

**WICHITA STATE UNIVERSITY
REQUEST FOR PROPOSAL (RFP)**

RFP Number: B0001838

RFP Issuance Date: Wednesday, November 22nd, 2023

RFP Question Deadline: Monday, December 4th, 2023

RFP Closing Date: Wednesday, December 13th, 2023 at 3:00 PM Central

Procurement Officer: Jory Boyd
316-978-5828
purchasing.office@wichita.edu
Wichita State University
Office of Purchasing
1845 Fairmount, Campus Box 38
Wichita, KS 67260-0038

Item / Service: Air-Cooled, Rotary-Screw Water Chillers

Agency: **Wichita State University (“WSU”) National Institute Aviation Research (NIAR)**

Period of Contract: N/A

Guarantee: No Monetary Guarantee Required

RFP Scope: WSU is issuing this Request for Proposal (“RFP”) to solicit proposals (“Proposals”) from qualified Bidders to provide Air-Cooled, Rotary-Screw Water Chillers

Procurement Type: Sealed Bid (See Section 2.1)

READ THIS RFP CAREFULLY AND CHECK FOR UPDATES

This RFP (Number B0001838) was posted to WSU Office of Purchasing Internet website and may be downloaded at: www.wichita.edu/purchasing.

It shall be the Bidder's responsibility to monitor this website on a regular basis for any changes or addenda.

Please view the file posted on WSU Bid Solicitations Page: https://www.wichita.edu/services/purchasing/Bid_Documents/BidDocuments.php, [***Boilerplate of Request for Quotation: Terms and Conditions/Bidding Instructions***](#) for a sample of WSU's standard terms and conditions to a Request for Quotation. Such terms and conditions are subject to change depending on the size, nature, and requirements of each project.

SECTION I
CONDITIONS TO BID

- 1.1. Basic Requirements.** Bidders must be a registered business in good standing and authorized to do business in the State of Kansas. Bidders must provide a certificate of good standing on request. Failure to provide proof of registration and/or a certificate of good standing may result in delay or disqualification.
- 1.2. Bid Specifications.** Bidder must be able to meet all bid specifications set forth in this RFP as well as the minimum qualification and performance specifications set forth in **Attachment 5: Minimum Qualifications and Performance Specifications**.
- 1.3. Bid Proposal.** Bidder's Proposal must include fully completed RFP attachments, except that Bidder may complete **Attachment 7: Bidder Signature Sheet** by referencing separately attached documents or information.
- 1.4. Proposal Reference Number:** The RFP Number identified on the first page of this RFP (the "RFP Cover Page") has been assigned to this RFP and MUST be shown on all correspondence or other documents associated with this RFP, including any Proposal, and MUST be referred to in all verbal communications. Any communication or submission that does not reference the RFP Number may be rejected or not considered by WSU, in WSU's sole discretion.
- 1.5. Communication with WSU During RFP Process:** All inquiries, written or verbal, shall be directed only to the Procurement Officer at the contact information identified on the RFP Cover Page. No communication is to be had with any other WSU employee regarding this RFP except: (1) in the course of RFP negotiations; (2) during RFP site inspections or visits; (3) at the time of negotiation and signing of any contractual documents resulting from the Proposal; and (4) as otherwise specified in this RFP. Violations of this provision by Bidder or WSU personnel may result in the rejection of the Proposal.
- 1.6. Exceptions:** By submission of a Proposal, Bidder acknowledges and accepts all terms and conditions of the RFP unless clearly avowed and wholly documented in a separate section of the Technical Proposal that must be marked as: "Exceptions". **If the Bidder will not or cannot comply with any of the terms and conditions contained within this RFP, it will be the Bidder's responsibility to make specific mention of conflicting terms in a separate section of the Proposal as set forth above; otherwise, the terms and conditions of this document will prevail.**
- 1.7. No Bid Revisions:** No additional revisions to Proposals shall be made after the Closing Date unless requested by WSU.
- 1.8. Cost of Preparing Proposal:** The cost of developing and submitting the Proposal is entirely the responsibility of the Bidder. This includes costs incurred by Bidder to determine the nature of the engagement, Bidder's preparation and submission of their Proposal, the negotiation of the resulting Contract and/or terms and conditions, and other costs associated with this RFP or post-award efforts to enter into a Contract.
- 1.9. Contract Formation:** No contract shall be considered to have been entered into by WSU until all statutorily required signatures and certifications have been rendered, funds for the contract have been encumbered, and a Contract is deemed formed or executed as set forth in Section 3.3 (Award) of this RFP.

1.10. Proposals Open to the Public:

- 1.9.1. **Proposals as WSU Property:** All Proposals become the property of WSU upon submission. With few exceptions, the Kansas Open Records Act (K.S.A. 45-215, *et seq.*) requires all information contained in Proposals to become open for public review once a Contract is formed or all Proposals are rejected. Please note: Bidders will **NOT** be notified prior to release of any documents submitted in response to this RFP.
- 1.9.2. **Submission of Proprietary Information:** Trade secrets or proprietary information legally recognized as such and protected by law may be requested to be withheld if clearly labeled "Proprietary" on each individual page and provided as separate from the main Proposal. Pricing information is not considered proprietary and the Bidder's entire Proposal will not be considered proprietary. All information requested to be handled as "Proprietary" shall be submitted electronically, separately from the main Proposal, and clearly identified in the subject line of the email or DropBox submission. The Bidder shall provide detailed written documentation justifying why this material should be considered proprietary. WSU reserves the right to accept, amend, or deny such requests for maintaining information as proprietary in accordance with Kansas law. WSU does not guarantee protection of any information which is not submitted as required.

1.11. Federal, State, and Local Taxes - Governmental Entity: Unless otherwise specified, the Proposal price shall include all applicable federal, state, and local taxes. The successful Bidder is solely responsible for, and shall pay, all taxes lawfully imposed on it with respect to any product or service delivered in accordance with this RFP. WSU does not agree to reimburse or pay Bidder for any taxes assessed unless itemized in Bidder's bid. **WSU is exempt from state sales or use taxes and federal excise taxes for direct purchases made in Kansas. These taxes should not be included in the Bidder's price quotations.**

1.12. Tax Clearance: WSU strongly supports the State of Kansas Tax Clearance Process. Bidders submitting Proposals which exceed twenty-five thousand dollars (\$25,000.00) shall include a copy of a Tax Clearance Certification Form with their submittal as set forth in **Attachment 1: Tax Clearance Information**. Failure to provide this information may be cause for rejection of Bidder's Proposal.

1.13. Debarment of Bidders: Pursuant to K.S.A. 75-37,103, a Bidder may be debarred from consideration for award of contracts for a period of up to three (3) years for any of the reasons set forth in K.S.A. 75-37,103(b).

1.14. Immigration Reform: The Bidder agrees, if awarded a Contract, it shall comply with the Immigration and Reform Control Act of 1986 (IRCA; 8 C.F.R. Ch. 1, Sub Ch. B, Pt. 245a), as may be amended from time to time. As a condition of this Proposal, Bidder must certify, by completing and submitting **Attachment 2: Certification Regarding Immigration Reform & Control**, that Bidder has complied with all federal and state laws relating to immigration and reform.

1.15. Sexual Harassment and Retaliation Prohibited: In accordance with Kansas Executive Order 18-04, upon selection for a Contract, Bidder will be expected to receive and read of a copy of Executive Order 18-04, and, further, will agree to comply with all applicable provisions of this Executive Order, and all applicable state and federal laws, including but not limited to all laws prohibiting sexual harassment. WSU's policies prohibiting sexual harassment, discrimination, and retaliation provide for confidentiality and anonymous reporting. To view these policies or to make a report of sexual harassment, discrimination, or retaliation, please visit https://www.wichita.edu/about/policy/ch_03/ch3_06.php.

SECTION II

PROCUREMENT TYPE, PROCESS, SELECTION, AND AWARD

2.1. Procurement Type: WSU's competitive procurement types include: (1) Sealed Bid; (2) Negotiated Bid; and (3) Simplified Acquisitions. The type of procurement for this RFP is noted on the RFP Cover Page.

2.1.1. A Sealed Bid process includes: (1) a solicitation to bid; (2) publication of solicitation; (3) Proposals submitted under seal by Bidders and the Proposals are not opened or reviewed until the Closing Date; (4) Proposals are reviewed by WSU after the Closing Date and are generally evaluated without discussion without the Bidders; and (5) WSU awards the work to the "Responsible Bidder" whose Proposal is determined to be the most advantageous to WSU based on the neutral criteria established by WSU.

2.1.2. A Negotiated Bid is a more flexible bidding procedure that includes the receipt of Proposals and permits negotiations between WSU and Bidders. This process usually affords the Bidders an opportunity to revise their Proposal before award of a Contract to account for changes in scope of services or goods, timelines, or value-added changes to a project. "Negotiation" includes discussion, persuasion, and alteration of initial assumptions and positions, and give-and-take may apply to price, schedule, technical requirements, type of contract, or other terms of a proposed contract. "Best and final offers" are frequently required under the Negotiated Bid procurement.

