement

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# RN/RQ Series

## Rooftop/Air Handlers

*AAON RN and RQ Series rooftop units continue to lead the packaged rooftop equipment industry in performance and serviceability. Double wall rigid polyurethane foam insulated cabinet construction and direct drive backward curved plenum fans allow RN and RQ Series units to have quiet, energy efficient airflow with high static pressure capabilities. RN and RQ Series units also feature lockable hinged doors which provide service access to all sections of the unit.*

### Superior Features

- Cabinet construction consists of rigid polyurethane foam panels with G90 galvanized steel on both sides and a closed cell polyurethane foam interior core. The inner wall protects the insulation from moisture damage, prevents microbial growth, and is easy to clean.
- Two inch rigid polyurethane foam insulated panels have a thermal resistance R-value of 13 or greater, which exceeds the R-value of a cabinet with four inch thick fiberglass construction. They also make the cabinet more rigid and resistant to damage and provide increased sound dampening.
- Access doors with full length stainless steel piano hinges and quarter turn, lockable handles provide improved reliability over single point hinges and make the unit easily serviceable.
- Corrosion resistant polyurethane paint exceeds a 2,500 hour salt spray test.
- AMCA Certified low leakage gear driven economizer dampers are standard on RN and RQ Series rooftop units. AAON low leakage dampers meet the California Title 24 damper air leakage requirement. Optional Economizer Fault Detection and Diagnostics is also available with the low leakage dampers to meet the California Title 24 requirements.
- Compressors and unit controls are contained within a compartment isolated from the air stream for ease of service and increased sound dampening.
- Direct drive backward curved plenum fans provide improved energy efficiency and reduced maintenance versus belt driven fans.
- Double sloped stainless steel drain pans eliminate standing water which can support microbial growth and stainless steel construction prevents corrosion that could lead to water leaks and contaminants in the air stream.
- Run test report, wiring diagram, and Installation, Operation, and Maintenance manual with startup form provided in control access compartment of every unit.
- 5 year non-prorated compressor warranty, 15 year non-prorated aluminized steel gas heat exchanger warranty, and 25 year non-prorated



► 55-140 ton RN Series Packaged Rooftop Unit

# Feature Flexibility

## Premier Options

- Variable capacity and variable speed R-410A scroll compressors for load matching cooling and improved part load efficiency.
- Air-source, water-source, and geothermal heat pump options for energy efficient heating.
- Factory installed total or sensible AAONAIRE energy recovery wheels.
- Humidity control options including: High Capacity Coils, Modulating Hot Gas Reheat Humidity Control, Return Air Bypass, and Mixed Air Bypass.
- Chilled water cooling coils allow unit to tie into new or existing chilled water system.
- Hot water or steam heating coils allow unit to tie into new or existing boiler system.
- Polymer e-coated coils are available to extend the life of the coils and protect them in corrosive environments.
- Power exhaust and power return fans with economizer for application flexibility.
- VFD controlled and ECM driven supply, exhaust, and return fans for precise airflow control, building pressure control, and reduced power consumption.
- Modulating gas heat with stainless steel heat exchanger provides greater fuel efficiency, longer heater life, and improved occupancy comfort.
- SCR (Silicon Controlled Rectifier) electric heat control for reduced power consumption, longer heater life, and improved occupant comfort.
- Multiple high efficiency air filtration options.
- Unit controls options including factory installed customer provided controls.
- VFD controlled or ECM driven condenser fans for energy savings and refrigerant head pressure control.



- ▲ Cutaway of double wall rigid polyurethane foam insulated cabinet panel increases thermal resistance, reduces air leakage, and attenuates radiated sound. Thermal break reduces heat transfer between interior and exterior metal cabinet walls.

- ▶ Standard AMCA Certified AAON Low Leakage Damper

## Dehumidification

AAON offers many humidity control options. High capacity cooling coils are available which allow for more dehumidification versus standard cooling coils. Return air bypass and mixed air bypass are available on RN Series units for single coil humidity control. Modulating hot gas reheat humidity control is available to provide energy efficient dehumidification, even with low sensible heat loads, without the temperature swings common with on/off reheat systems.

## High Ambient Operation

With robust design and construction, AAON equipment can be rated and operate to over 125°F (52°C) ambient.