2.1.3. Simplified Acquisitions is the most flexible form of procurement. Simplified Acquisitions can only occur if the procurement expenditure does not exceed the WSU established threshold. A Simplified Acquisition affords WSU the ability to call upon qualified vendors, contractors, and individuals for a quote and to negotiate a final agreement.

2.2. RFP Committee Selection: Final evaluation and selection will be made by designated representatives of WSU who have been designated as potentially utilizing the goods and/or services solicited in this RFP, referred to collectively as the Procurement Negotiation Committee (PNC).

2.3. Appearance Before Committee: The PNC may award to the low Bidder without question or negotiation. The PNC reserves the right to request information from Bidders as needed. If information is requested, the PNC is not required to request the information of all Bidders. The PNC may require, as a condition of bidding, that Bidders be required to appear before the PNC to explain the Bidder's understanding and approach to the RFP and/or to respond to questions from the PNC concerning the Proposal. Meetings with and appearances before the PNC are not subject to the Kansas Open Meetings Act. Bidders are prohibited from electronically recording these meetings.

2.4. Pre-Proposal On-Site Visit: No Pre-Proposal conference is scheduled for this RFP.

2.5. Pre-Proposal Questions: Questions requesting clarification of the RFP, if allowed, must be submitted in WRITING to the Procurement Officer by email prior the RFP Question Deadline indicated on the RFP Cover Page. Failure to notify the Procurement Officer of any conflicts or ambiguities in the RFP may result in items being resolved in the best interest of WSU. Any modification to this RFP as a result of Pre-Proposal Questions shall be made in writing by addendum and sent electronically to all Bidders who received the original request. Only written communications are binding.

2.6. Acceptance or Rejection: WSU reserves the right to accept or reject any or all Proposals or part of a Proposal; to waive any informalities or technicalities; clarify any ambiguities in this RFP; modify any criteria in this RFP; and unless otherwise specified, to accept any item in a Proposal.

2.7. Selection Criteria: Award shall be made in the best interest of WSU as determined by the PNC. WSU reserves the right to make an award based on any of the following factors and is not required to make the determination based solely on cost. Consideration will be given, but is not limited, to each of the following criteria:

1. Proposal cost [NOTE: Bidders are not to inflate prices in the initial Proposal as cost is a factor in determining who may receive an award or be invited to formal negotiations]



2. Any poor performance experienced by WSU with Bidder within the five (5) year period prior to Proposal.
3. Documented experience in providing the same products / services to third parties that are solicited in this RFP.
4. Product, service, and performance.
5. Equipment owned by Bidder to be used in providing requested services.
6. Qualified staff and/or subcontractors.
7. Adequacy and completeness of Proposal.
8. Compliance with the terms and conditions of the RFP; and
9. Response format as required by this RFP.
10. Bidder's anticipated ability to meet RFP requirements.

2.8 Proposal Disclosures:

2.8.1 In the event this is a Sealed Bid, at the time of closing, only the names of those who submitted Proposals shall be made public information. No price information will be released. Bid tab results will not be given to individuals over the telephone. Results may be obtained after contract finalization by obtaining a bid tabulation from the Office of Purchasing. Bid results can be obtained by sending a written request, referencing the Solicitation name and number to the following:

Wichita State University
Office of Purchasing
1845 Fairmount St, Campus Box 38
Wichita, KS 67260-0038
purchasing.office@wichita.edu

2.8.2 Copies of individual Proposals may be obtained under the Kansas Open Records Act (KORA), K.S.A. 45-215, *et seq.*, by submitting an Open Records Request at <https://openrecords.wichita.edu>. . Once your request is received, you will be provided an estimate of the cost. Upon receipt of that amount, the documents will be transmitted to you electronically, except that no information in any Proposal file shall be released until a Contract has been executed or all Proposals have been rejected.

2.9 Retention of Proposals: WSU reserves the right to destroy all Proposals if the RFP is withdrawn, the RFP does not result in an agreed Contract, or in accordance with Kansas law. Late Proposals will not be considered a valid Proposal and shall not be retained unless deemed necessary by WSU.

2.10 Award: An RFP is not considered to be "awarded" until a Contract is executed between WSU and the Contractor. A Contract may be formed upon a Bidder's formal acceptance of WSU's notice of award where it is made clear that no other contractual document shall be presented subsequently for signature.

2.11 Notice of Award: Generally, WSU will notify all Bidders of an award made contingent on a fully executed Contract between the Contractor and WSU. Only WSU is authorized to issue news releases relating to this RFP, its evaluation, award, and/or performance of the Contract, unless express written permission is obtained by WSU.

SECTION III

PROPOSAL INSTRUCTIONS AND REQUIREMENTS

Proposal Form & Certifications

Bidders must submit a Proposal that complies with the requirements set forth in **Attachment 3: Proposal Requirements**. Bidders can include additional information with their Proposal including, but not limited to, photos, renderings, plans, designs, quotes, and references with its Proposal except that all such additional information shall be properly marked to include the Bidder's name and RFP Number and shall make every effort to number all pages.

Bidders must fully complete and submit with its Proposal all certifications and forms attached or referenced in this RFP.

3.1 Preparation of Proposal:

3.1.1 A Proposal shall not be considered for award if the price in the Proposal was not arrived at independently and without collusion, consultation, communication, or agreement as to any matter related to price with any other Bidder, competitor, or public officer/employee.

3.2 Submission of Proposals:

3.2.1 Proposals must be sent / delivered so that it is received by WSU no later than the RFP Closing Date indicated on the RFP Cover Page.

3.2.2 WSU prefers that all Proposals be submitted electronically. When submitting electronically:

- One (1) electronic version of the Bidder's Proposal, including literature and other supporting documents, shall be sent by email or secured electronic DropBox to the Procurement Officer at the email on the RFP Cover Page.
- All emails or communications transmitting Proposals shall contain, for identification, the title, the RFP Number, and the Subject of the RFP.
- The Bidder shall email the Proposal attachments or may email instructions for downloading all Proposal documents by Dropbox.
- An Adobe PDF document type is preferred, but Microsoft Word, Excel, JPEG, and other formats will be accepted.
- Bidders will be contacted if additional information is needed.

3.2.3 Bidders who are unable to submit their Proposal electronically must deliver their Proposal by hand delivery to the Procurement Officer Address identified on the RFP Cover Page. Hand delivered Proposals must be in a sealed envelope, and clearly marked for delivery to the Office of Purchasing, **B0001838- Air-Cooled, Rotary-Screw Water Chillers**

3.2.4 Proposals received prior to the Closing Date shall be kept secured and sealed until closing if they are properly identified as instructed above. WSU shall not be responsible for the premature opening of a Proposal or for the rejection of a Proposal that was not received prior to the Closing Date because it was not properly identified.

3.2.5 Late Proposals will not be considered a valid Proposal and will not receive consideration.

3.3 Acknowledgment of Addenda: All Bidders shall acknowledge receipt of any addenda to this RFP. Failure to acknowledge receipt of any addenda may render the Proposal to be non-responsive. Changes to this RFP shall be issued only by the Office of Purchasing in writing.

3.4 Modification of Proposals: A Bidder may modify a Proposal electronically by email or by DropBox transmission at any time prior to the closing date and time for receipt of proposals.

3.5 Withdrawal of Proposals: A Proposal may be withdrawn on written request submitted electronically in email from the Bidder to the Procurement Officer at the Office of Purchasing prior to the RFP Closing Date.

3.6 Parties to Contract: Proposals shall be submitted in manner that allows WSU controlled affiliated corporations to enter into similar agreements subject to the same or substantially similar terms and conditions. WSU controlled affiliated corporations include Wichita State University Intercollegiate Athletic Association, Inc., Wichita State University Union Corporation, Wichita State University Innovation Alliance, Inc., and WSIA Investments Corporation.

SECTION IV

GENERAL CONTRACT PROVISIONS

The provisions of this section list all general contract provisions that shall govern the resulting services and/or goods solicited in this RFP. These provisions shall be deemed binding on the Bidder if a Bidder's Proposal is accepted by WSU and WSU and Bidder (referred to in this Section as "Contractor") enter into a Contract or deem a Contract to be formed (referred to in this Section as "Contractor").

4.1 Contract Documents: The successful Bidder ("Contractor") may be required to enter into a separate written Contract with WSU. Unless expressly omitted in the Contract, this RFP and any amendments, and the WSU DA-146a - Contractual Provisions Attachment, located at <https://www.wichita.edu/administration/generalcounsel/DA-146a.php> are deemed binding on Contractor and hereby incorporated by reference into the Contract. The Proposal and any Proposal amendments may be incorporated into the Contract at the discretion of WSU.

4.2 Order of Precedence: In the event of a conflict in terms of language among the Contract documents listed below (as applicable), the following order of precedence shall govern:

1. Wichita State University Modified Form DA-146a;
2. Executed Contract between the parties;
3. This RFP including any and all addenda; and
4. Bidder's Proposal submitted in response to this RFP, as finalized.

4.3 Term and Termination: The term of the Contract and any clauses regarding termination of such Contract will be set forth in the subsequent Contract awarded.

4.4 Independent Contractor:

4.4.1 Both parties, in the performance of a Contract, shall be acting in their individual capacity and not as agents, employees, partners, joint ventures, or associates of one another. The employees or agents of one party shall not be construed to be the employees or agents of the other party for any purpose whatsoever. As such, Bidder and its employees and agents shall have no right to participate in any employee benefit plan, program or arrangement provided to WSU employees, including, but not limited to, workers compensation benefits, unemployment benefits, health and accident insurance, life insurance, sick leave, and/or vacation.

4.4.2 The Contractor accepts full responsibility for payment of unemployment insurance, workers compensation, and social security as well as all income tax deductions and any other taxes or payroll deductions required by law for its employees engaged in work authorized by any Contract.

4.4.3 The Contractor is not subject to the direction, control, or supervision of WSU with respect to how it is to perform its duties. The Contractor is solely responsible for the control and supervision of its employees, agents, and contractors that are assigned to provide services to WSU.

4.5 Industry Standards: If not otherwise provided, materials or work called for in the Contract shall be furnished and performed in accordance with best established practice and standards recognized by the contracted industry and comply with all codes and regulations which shall apply.

4.6 Contractor Qualifications and Abilities: Submission of Contractor's bid will be considered presumptive evidence that the Contractor is conversant with local facilities and difficulties, the requirements of the documents and of pertinent State and/or local codes, state of labor and material markets, and has made due allowances in the Proposal for all contingencies. Any written representation covering such matters as reliability of the item(s), the experience of other users, or warranties of performance shall be incorporated by reference into the Contract. Later claims for labor, work, materials, and equipment required

for any difficulties encountered which could have foreseen will not be recognized and all such difficulties shall be properly taken care of by Contractor at no additional cost to WSU.

4.7 Staff Qualifications: The Contractor shall warrant that all persons assigned by it to the performance of any Contract shall be employees of the Contractor (or specified subcontractor if authorized) and shall be fully qualified to perform the work required, including passing all required background checks and meeting all work authorization and export compliance requirements. The Contractor shall include a similar provision in any contract with any subcontractor selected to perform work under the Contract, if subcontractors are authorized. Failure of the Contractor to provide qualified staffing at the level required by the Proposal specifications may result in termination of the Contract and/or damages.

4.8 Payments: WSU shall not be responsible for, and does not agree to be charged, any payments for costs or items not listed in the Bidder's Proposal.

4.9 Conflict of Interest: The Contractor shall not knowingly employ, during the period of the Contract or any extensions to it, any professional personnel who are also in the employ of WSU and who are providing services involving the Contract or services similar in nature to the scope of the Contract to WSU. Furthermore, the Contractor shall not knowingly employ, during the period of the Contract or any extensions to it, any WSU employee who has participated in the making of the Contract until at least two (2) years after termination of employment with WSU.

4.10 Confidentiality: The Contractor may have access to private or confidential data maintained by WSU to the extent necessary to carry out its responsibilities under the Contract. Contractor must comply with all the requirements of the Kansas Open Records Act (KORA) in providing services under the Contract. Contractor shall accept full responsibility for providing adequate supervision and training to its agents and employees to ensure compliance with the Act. No private or confidential data collected, maintained, or used in the course of performance of the Contract shall be disseminated by either party except as authorized by statute, either during the period of the contract or thereafter. Contractor must agree to return any or all data furnished by WSU promptly at the request of WSU in whatever form it is maintained by Contractor. On the termination or expiration of the Contract, Contractor will not use any of such data or any material derived from the data for any purpose and, where so instructed by WSU, will destroy or render it unreadable.

4.11 Nondiscrimination and Workplace Safety: The Contractor agrees to abide by all federal, state, and local laws, rules and regulations prohibiting discrimination in employment and controlling workplace safety. Any violations of applicable laws, rules, and regulations may result in termination of the Contract.

4.12 Environmental Protection: The Contractor shall abide by all federal, state, and local laws, rules and regulations regarding the protection of the environment. The Contractor shall report any violations to the applicable governmental agency. A violation of applicable laws, rules or regulations may result in termination of the Contract.

4.13 Insurance: The successful Bidder shall present, upon request, an affidavit or certificate demonstrating insurance coverages consistent with any requirements set forth in **Attachment 6**.

4.14 Hold Harmless: WSU shall not be precluded from receiving the benefits of any insurance the Contractor may carry which provides for indemnification for any loss or damage to property in the Contractor's custody and control, where such loss or destruction is to WSU property. The Contractor shall do nothing to prejudice WSU's right to recover against third parties for any loss, destruction, or damage to WSU property.

4.15 Care of WSU Property: The Contractor shall be responsible for the proper care and custody of any WSU-owned personal tangible property and real property furnished for Contractor's use in connection with the performance of the Contract, and Contractor will reimburse WSU for such property's loss or damage caused by Contractor, normal wear and tear excepted.

4.16 Prohibition of Gratuities: Neither the Contractor nor any person, firm, or corporation employed by the Contractor in the performance of the Contract shall offer or give any gift, money or anything of value or any promise for future reward or compensation to any WSU employee at any time.

4.17 Retention of Records: Unless WSU specifies in writing a shorter period of time, the Contractor agrees to preserve and make available all of its books, documents, papers, records, and other evidence involving transactions related to the Contract for a period of five (5) years from the date of the expiration or termination of the Contract. Matters involving litigation shall be kept for one (1) year following the termination of litigation, including all appeals, if the litigation exceeds five (5) years.

4.18 Examination of Records: The Contractor agrees that authorized federal and state representatives, including but not limited to, WSU personnel; independent auditors acting on behalf of WSU and/or state or federal agencies shall have access to and the right to examine records during the contract period and during the five (5) year post-contract period. Delivery of and access to the records shall be at no cost to WSU.

4.19 Federal, State, and Local Taxes: WSU makes no representation as to the exemption from liability of any tax imposed by any governmental entity on the Contractor.

4.20 Antitrust: If the Contractor elects not to proceed, the Contractor assigns to WSU all rights to and interests in any cause of action it has or may acquire under the anti-trust laws of the United States and the State of Kansas relating to the particular products or services purchased or acquired by WSU pursuant to the Contract.

4.21 Anti-Kickback: When WSU has reasonable grounds to believe that a violation of the Anti-Kickback Act of 1986 (41 U.S.C. 87, *et seq.*, as amended) may have occurred, WSU shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting department or agency of the United States or the Department of Justice. WSU shall cooperate fully with any Federal agency investigating a possible violation of the Anti-Kickback Act of 1986. The Contracting Officer may (1) offset the amount of kickback against any monies owed by the United States under the prime contract and/or (2) direct that the Prime Contractor withhold from sums owed a Contractor under the prime contract the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (1) of this clause be paid over to the United States Government unless the Government has already offset those monies under subdivision (2) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld. WSU agrees to incorporate the substance of this clause, including this subparagraph in all subcontracts which exceed one hundred thousand dollars (\$100,000.00).

4.22 Modification: The Contract shall be modified only by the written agreement of the parties. No alteration or variation of the terms and conditions of the Contract shall be valid unless made in writing and signed by the parties. Every amendment shall specify the date on which its provisions shall be effective.

4.23 Assignment: The Contractor shall not assign, convey, encumber, or otherwise transfer its rights or duties under the Contract without the prior written consent of WSU. The Contract may terminate in the event of its assignment, conveyance, encumbrance, or other transfer by the Contractor without the prior written consent of WSU.

4.24 Third Party Beneficiaries: The Contract is not intended to and shall not be construed as providing an enforceable right to any third party.

4.25 Captions: The captions or headings in the Contract are for reference only and do not define, describe, extend, or limit the scope or intent of the Contract.

4.26 Severability: If any provision of the Contract is determined by a court of competent jurisdiction to be invalid or unenforceable to any extent, such invalidity shall not affect other terms, conditions, or applications which can be given effect without the invalid term, condition, or application, and the remainder of the Contract shall not be affected, and each provision of the Contract shall be enforced to the fullest extent permitted by law.

4.27 Integration: The Contract, in its final composite form, shall represent the entire agreement between the parties and shall supersede all prior negotiations, representations or agreements, either written

or oral, between the parties relating to the subject matter hereof. The Contract between the parties shall be independent of and have no effect on any other contracts of either party.