## R-13 Double Wall Rigid Polyurethane Foam Panel Construction

AAON is setting a new standard for performance with double wall construction using closed cell polyurethane foam insulation. Not only does it have several times the insulating R-value, it creates a far more rigid and stronger assembly with less air leakage than fiberglass insulated panels.

## AMCA Certified and Labeled Low Leakage Dampers

Gear driven economizer eliminates the excess play and bind that occurs with linkage type economizers. Standard AMCA Certified and Labeled AAON Low Leakage Dampers meet the California Title 24 damper air leakage requirement.





## Rooftop Units (6-140 tons)

RN Model	Cabinet	Configuration	Air-Cooled IEER	Air-Cooled EER	Water-Cooled IEER	Nominal cfm	Width*	Height*	Length*
RN-006	A	Vertical	Up to 14.8	Up to 14.0	NA	2,000	79	44	82
RN-007						2,500			
RN-008						2,650			
RN-010						3,000			
RN-009						3,400			
RN-011	B	Vertical	Up to 20.5	Up to 13.9	NA	3,600	96	50	88
RN-013						3,800			
RN-015						4,200			
RN-014						5,200			
RN-016						6,400			
RN-018	C	Vertical	Up to 20.2	Up to 13.6	NA	6,800	101	60	110
RN-020						7,000			
RN-025						9,000			
RN-030						10,500			
RN-026						10,000			
RN-031	12,400								
RN-040	D	Vertical	Up to 12.0	Up to 13.8	Up to 16.5	16,000	100	102	155
RN-050						20,000			
RN-060						23,000			
RN-070						25,000			
RN-055						15,000			
RN-065	17,000	241							
RN-075	18,000								
RN-090	E	Vertical	Up to 17.5	Up to 12.1	Up to 15.2	22,000	142	105	303
RN-105						24,000			
RN-120						29,500			
RN-130						32,000			
RN-140						33,000			
RNA-011	C	Horizontal	Up to 13.8	Up to 12.7	NA	3,600	101	60	138
RNA-013						3,800			
RNA-016						6,400			
RNA-018						6,800			
RNA-020						7,000			
RNA-025						9,000			
RNA-030						10,500			
						Up to 16.0			

\*Dimensions vary depending on options selected. • All dimensions are in inches • Design cfm may be 30-50% greater or less than nominal cfm.

# Wide Range of Capacities



◀ 6-30 ton RN Series Air-Cooled Condenser Packaged Rooftop Unit



▶ 2-6 ton RQ Series Air-Cooled Condenser Rooftop Unit

▶ Dimpled heat exchanger provides energy efficient heat transfer and has no internal turbulator, which can corrode over time.



## Rooftop Units (2-6 tons)

RQ Model	Cabinet	Air-Cooled SEER	Air-Cooled EER	Nominal cfm	Width*	Height*	Length*
RQ-002	Vertical or Horizontal	Up to 20.7	Up to 14.8	850	44	51	82
RQ-003				1,050			
RQ-004				1,400			
RQ-005				1,750			
RQ-006				1,800			

\*Dimensions vary depending on options selected. • All dimensions are in inches • Design cfm may be 30-50% greater or less than nominal cfm.