4.28 Criminal or Civil Offense of An Individual or Entity That Controls A Contractor or Organization or Will Perform Work Under The Contract: Any conviction for a criminal or civil offense that indicates a lack of business integrity or business honesty must be disclosed in the Proposal and during the term of the Contract. This includes (1) conviction of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract, or subcontract or in the performance of such contract or subcontract; (2) conviction under state or federal statutes of embezzlement, theft, forgery, bribery, falsification, or destruction of records, receiving stolen property; (3) conviction under state or federal antitrust statutes; and (4) any other offense to be so serious and compelling as to affect responsibility as a state contractor. For purposes of this section, an individual or entity shall be presumed to have control of a Contractor or organization if the individual or entity directly or indirectly, or acting in concert with one or more individuals or entities, owns or controls twenty-five percent (25%) or more of its equity, or otherwise controls its management or policies. Any conviction for a felony criminal offense, or an adverse judgment in a civil case, that involves the actual or threatened harm to the health or safety of an individual must be disclosed. Failure to disclose an offense may result in disqualification of the bid or termination of the contract.

4.29 Injunctions: Should Kansas be prevented or enjoined from proceeding with the acquisition before or after contract execution by reason of any litigation or other reason beyond the control of WSU, Contractor shall not be entitled to make or assert claim for damage by reason of said delay.

4.30 Acceptance: No contract provision or use of items by WSU shall constitute acceptance or relieve the Contractor of liability in respect to any expressed or implied warranties.

4.31 Breach: Waiver or any breach of any contract term or condition shall not be deemed a waiver of any prior or subsequent breach. No contract term or condition shall be held to be waived, modified, or deleted except by a written instrument signed by the parties thereto.

4.32 Statutes: Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein. If through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then on the application of either party the Contract shall be amended to make such insertion or correction.

4.33 New Materials, Supplies or Equipment: Unless otherwise specified, all materials, supplies or equipment offered by a contractor shall be new, unused in any regard and of most current design. All materials, supplies and equipment shall be first class in all respects. Seconds or flawed items will not be acceptable. All materials, supplies or equipment shall be suitable for their intended purpose and, unless otherwise specified, fully assembled and ready for use on delivery.

4.34 Special Contract Provisions Specific to Scope of Work: In addition to the General Contract Provisions set forth in this Section IV, Contractor shall agree to the special contract provisions set forth in **Attachment 4: Additional Contract Provisions**.

ATTACHMENT 1: TAX CLEARANCE INFORMATION

WSU strongly supports the State of Kansas Tax Clearance Process. Bidders submitting Proposals that exceed twenty-five thousand dollars (\$25,000.00) over the term of the contract shall include a copy of a Tax Clearance Certification Form with their submittal. Failure to provide this information may be cause for rejection of a Bidder's bid or proposal.

A "Tax Clearance" is a comprehensive tax account review to determine and ensure that the account is compliant with all primary Kansas Tax Laws administered by the Kansas Department of Revenue (KDOR) Director of Taxation. Information pertaining to a Tax Clearance is subject to changes(s), which may arise as a result of a State Tax Audit, Federal Revenue Agent Report, or other lawful adjustment(s).

To obtain a Tax Clearance Certificate, you must:

- Go to <https://www.kdor.ks.gov/apps/taxclearance/Default.aspx> to request a Tax Clearance Certificate
- Return to the website the following working day to see if KBOR will issue the certificate
- If issued an official certificate, print it and attach it to your Proposal
- If denied a certificate, engage KDOR in a discussion about why a certificate was not issued

Bidders (and their subcontractors) are expected to submit a current Tax Clearance Certificate with every Proposal.

Please Note: Individual and business applications are available. For applications entered prior to 5:00 PM Monday through Friday, results typically will be available the following business day. Tax clearance results may be denied if the request includes incomplete or incorrect information.

Please Note: You will need to sign back into the KDOR website to view and print the official tax clearance certificate.

A copy of the Certification of Tax Clearance form received from the Kansas Department of Revenue should be sent along with your Proposal to:

Wichita State University
Purchasing Office
1845 Fairmount Street, Campus Box 012
Wichita, KS 67260-0012

Failure to provide this information may be cause for rejection of Bidder's bid or proposal.

Information about Tax Registration can be found at the following website:

<http://www.ksrevenue.org/forms-btreg.html>

The WSU Purchasing Office reserves the right to confirm tax status of all potential contractors and subcontractors prior to the release of a purchase order or contract award.

In the event that a current tax certificate is unavailable, the WSU Purchasing Office reserves the right to notify a Bidder (one that has submitted a timely event response) that they have to provide a current Tax Clearance Certificate within ten (10) calendar days, or WSU may proceed with an award to the next lowest responsive Bidder, whichever is determined by the Purchasing Director to be in the best interest of WSU and the State.

ATTACHMENT 2: CERTIFICATION REGARDING IMMIGRATION REFORM & CONTROL

Any Bidder that is awarded a subsequent contract ("Contractor") is expected to comply with the Immigration and Reform Control Act of 1986 (IRCA; 8 C.F.R. Ch. 1, Sub Ch. B, Pt. 245a), as may be amended from time to time. This Act, with certain limitations, requires the verification of the employment status of all individuals who were hired on or after November 6, 1986, by the Contractor as well as any subcontractor or sub-subcontractor. The usual method of verification is through the Employment Verification (I-9) Form. With the submission of this bid, the Contractor hereby certifies without exception that Contractor has complied with all federal and state laws relating to immigration and reform. Any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and, at the State's option, may subject the contract to termination and any applicable damages.

Contractor certifies that, should it be awarded a contract by the State, Contractor will comply with all applicable federal and state laws, standards, orders, and regulations affecting a person's participation and eligibility in any program or activity undertaken by the Contractor pursuant to the Contract. Contractor further certifies that it will remain in compliance throughout the term of the contract.

At the State's request, Contractor is expected to produce to the State any documentation or other such evidence to verify Contractor's compliance with any provision, duty, certification, or the like under the contract.

Contractor agrees to include this Certification in contracts between itself and any subcontractors in connection with the services performed under the Contract.

Signature

Date

Title of Contractor

ATTACHMENT 3: PROPOSAL REQUIREMENTS

Proposals should set forth, in detail, Bidder's plans to meet each of the requirements set forth in this RFP and specifically in this **Attachment 3: Proposal Requirements**. The proposal will be evaluated in light of the material and the substantiating evidence presented in the proposal, not on the basis of what may be inferred.

3.1 Company Overview and Qualifications. Provide a narrative description of your firm, its capacity to provide these services, and the Bidder's **Air-Cooled, Rotary-Screw Water Chillers**. Provide a description of the Bidder's qualifications and experience in performing the requested or similar services, including summaries of personnel assigned to the project stating their work experience. Bidder should establish in its Proposal that it is an established firm recognized for its capacity to perform and capable of mobilizing sufficient personnel to meet deadlines specified by WSU.

3.2 Successful Projects / Services. Provide a list of past successful projects that align with the expectations set forth in this RFP in the State of Kansas. Such information may be marked as "Proprietary" if it is not open to the public.

3.3 Key Personnel. Provide a list of personnel to be used to perform the services identified in this RFP and include their qualifications, education, accomplishments, and any other relevant information demonstrating level of experience.

3.4 Refunded, Credited or Discounted Fees. Describe any circumstances where WSU would receive a refund, credit, or discount of the proposed fees.

3.5 Equal Opportunity Employment. Describe how you will accommodate state and federal laws and policy provisions issued by the Kansas Board of Regents and WSU relating to Affirmative Action and Equal Opportunity Employment, including your firm's efforts to recruit and contract with disadvantaged groups and/or businesses (minority, women, veteran, and small business).

3.6 Additional Tasks. Identify any additional tasks the Bidder considers necessary to provide the services and/or goods solicited in this RFP and explain any recommended deviation from the tasks identified in **Attachment 5: Minimum Qualifications and Performance Specifications** that Bidder believes are necessary.

3.7 References. Provide three (3) references that have used Bidder to complete the same or similar services within the last three (3) years. Specify a contact person with a telephone number, and email address.

ATTACHMENT 4: ADDITIONAL CONTRACT PROVISIONS SPECIFIC TO THIS RFP

In the event of an award, Bidder agrees to accept, subject to exception as set forth in Bidder's Proposal, the following additional contractual terms that are specific to this RFP:

- 4.1 Industry Standards:** If not otherwise provided, materials or work called for in the Contract shall be furnished and performed in accordance with best established practice and standards recognized by the contracted industry and comply with all codes and regulations which shall apply.
- 4.2 Experience:** All bidders must have a minimum of three (3) years active participation in the applicable industry as a distinct company, providing equipment and systems comparable in size and complexity to the equipment and systems specified. Bidders may be required to furnish information supporting the capability to comply with conditions for bidding and fulfill the contract if receiving an award of contract. Such information may include, but not be limited to, a list of similar size and type projects the Bidder has completed. If Bidder cannot meet this requirement, provide a written explanation as to why. Inability to meet this requirement is not necessarily grounds for disqualification and such determination will be made within the sole discretion of WSU.
- 4.3 Payment Terms:** Unless otherwise agreed to in writing by WSU and Bidder, pursuant to the Kansas Prompt Payment Act (K.S.A. 75-6403(b)), all payment terms are Net 30 days from the date the goods are delivered and finally accepted by WSU. If the 30th day falls on a weekend, legal holiday, or WSU holiday, WSU shall have until the next business day to make payment.
- 4.4 Bidder Contracts:** Bidder shall include an editable Word version copy of any proposed terms and conditions applicable to this purchase.
- 4.5 Equipment:** All offered equipment, equipment options, and hardware expansions must be identified by manufacturer and model number and descriptive literature of such equipment must be submitted with the bid.
- 4.6 Implied Requirements:** All products and services not specifically mentioned in this solicitation, but which are necessary to provide the functional capabilities described by the specifications, shall be included.
- 4.7 Technical Literature:** All bids shall include specifications and technical literature sufficient to allow WSU to determine that the equipment meets all requirements. This technical literature will be the primary source for bid evaluation. If a requirement is not addressed in the technical literature, it must be supported by additional documentation and included with the bid. Proposals without sufficient technical documentation may be rejected.
- 4.8 New Materials, Supplies or Equipment:** Unless otherwise specified, all materials, supplies or equipment offered by a vendor shall be new, unused in any regard and of most current design. All materials, supplies and equipment shall be first class in all respects. Seconds or flawed items will not be acceptable. All materials, supplies or equipment shall be suitable for their intended purpose and, unless otherwise specified, fully assembled and ready for use on delivery. Failure to produce and/or supply materials of the highest quality may result in rejection of an order entirely at the Bidder's expense. The decision of WSU shall be final in all instances of dispute herein. The proof of accuracy or manufacture and quality of material rests with the Bidder.
- 4.9 Documentation:** Examples of documentation delivered by the manufacturer with purchase of items shall be included. Vendor must be able to deliver additional copies (beyond the response set) of documentation on an immediate basis for use in the evaluation process. Within the section, vendors may use any format. Include detailed, standard, published literature describing each equipment item

and feature offered.

4.10 Quality: Materials used, and workmanship shall be of the highest quality Vendor should keep in mind that this Request for Proposal provides potential for negotiations and does not require an award to low bid. Although cost is very important, the University reserves the right to evaluate using additional criteria including, but not limited to, cost, quality, weight, durability, delivery time, proposal initiative, vendor experience and related past performance, etc.

4.11 Default on Delivery: Any vendor who defaults on delivery as defined in this Request may, be barred from bidding on any subsequent Request for a period to be determined.

4.12 Award: Award will be by line item or group total, whichever is in the best interest of the WSU.

4.13 Invoices: Each purchase order must be individually invoiced. Invoices shall be forwarded to the using department and must include the following:

- Date of invoice;
- Purchase Order number and Contract number;
- Itemization of all applicable charges; and
- Net amount due.

ATTACHMENT 5: MINIMUM QUALIFICATIONS AND PERFORMANCE SPECIFICATIONS

- 5.1 BUY AMERICAN:** Consistent with Executive Order 13858, Strengthening Buy-American Preferences for Infrastructure Projects,” the Recipient is encouraged to use, to the greatest extent practicable, iron and aluminum as well as steel, cement, and other manufactured products produced in the United States in every contract, subcontract, purchase order, or sub-award that is chargeable under this Award.
- 5.2 Federal Participation Disclosure** – “This project will be partially funded with Federal funds from the United States Department of Commerce, Economic Development Administration and therefore is subject to the Federal laws and regulations associated with that program.
- 5.3 Experience:** All bidders must have a minimum of three (3) years active participation in the applicable industry as a distinct company, providing equipment and systems comparable in size and complexity to the equipment and systems specified. Bidders may be required to furnish information supporting the capability to comply with conditions for bidding and fulfill the contract if receiving an award of contract. Such information may include, but not be limited to, a list of similar size and type projects the Bidder has completed. If Bidder cannot meet this requirement, provide a written explanation as to why. Inability to meet this requirement is not necessarily grounds for disqualification and such determination will be made within the sole discretion of WSU.
- 5.4 Certification of Specifications Compliance** By submission of a bid response and the signatures affixed thereto, the Bidder certifies all products and services proposed in the solicitation meet or exceed all requirements of specifications as set forth in this RFP.
- 5.5 Certification of Materials Submitted:** The response to this RFP, together with the specifications set forth herein and all data submitted by the Bidder to support the response including brochures, manuals, and descriptions covering the operating characteristics of the item(s) proposed, shall become a part of any contract between the successful Bidder and Wichita State University. Any written representation covering such matters as reliability of the item(s), the experience of other users, or warranties of performance shall be incorporated by reference into the contract.
- 5.6 Drugs:** The illegal use, possession, dispensation, distribution, manufacture or sale of a controlled substance or illegal drug by an employee of Bidder or any approved subcontractor while performing Services on the Premises is prohibited, as is the use or possession of alcohol. Any violation of this prohibition provides sufficient cause for termination of the Contract. No smoking is allowed in the facility. Any smoking must take place outside the building.
- 5.6 Overall Expectations:** The install locations shall be left with a neat, clean, and attractive appearance. Bidder shall impress upon employees the idea that the specifications are the minimum expected of Bidder. If extra effort is required in any area at any time, it is expected without argument or extra charge.
- 5.7 Notification:** Any irregularities noticed while performing Services, such as defective plumbing, electrical switches or plugs, leaks, necessary supplies as applicable, etc., shall be reported to WSU.
- 5.8 Schedule of Service:** All Services shall be performed between the hours of 7:00 AM and 4:00 PM CST, Monday through Friday. Weekend or after regular hours may be utilized if situation requires. Services shall be scheduled by contacting the designated department contact for WSU, as designated in the Contract. Services are to be proactively scheduled on the part of Contractor; WSU shall not have the responsibility of scheduling these inspections or contacting Contractor to remind of this requirement.
- 5.9 Employee and Qualifications:** All persons employed to perform these services shall be an employee or an authorized subcontractor of the Bidder, have received sufficient training, and at least 18 years of age. The Bidder shall pay all salaries and expenses of, and all federal, Social Security taxes, federal, and state unemployment taxes, and any similar payroll taxes relating to

such employees. Bidder must comply with all federal, state, city and local laws, rules and regulations as it relates to its employees, agents, and subcontractors, including, but not limited to, non-discrimination in its policies and practices and compliance with the Immigration Reform and Control Act of 1986. Bidder agrees that it shall make available for inspection to WSU, upon request, its policies and procedures and all I-9 employee forms of employees working at the premises.

- 5.10 Restrictions on Use:** Bidder's employees shall be instructed that state property and state employee property is not available for use in any way unless prior approval is obtained. Additionally, no person or employee family members shall be allowed on the property who is not directly involved in performance of the Calibration services.
- 5.11 Availability:** Upon request, the Bidder must provide WSU a list of its regular established office hours and telephone numbers. Furthermore, Bidder must provide a listing of emergency phone numbers so that a representative of their firm can be available twenty-four (24) hours per day as needed to handle emergencies and/or to receive messages for WSU needs. The contractor must provide designated WSU Staff a list of established office hours and a toll-free telephone number of the contractor. Furthermore, contractor must provide a listing of emergency telephone numbers, also toll free, so that a representative of their firm can be available twenty- four (24) hours a per day as needed to handle emergencies/or to receive messages for agency needs.

STATEMENT OF WORK

Please reference Attachment 9: A-014677 WSU NIAR HAMR Mechanical Long Lead Manual for statement of work, specifications, and drawings specific to this RFP.

Cost Sheet

_____ (Contractor) agrees to furnish Three (3) Air-Cooled, Rotary-Screw Water Chillers that meets all Project Minimum Requirements as listed in the Scope of Work Minimum Qualifications, Attachment 5 and Attachment 9 at a cost of \$_____ including freight within _____ weeks from the receipt of an order. Prices must remain valid for Ninety (90) calendar days.

Pricing Must list each individual item if not included in system price. Further, Contractor understands that final payment will not be made until all minimum requirements are verified to have been delivered.

Lead Time: _____

Product Name and Model No. _____

Warranty: _____

Delivery Timeline: _____

ATTACHMENT 6: TAX DOCUMENTATION AND INSURANCE

All suppliers new to WSU are required to submit a completed tax ID form to the Office of Purchasing as confirmation of their business identity. This information is used to build supplier profiles in the three databases that support encumbrances from our electronic requisitioning system. A scanned image of your tax ID form will be included in the profiles. Please submit documentation with your proposal.

NOTE: Insurance requirements are dependent on the type of particular project being bid. Bidder's may inquire with the Office of Purchasing for more information on insurance requirements.