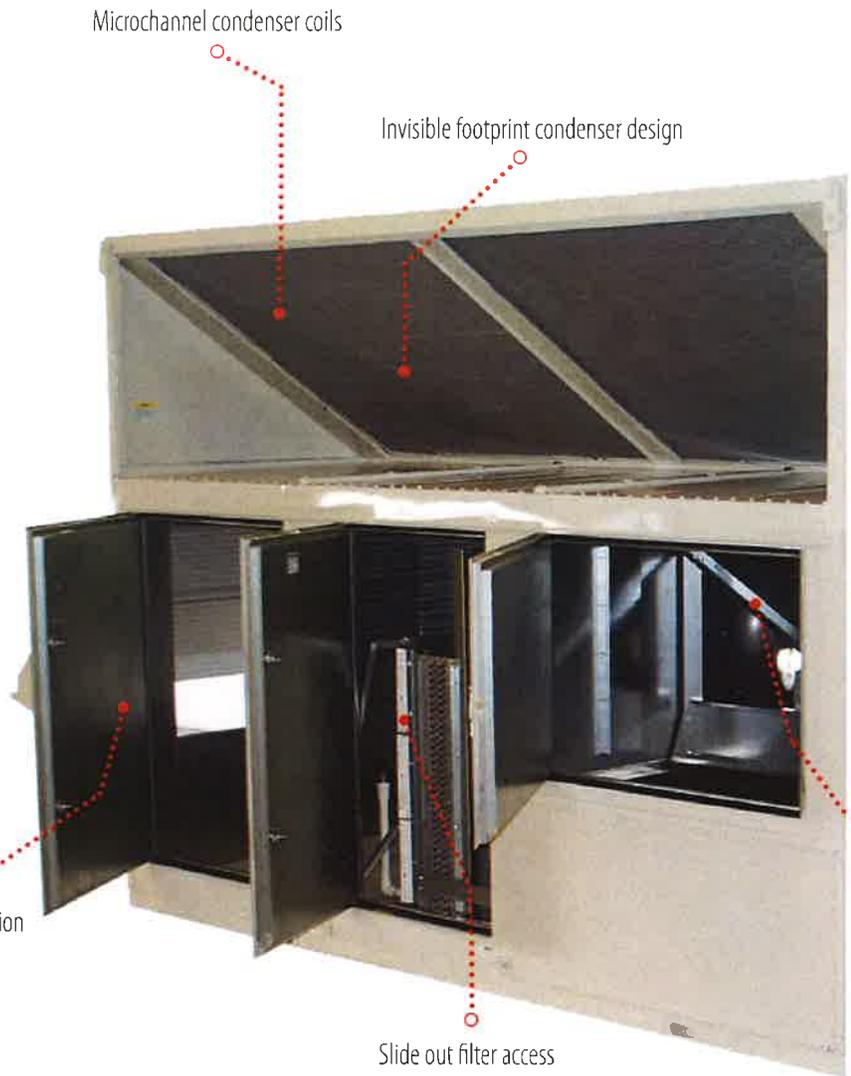
# Ease of Service

## Ease of Service

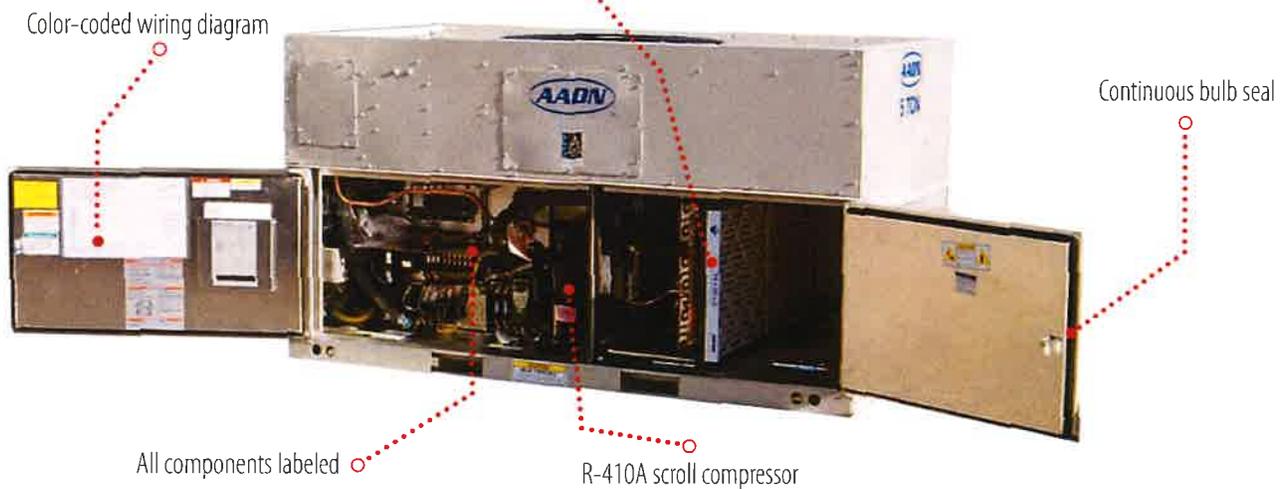
AAON equipment is designed from concept to completion with minimum service time as a primary factor. Readily accessible compressors and control components allow timely evaluation of service issues without delay. Color-coded wiring diagrams allow fast connection identification and analysis and thus a reduction in down time and cost. Individual components and wires are also labeled for quick circuit evaluation. The result of this AAON standard procedure is low service cost and greater unit run time.