All Bidders will submit proof of the following required insurance to WSU with their proposal:

1. **Comprehensive General Liability Insurance.** Bidder shall maintain comprehensive general liability insurance with limits not less than one million dollars (\$1,000,000.00) for each occurrence involving bodily injury and property damage, a general aggregate of two million dollars (\$2,000,000.00) and products-completed operation aggregate of one million dollars (\$1,000,000.00). Such coverage must include premises operations broad form property damage, completed operations, independent contractors, and contractual and products liability.
2. **Comprehensive Automobile Liability Insurance.** Bidder shall maintain comprehensive automobile liability insurance with limits not less than five hundred thousand dollars (\$500,000.00) for bodily injury and property damage combined, and must cover all owned, non-owned or hired vehicles of Bidder.
3. **Worker's Compensation Insurance.** Bidder shall maintain one hundred thousand dollars (\$100,000.00) in employer liability coverage and worker's compensation insurance as required by Kansas law.
4. **Property Insurance.** Bidder shall maintain insurance in an amount of not less than five hundred thousand dollars (\$500,000.00) to cover all sums, which Bidder will legally be liable to pay be reason of liability for damages to or destruction of WSU property, including the loss of use thereof.
5. **Employees Liability.** Bidder shall maintain employer's liability insurance with policy limits not less than one million dollars (\$1,000,000) each accident, one million dollars (\$1,000,000) each employee, and one million dollars (\$1,000,000) policy limit.

All insurance shall be maintained at bidder's sole expense. Insurance and bonds must be with a Contractor or companies qualified to do business in Kansas or in the state where the Services are being performed, as acceptable to WSU, and written on the standard approved certification forms. Bidder must furnish a certificate showing that such insurance upon execution of any Contract and no less than annually thereafter.

All liability insurance policies will name WSU as additional insured with respect to claims, demands, suits, judgments, costs, charges, and expenses arising out of, or in connection with, any loss, damage, or injury resulting from the negligence or other fault of Bidder, its agent, representatives, and employees.

ATTACHMENT 7: BIDDER SIGNATURE SHEET

INSTRUCTIONS TO BIDDER: Please respond to all questions below. If you intend to rely on any marketing materials or separately submitted proposal document in response to any of the below questions, please reference such materials in response to the relevant question and provide that material along with your responses. Mark any information that is proprietary or business trade secrets as "CONFIDENTIAL."

1. RFP Name:							
2. Bidder Legal Name:							
3. FEIN Number:							
4. Any Other Relevant Name under which Bidder Operates:							
5. Bidder Parent Contractor, if any:				Corporation <input type="checkbox"/>			
				Limited Liability Contractor <input type="checkbox"/>			
				Not for Profit <input type="checkbox"/>			
6. Identify Corporate Structure:				Other <input type="checkbox"/> Describe:			
7. Address:							
8. Main Telephone Number:							
9. io Person if Awarded Bid:		Name:					
		Title:					
		Phone Number:					
		E-Mail:					
10. Do you certify that this Proposal meets the Minimum Qualifications & Performance Specifications set forth in Attachment 5? If no, provide written explanation and attach.						Yes <input type="checkbox"/>	No <input type="checkbox"/>
11. Do you acknowledge that you have received all Attachments referenced in this RFP and have, as of the time of submission, reviewed the Purchasing Website for any supplemental terms or amendments?						Yes <input type="checkbox"/>	No <input type="checkbox"/>
12. If awarded a Contract and purchase orders are to be directed to an address other than above, indicate mailing address and telephone number below.							
		Address:					
		City, State, Zip					
		Phone Number:					
<p>By my signature below, I hereby certify that this Proposal is being submitted on behalf of the person, Contractor, organization or entity identified above, that I have the authority to submit this Proposal and all certifications, is in accordance with the RFP specifications set forth herein and is a complete and accurate statement of skills, qualifications, service guarantees and costs. I further hereby certify that I do not have and am unaware that Bidder has any substantial conflict of interest sufficient to influence the bidding process on this bid. A conflict of substantial interest is one which a reasonable person would think would compromise the open competitive bid process.</p>							

Name of Authorized Official: _____ **Title:** _____

Signature: _____ **Date:** _____

ATTACHMENT 8: FEDERAL FLOWDOWN TERMS AND CONDITIONS

Wichita State University has entered into a grant or cooperative agreement with either the U.S. Government or another entity who itself has entered into a grant or cooperative agreement with the U.S. Government (the "Prime Award"). That Prime Award requires that certain clauses be incorporated into and form part of the terms and conditions of any agreement by and between WSU and the successful Bidder. Accordingly, the following provision is hereby incorporated into this RFP and any agreement by and between WSU and the successful Bidder:

Bidder shall comply and shall require each of its contractors and subcontractors to comply with all applicable laws, statutes, rules, regulations, executive orders, directives, and guidance, and official or authoritative interpretations thereof, and any and all amendments, supplements, or modifications thereto, promulgated hereafter by any federal, state, or local government, or agency authority (collectively, the "Applicable Laws"). The term Applicable Laws shall include, but not be limited to, the U.S. Department of Commerce Economic Development Administration's Standard Terms and Conditions for Construction Projects, as amended from time to time. Bidder shall include this provision in its contracts with all contractors and subcontractors. Bidder shall complete, and shall require its contractors and subcontractors to complete, the compliance certification set forth in Attachment 8-1. Bidder shall provide WSU with a copy of its completed compliance certification and shall also provide WSU with a copy of the completed compliance certification of each of Bidder's contractors and subcontractors.

1.

REPRESENTATION & CERTIFICATION STATEMENT

SIGNATURE / CERTIFICATION: By signing below, the Bidder certifies that the Representations and Certifications are accurate, current and complete, and may be subject to liability under the False Claims Act. The Offeror further certifies it will notify the WSU Purchasing Office of any changes to these Representations and Certifications. Certifying affirmatively asserts Bidder’s understanding of and compliance with these Representations and Certifications.

Bidder shall comply and shall require each of its contractors and subcontractors to comply with all applicable laws, statutes, rules, regulations, executive orders, directives, and guidance, and official or authoritative interpretations thereof, and any and all amendments, supplements, or modifications thereto, promulgated hereafter by any federal, state, or local government, or agency authority (collectively, the “Applicable Laws”). The term Applicable Laws shall include, but not be limited to, the U.S. Department of Commerce Economic Development Administration’s Standard Terms and Conditions for Construction Projects, as amended from time to time. Bidder shall include this provision in its contracts with all contractors and subcontractors and shall obtain from each such contractor and subcontractor a copy of this certification.

CERTIFICATION

I hereby certify the information supplied herein to be true and correct. I understand that I could be subject to penalties for any misrepresentations made on this form.

Company Name:	
Company Address:	
NAICS Code:	
Types of Goods/Services:	
Name of Company Officer:	
Title of Company Officer:	
Date Completed:	
Signature of Company Officer:	

PROJECT MANUAL

**WSU NIAR
HUB FOR ADVANCED MANUFACTURING AND RESEARCH (HAMR)**

AIR-COOLED, ROTARY-SCREW WATER CHILLERS – B0001838

EDA 05-79-06255 HAMR

A-014677

Architect's Project Number: 11158R23001

Date: November 2023

Mechanical Engineer

Digitally Signed

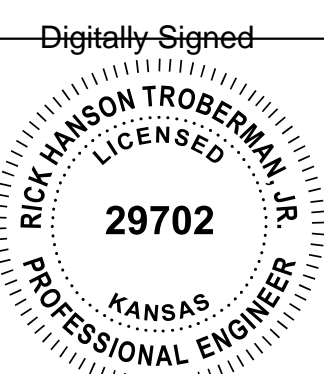


2023.11.06 09:36:57-06'00'

AIR-COOLED CHILLER SCHEDULE																									
MARK	MAKE	MODEL	CHILLER TYPE	CHW SYSTEM TYPE	REF.	ELEV (FT ABV MSL)	WEIGHT (LBS)	NOMINAL CAP. (TONS)	COND. TEMP (°F)	% MIN. LOAD (%)	EFFICIENCY		GLYCOL		EVAPORATOR					ELECTRICAL					
											AHRF	IPLV (EER)	TYPE	CONCENTRATION	CHW FLOW (GPM)		CHWS TEMP. (°F)	CHWR TEMP. (°F)	MAX P.D. (FT HD)	FOULING FACTOR	CONNECTION SIZE (IN)	TYPE	V/PH	MCA (AMPS)	MOCIP (AMPS)
															DESIGN	MIN									
ACCH-1	DAIKIN APPLIED	AWV026B	SCREW	PRIMARY-SECONDARY	R134a	1,421	26,459	350	105	25	10.1	14	PROPYLENE	40%	636.0	337	42	56	15	0.0001	10	FLANGED	480	769	1000
ACCH-2	DAIKIN APPLIED	AWV026B	SCREW	PRIMARY-SECONDARY	R134a	1,421	26,459	350	105	25	10.1	14	PROPYLENE	40%	636.0	337	42	56	15	0.0001	10	FLANGED	480	769	1000
ACCH-3	DAIKIN APPLIED	AWV026B	SCREW	PRIMARY-SECONDARY	R134a	1,421	26,459	350	105	25	10.1	14	PROPYLENE	40%	636.0	337	42	56	15	0.0001	10	FLANGED	480	769	1000
(F) ACCH-4	DAIKIN APPLIED	AWV026B	SCREW	PRIMARY-SECONDARY	R134a	1,421	26,459	350	105	25	10.1	14	PROPYLENE	40%	636.0	337	42	56	15	0.0001	10	FLANGED	480	769	1000

NOTES:

- PROVIDE MAKE AND MODEL SPECIFIED OR ENGINEER APPROVED EQUAL.
- ACTUAL CAPACITY (TONS) AND INPUT POWER (KW) ARE BASED UPON THE SCHEDULED CHW TEMPERATURES AND CONDENSER TEMPERATURE.
- FOULING FACTOR UNITS ARE CONSISTENT WITH AHRI 550/590: SQ FT x H x DEG F / BTU.
- PROVIDE CHILLERS WITH EVAPORATOR FREEZE PROTECTION ON SEPARATE ELECTRICAL CIRCUIT.
- PROVIDE CHILLERS WITH THE FOLLOWING OPTIONS AND ACCESSORIES:
 - SINGLE POINT ELECTRICAL CONNECTION WITH NON-FUSED DISCONNECT SWITCH.
 - INTERNAL SOUND ATTENUATING BLANKET ON COMPRESSORS.
 - LOW AMBIENT CONTROLS DOWN TO 0 DEG F.
 - CONDENSER COIL HAIL GUARDS.
 - EVAPORATOR FLOW SWITCH TO BE FIELD-INSTALLED.
 - FACTORY-MOUNTED 68KAIC-RATED CONTROL PANEL WITH BACNET CONTROLS TO INTERFACE WITH BAS. REFER TO SEQUENCE OF OPERATION FOR DETAILS.
 - FACTORY-MOUNTED VARIABLE FREQUENCY DRIVE ON ALL SCREW COMPRESSORS.
- INSTALL CHILLERS WITH VIBRATION ISOLATION IN ACCORDANCE WITH THE VIBRATION ISOLATION SCHEDULE.
- CONTROL PANEL SHORT CIRCUIT CAPACITY SHALL MATCH FEEDER KAIC OR PROVIDE WIRING FOR SEPARATE 120V FEED.
- ENGAGE A MANUFACTURER'S REPRESENTATIVE TO PERFORM STARTUP AND TRAINING SERVICES. IF THE CHILLER WARRANTY IS VOIDED FOR ANY REASON BY THE CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WARRANTY-RELATED REPAIR AND MAINTENANCE COSTS FOR THE LIFE OF THE WARRANTY.
- CHILLER SHALL BE RATED FOR SCHEDULED NOMINAL CAPACITY USING SCHEDULED CONCENTRATION OF PROPYLENE GLYCOL.
- FUTURE EQUIPMENT INFORMATION ADDED FOR REFERENCE ONLY. DO NOT USE FOR BIDDING.



DATE	DESCRIPTION
2023.11.13 08:41:48-06'00"	

PROJECT NUMBERS:
 State Building # - 71500-00095
 ED # - 11118R2301
 05-79-90255-HAMR
PROJECT TYPE:
 New Construction

Wichita State University
FACILITIES PLANNING
WICHITA STATE UNIVERSITY
 1845 Fairmount St.
 Wichita, KS 67260
 Tel: (316) 978-2444
 www.wichita.edu

Department of Administration
 Office of Facilities & Procurement
 Design, Construction & Compliance
 700 SW Harrison, Suite 1200
 Topeka, Kansas 66603
 Phone 765-296-8899

WICHITA STATE UNIVERSITY
NIAR - Hub for Advanced Manufacturing and Research (HAMR)
 1845 Fairmount St., Wichita, KS 67260
 BUILDING NUMBER 71500-00095
 DATE: 11/02/2023
 DRAWN BY: DH
 CHECKED BY: TT

HVAC SCHEDULES
A-014677
M-601
 ORIGINAL CONTRACT DOCUMENTS

Title: Air-Cooled, Rotary-Screw Water Chillers

Wichita State University is soliciting competitive bids to supply a Purchase Order for air-cooled, rotary-screw water chillers as shown in the attached Plans and Specifications. Quote shall be for all products as indicated in Plans and Specifications noted below or Engineer approved equal which shall be submitted for review prior to being included in bids. Quote shall be valid for Ninety (90) calendar days. The Purchase Order shall enable the awarded Vendor the ability to start Shop Drawings for the air-cooled, rotary-screw water chillers and obtain a slot in the Vendor’s production queue.

The Purchase Order value established during this long-lead bidding phase will be incorporated in the State of Kansas Bid Forms for the total building Project as a unit price for all bidding General Contractors to include in their bids. The total building Project competitive bidding process is anticipated to begin December 2023 and commence February 2024. The General Contractor that is awarded the total building Project will assume the Contract, warranties, deliveries, and installation between the Vendor for the switchgear assemblies and 480V panelboards. The Purchase Order established during this bid process shall be transferred to the selected total building Project General Contractor following a competitive bid process for the total building Project, and the Vendor shall guarantee the values established during this Bid to be included in contracts with the selected total building Project General Contractor. Wichita State University shall not be the recipient or installer for any scope including in this long-lead procurement.

If the University cancels this Project at any time prior to total building Project bid opening, a termination fee for Shop Drawings shall be negotiated between the parties for all work that has been completed upon notice of termination.

Refer to the following attachments for equipment details and requirements:

- A. Drawings:
 - 1. Sheet M-601 - HVAC Schedules
- B. Specification Sections:
 - 1. Section 23 6426.13 – Air-Cooled, Rotary-Screw Water Chillers

The University intends to lock in pricing through this Bid Invitation for bid process and (if awarded) will issue a Purchase Order to purchase all equipment from one supplier. Bidders shall be required to provide a bid price for the air-cooled, rotary-screw water chillers. The bid price shall be provided for in the General Contractor’s Bid for the complete Project’s Contract Documents.

A. Product Specification:

<u>Item</u>	<u>Description</u>	<u>Quantity</u>
1.	Air Cooled, Rotary-Screw Water Chillers <i>Note: Refer to Plans and Specifications for requirements.</i>	3

B. Submittal Requirements:

This Bid calls for specific submittal requirements listed in Specification Sections noted above of the equipment details and requirements. Bidders are required to submit requested information, including manufacturer certifications and product datasheets documenting that proposed products meet production requirements as listed in Drawings and Specifications, with their Bid submission. Failure to provide required documentation may result in the Bid being deemed non-responsive. All other documents will be required after the Contract award, as stated in the submittal requirements.

C. Shop Drawings:

This Bid calls for Shop Drawings to be provided in conformance with the product Specification and Plans. This Purchase Order allows the Shop Drawings to begin so that the equipment manufacturing process can proceed before the overall Project bids.

D. Installation and Delivery:

This Bid does not include installation of equipment, nor does it include delivery of equipment.

END OF DOCUMENT

SECTION 23 6426.13 - AIR-COOLED, ROTARY-SCREW WATER CHILLERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Packaged, air-cooled chillers.
 - 2. Packaged, portable refrigerant recovery units.

1.2 DEFINITIONS

- A. COP: Coefficient of performance. The ratio of the rate of heat removal to the rate of energy input using consistent units for any given set of rating conditions.
- B. DDC: Direct digital control.
- C. EER: Energy-efficiency ratio. The ratio of the cooling capacity given in terms of Btu/h to the total power input given in terms of watts at any given set of rating conditions.
- D. IPLV: Integrated part-load value. A single-number part-load efficiency figure of merit calculated per the method defined by AHRI 550/590 and referenced to AHRI standard rating conditions.
- E. kW/Ton: The ratio of total power input of the chiller in kilowatts to the net refrigerating capacity in tons at any given set of rating conditions.
- F. NPLV: Nonstandard part-load value. A single-number part-load efficiency figure of merit calculated per the method defined by AHRI 550/590 and intended for operating conditions other than AHRI standard rating conditions.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include refrigerant, rated capacities, operating characteristics, furnished specialties, and accessories.
 - 2. Performance at AHRI standard conditions and at conditions indicated.
 - 3. Performance at AHRI standard unloading conditions.
 - 4. Minimum evaporator flow rate.
 - 5. Refrigerant capacity of chiller.
 - 6. Oil capacity of chiller.
 - 7. Fluid capacity of evaporator.
 - 8. Characteristics of safety relief valves.
 - 9. Minimum entering condenser-air temperature.
 - 10. Maximum entering condenser-air temperature.
 - 11. Performance at varying capacities with constant-design, entering condenser-air temperature. Repeat performance at varying capacities for different entering condenser-air temperatures from design to minimum in 10 deg F increments.

B. Shop Drawings:

1. Include plans, elevations, sections, and attachment details.
2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Floor plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Structural supports.
2. Piping roughing-in requirements.
3. Wiring roughing-in requirements, including spaces reserved for electrical equipment.
4. Access requirements, including working clearances for mechanical controls and electrical equipment, and tube pull and service clearances.

B. Product Certificates: For certification required in "Quality Assurance" Article.

C. Source quality-control reports.

D. Field Test Reports: Include startup service reports.

E. Sample Warranty: For AHRI special warranty.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For each chiller to include in emergency, operation, and maintenance manuals.