## Air Handling Unit Option

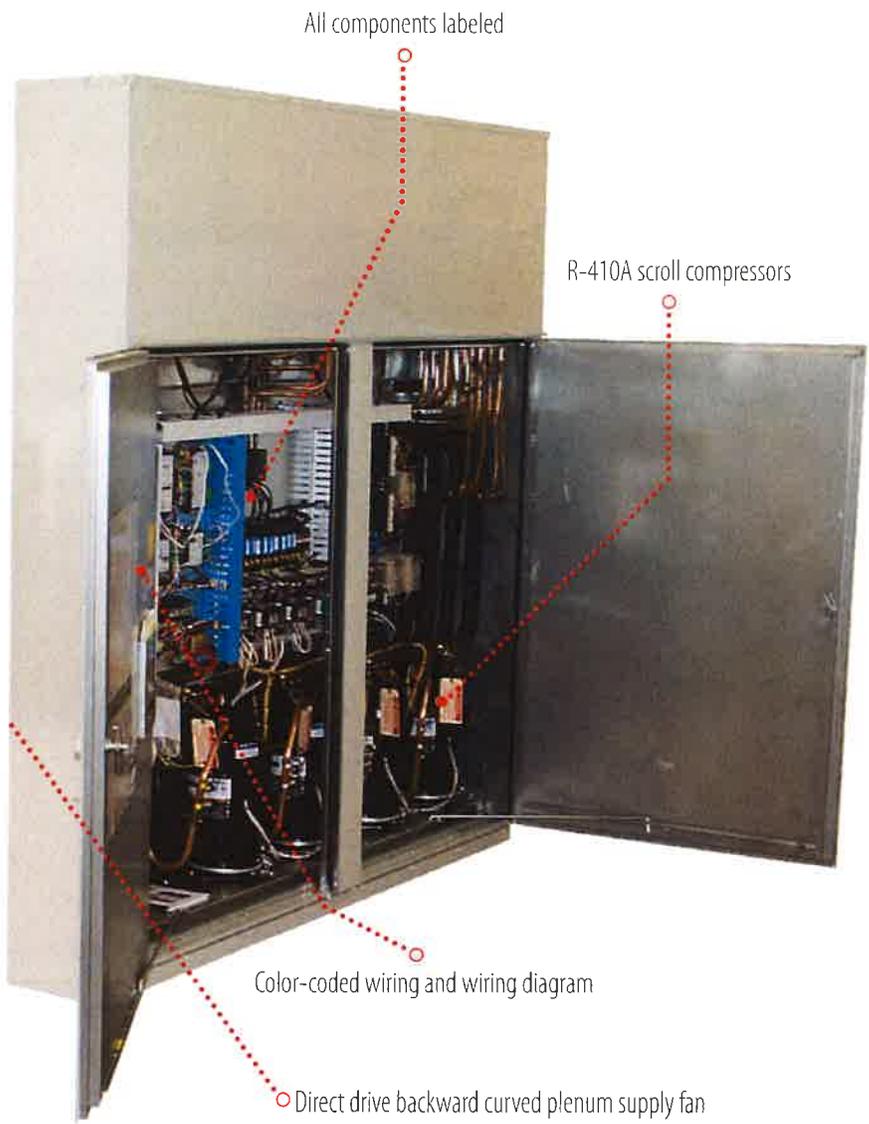
AAON RN and RQ Series outdoor air handling units provide a hydronic cooling and heating option. Gas, electric, steam, and hot water heating are available on an RN and RQ Series air handling units. Cabinet construction is similar to the packaged rooftop units with easily accessible coil connections.



## 2-6 ton RQ Series



## 26-70 ton RN Series Unit



All components labeled

R-410A scroll compressors

Color-coded wiring and wiring diagram

Direct drive backward curved plenum supply fan

## Makeup Air Capability

AAON RN and RQ Series units have makeup air capability and can be specified with up to 100% outside air. AAONAIRE energy recovery wheels are available on makeup air units to increase the unit's energy efficiency. High capacity cooling coils are available to handle the higher latent load of outside air. Modulating gas heat and SCR electric heat are available to provide energy efficient supply air temperature heating. Modulating humidity control is available to provide dehumidification without over cooling when the outside air humidity is above setpoint. Variable capacity scroll compressors are available to provide energy efficient supply air temperature control.

## AHRI Certified High Efficiency

The RN Series is available with an IEER rating up to 20.5, while the RQ Series is available with a SEER rating up to 20.7.



◀ 20.7 SEER 3 ton RQ Series Unit



20.2 IEER 14 ton ▶  
RN Series Unit



▲ 11, 13, & 16-30 ton RN Series Horizontal Configuration Unit with Factory Provided Final Filtration

## Horizontal Configuration

Horizontal configuration is available for RQ Series units (2-6 tons) and RN Series units (11, 13, 16-30 tons). This configuration provides a solution for applications that require horizontal ductwork; it does not require special horizontal supply/return curbs. All of the premier features and options currently available for the RQ and RN units are available with this configuration. **High efficiency final filtration configuration is available on the RN Series units for health care and other applications that require it.**

# High Efficiency Options



- ◀ Electric Preheat is available with all AAO energy recovery options for frost prevention.

## Air-Source Heat Pump Option

Energy efficient cooling and heating can be achieved by reversing the unit's refrigeration circuits. This allows the indoor coil to be used as either a cooling coil or heating coil. This is a more efficient method of heating than electric heating because a heat pump can reject more heat to the space per the amount of energy used. Thus, the operating costs of heat pump heating are always less than the operating costs of electric heating. Heat pump heating can also a more efficient method of heating than gas heating and, depending on the cost of electricity and natural gas or propane, heat pump heating can have less operating costs than gas heating.

## Compressor Capacity Control



- ◀ VFD controlled variable speed scroll compressors provide load matching cooling and improve part load efficiency.

RN and RQ Series units have a variety of compressor options available for load matching cooling, providing both high full load and part load efficiency. Options include staged, two-step, 10-100% variable capacity, and variable speed compressors. Two-stage compressors provide a cost effective additional cooling capacity stage that improves part load efficiency. Units with 10-100% variable capacity scroll compressors are simple to control and the compressors have a wide range of capacity modulation. Variable speed compressors use compressor motor speed control to reduce capacity, save energy, and reduce sound.

- ▶ Variable compressors allow for a wide range of capacity control (10-100%) for improved part load efficiency with simple controls.



- ◀ Two-Step Scroll Compressors provide the simplicity of staged capacity control with high part load efficiency



**Two-Step Compressors** improve part load efficiency with simple staged control. Unit IEER can be optimized without requiring complex refrigeration and DDC controls, reducing operating costs and maintenance costs. Two-step compressors are available in the RQ and RN Series.

## Variable Speed Compressors

Variable speed compressors provide load matching cooling and the highest efficiency ratings when operating at part load conditions. Refrigeration controls are built-in to the AAON equipment to protect the compressors and optimize the efficiency for VAV, Single Zone VAV and Makeup Air applications. Variable speed compressors are quiet in operation, especially at reduced capacity.



▲ 2-6 ton RQ Series with inverter driven variable speed compressors for load matching cooling and improved part load efficiency

## Water-Source/Geothermal Heat Pump Option

Energy efficient cooling and heating can be achieved by reversing the flow of the unit's refrigeration circuits. This allows the indoor coil to be used as either a cooling coil or heating coil. Geothermal heat pumps take advantage of the relatively constant temperature of the earth below ground level to transfer heat to or from the building. Depending on latitude, ground temperatures range from 45°F to 75°F. This ground temperature is warmer than the air above it during the winter and cooler than the air in the summer.



▶ 2-230 ton RN Series Water-Source/Geothermal Heat Pump Packaged Rooftop Unit





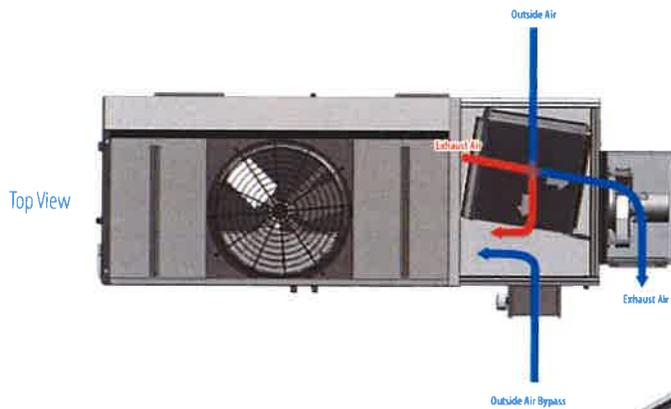
Electric Preheat is available with all AAON energy recovery options for frost prevention. ▼



### Cross-Flow Fixed Plate Heat Exchanger Energy Recovery

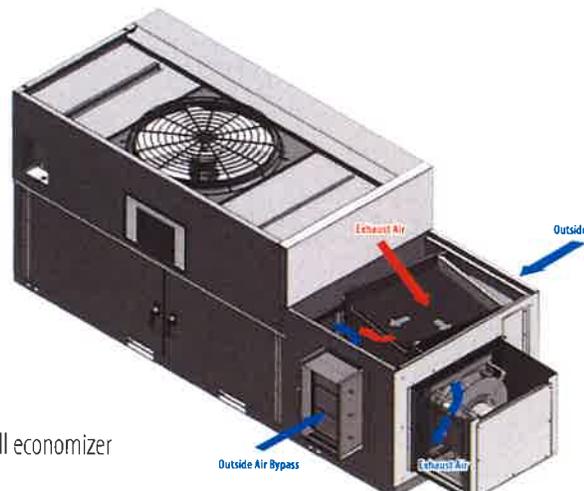
Cross-flow fixed plate heat exchangers save heating and cooling dollars by pre-cooling, pre-heating, and humidifying the ventilation outside air (depending on ambient conditions). Cross-flow fixed plate heat exchangers have no moving parts and can also improve indoor air quality by eliminating cross contamination. Sensible only or enthalpy fixed plate heat exchangers are available to meet application requirements. Fixed plate heat exchangers are available in the RQ Series (2-6 tons).

▲ 2-6 ton RQ Series with Cross-Flow Fixed Plate Heat Exchanger Energy Recovery



◀ Cross-Flow Fixed Plate Energy Recovery Airflow

▶ Cross-Flow Fixed Plate Energy Recovery Airflow



**Outside Air Bypass** allows for higher ventilation airflow and full economizer operation. Damper can also be used for defrosting the heat exchanger.

# Energy Saving Configurations



- ▲ Factory installed AAONAIRE energy recovery wheel saves heating and cooling energy. Slide-out wheel allows for quick and easy maintenance.

## AAONAIRE® Energy Recovery Wheel

The energy recovery wheel option can be provided in all model sizes allowing reduced equipment size and operating cost savings while pre-conditioning the outside air being introduced into the conditioned space. Sensible only or enthalpy wheels are available to meet the humidity control requirement of the system. Segmented polymer wheels allow for easy cleaning. Aluminum wheels are also available for application that require aluminum construction. Bypass dampers can be selected for full economizer operation.



### *AHRI Certified Performance*

All AAON energy recovery options feature AHRI Certified heat exchangers.



- ◀ Direct Drive Backward Curved Plenum Fans are more energy efficient, quieter, and require less maintenance than belt driven fans. VFD controlled and ECM driven supply, exhaust, and return fans are available for precise air flow control, building pressure control, and reduced power consumption.

- ▶ Microchannel condenser coils are durable, more efficient, lighter, and use less refrigerant than traditional fin and tube condenser coils. These coils are standard on all air-cooled condenser RN/RQ Series rooftop units.





# AAON Environmentally Friendly HVAC Product Family

## ROOFTOP UNITS (2-240 tons)



## WATER-SOURCE HEAT PUMPS (15-230 tons)



## PACKAGED OUTDOOR MECHANICAL ROOMS (4-540 tons)



## INDOOR AIR HANDLING UNITS (800 - 100,000 + cfm)



## SELF-CONTAINED UNITS (3-70 tons)



## CONDENSING UNITS (2-230 tons)



## OUTDOOR AIR HANDLING UNITS (800 - 100,000 + cfm)



## COILS BOOSTER, HYDRONIC, & DX



## CONTROLS (WSHP, RTO, SELF-CONTAINED, & SPLIT SYSTEM)



## HEATING AND COOLING FOR...

- Auditoriums
- Convenience Stores
- Health Clubs
- Health Care Facilities
- Homes
- Lodgings
- Manufacturing
- Museums & Libraries
- Natatoriums
- Office Buildings
- Restaurants
- Retail Store
- Schools
- Supermarkets



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