1.6 QUALITY ASSURANCE

A. AHRI Certification: Certify chiller according to AHRI 590 certification program(s).

B. AHRI Rating: Rate chiller performance according to requirements in AHRI 550/590.

C. ASHRAE Compliance:

1. ASHRAE 15 for safety code for mechanical refrigeration.
2. ASHRAE 147 for refrigerant leaks, recovery, and handling and storage requirements.

D. ASHRAE/IES Compliance: Applicable requirements in ASHRAE/IES 90.1.

E. ASME Compliance: Fabricate and label chiller to comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1, and include an ASME U-stamp and nameplate certifying compliance.

F. Comply with NFPA 70.

G. Comply with requirements of UL and UL Canada and include label by a qualified testing agency showing compliance.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Ship chillers from the factory fully charged with refrigerant.
- B. Ship each oil-lubricated chiller with a full charge of oil.
 - 1. Ship oil factory installed in chiller.

1.8 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of chillers that fail in materials or workmanship within specified warranty period.
 - 1. Extended warranties include, but are not limited to, the following:
 - a. Complete chiller including refrigerant and oil charge.
 - b. Parts and labor.
 - c. Loss of refrigerant charge for any reason.
 - 2. Warranty Period: Five years from date of Substantial Completion.
- B. The Contractor shall provide maintenance and troubleshooting assistance for a period of one year following substantial completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Site Altitude: Chiller shall be suitable for altitude in which installed without affecting performance indicated. Make adjustments to affected chiller components to account for site altitude.

2.2 PACKAGED, AIR-COOLED CHILLERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Carrier Global Corporation
 - 2. Daikin Applied
 - 3. Trane
- B. Description: Factory-assembled and run-tested chiller complete with base and frame, condenser casing, compressors, compressor motors and motor controllers, evaporator, condenser coils, condenser fans and motors, electrical power, controls, and accessories.
- C. Cabinet:
 - 1. Base: Galvanized-steel base extending the perimeter of chiller. Secure frame, compressors, and evaporator to base to provide a single-piece unit.
 - 2. Frame: Rigid galvanized-steel frame secured to base and designed to support cabinet, condenser, control panel, and other chiller components not directly supported by base.
 - 3. Casing: Galvanized steel.

4. Finish: Coat base, frame, and casing with a corrosion-resistant coating.
 5. Sound-reduction package designed to reduce sound level without affecting performance and consisting of the following:
 - a. Acoustic enclosure around compressors.
 - b. Reduced-speed fans with acoustic treatment.
- D. Compressors:
1. Description: Positive displacement, hermetically sealed.
 2. Casing: Cast iron, precision machined for minimum clearance about periphery of rotors.
 3. Rotors: Manufacturer's standard one- or two-rotor design.
 4. Each compressor provided with suction and discharge shutoff valves, crankcase oil heater, and suction strainer.
- E. Service: Easily accessible for inspection and service.
- F. Capacity Control: On-off compressor cycling and modulating slide-valve assembly or port unloaders combined with hot-gas bypass, if necessary, to achieve performance indicated.
1. Maintain stable operation throughout range of operation. Configure to achieve most energy-efficient operation possible.
 2. For units equipped with a variable-frequency controller, capacity control shall be both "valveless" and "stepless," requiring no slide valve or capacity-control valve(s) to operate at reduced capacity.
- G. Oil Lubrication System: Consisting of pump if required, filtration, heater, cooler, factory-wired power connection, and controls.
1. Provide lubrication to bearings, gears, and other rotating surfaces at all operating, startup, shutdown, and standby conditions including power failure.
 2. Thermostatically controlled oil heater properly sized to remove refrigerant from oil.
 3. Factory-installed and pressure-tested piping with isolation valves and accessories.
 4. Oil compatible with refrigerant and chiller components.
 5. Positive visual indication of oil level.
- H. Vibration Control:
1. Vibration Balance: Balance chiller compressors and drive assemblies to provide a precision balance that is free of noticeable vibration over the entire operating range.
 - a. Overspeed Test: 25 percent above design operating speed.
 2. Isolation: Mount individual compressors on vibration isolators.
- I. Compressor Motors:
1. Hermetically sealed and cooled by refrigerant suction gas.
 2. High-torque, induction type with inherent thermal-overload protection on each phase.
- J. Compressor Motor Controllers:
1. Variable-Frequency Controller:

- a. Motor controller shall be factory mounted and wired on the chiller to provide a single-point, field-power termination to the chiller and its auxiliaries.
- b. Description: NEMA ICS 2; listed and labeled as a complete unit and arranged to provide variable speed by adjusting output voltage and frequency.
- c. Enclosure: Unit mounted, NEMA 250, Type 3R with hinged full-front access door with lock and key.
- d. Integral Disconnecting Means: Door-interlocked, UL 489, instantaneous-trip circuit breaker with lockable handle.
- e. Technology: Pulse-width-modulated output suitable for constant or variable torque loads.
- f. Motor current at start shall not exceed the rated load amperes, providing no electrical inrush.

K. Refrigerant Circuits:

1. Refrigerant Compatibility: Chiller parts exposed to refrigerants shall be fully compatible with refrigerants, and pressure components shall be rated for refrigerant pressures.
2. Refrigerant Circuit: Each shall include a thermal- or electronic-expansion valve, refrigerant charging connections, a hot-gas muffler, compressor suction and discharge shutoff valves, a liquid-line shutoff valve, a replaceable-core filter-dryer, a sight glass with moisture indicator, a liquid-line solenoid valve, and an insulated suction line.
3. Pressure Relief Device:
 - a. Comply with requirements in ASHRAE 15 and in applicable portions of ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
 - b. ASME-rated, spring-loaded pressure relief valve; single- or multiple-reseating type.

L. Evaporator:

1. Description: Shell-and-tube design.
 - a. Direct-expansion type with fluid flowing through the shell, and refrigerant flowing through the tubes within the shell.

or
 - b. Flooded type with fluid flowing through tubes and refrigerant flowing around tubes within the shell.
2. Code Compliance: Tested and stamped according to ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
3. Shell Material: Carbon steel.
4. Shell Heads: Removable carbon-steel heads located at each end of the tube bundle.
5. Fluid Nozzles: Terminated with mechanical-coupling or flanged end connections for connection to field piping.
6. Tube Construction: Individually replaceable copper tubes with enhanced fin design, expanded into tube sheets.

M. Air-Cooled Condenser:

1. Plate-fin coil with integral subcooling on each circuit, rated at 450 psig.
 - a. Construct coil casing of galvanized or stainless steel.
 - b. Construct coils of copper tubes mechanically bonded to aluminum or copper fins.
 - c. Hail Protection: Provide condenser coils with louvers, baffles, or hoods to protect against hail damage.

2. Fans: Direct-drive propeller type with statically and dynamically balanced fan blades, arranged for vertical air discharge.
3. Fan Motors: Totally enclosed nonventilating or totally enclosed air over enclosure, with permanently lubricated bearings. Equip each motor with overload protection integral to either the motor or chiller controls.
4. Fan Guards: Steel safety guards with corrosion-resistant coating.

N. Electrical Power:

1. Factory-installed and -wired switches, motor controllers, transformers, and other electrical devices necessary shall provide a single-point, field-power connection to chiller.
2. House in a unit-mounted, NEMA 250, Type 3R enclosure with hinged access door with lock and key or padlock and key.
3. Wiring shall be numbered and color-coded to match wiring diagram.
4. Install factory wiring outside of an enclosure in a raceway.
5. Field-power interface shall be to NEMA KS 1, heavy-duty, nonfused disconnect switch.
 - a. Disconnect means shall be interlocked with door operation.
6. Provide branch power circuit to each motor and to controls with one of the following disconnecting means:
 - a. NEMA KS 1, heavy-duty, fusible switch with rejection-type fuse clips rated for fuses. Select and size fuses to provide Type 2 protection according to IEC 60947-4-1.
 - b. UL 489, motor-circuit protector (circuit breaker) with field-adjustable, short-circuit-trip set point.
7. Provide each motor with overcurrent protection.
8. Overload relay sized according to UL 1995 or an integral component of chiller control microprocessor.
9. Phase-Failure and Undervoltage Relays: Solid-state sensing with adjustable settings.
10. Control Transformer: Unit-mounted transformer with primary and secondary fuses and sized with enough capacity to operate electrical load plus spare capacity.
 - a. Power unit-mounted controls where indicated.
 - b. Power unit-mounted, ground fault interrupt duplex receptacle.
11. Control Relays: Auxiliary and adjustable time-delay relays.
12. For chiller electrical power supply, indicate the following:
 - a. Current and phase to phase for all three phases.
 - b. Voltage, phase to phase, and phase to neutral for all three phases.
 - c. Three-phase real power (kilowatts).
 - d. Three-phase reactive power (kilovolt amperes reactive).
 - e. Power factor.
 - f. Running log of total power versus time (kilowatt-hours).
 - g. Fault log, with time and date of each.

O. Controls:

1. Standalone and microprocessor based.
2. Enclosure: Share enclosure with electrical power devices or provide a separate enclosure for remote mounting in the field.

3. Operator Interface: Multiple-character digital or graphic display with dynamic update of information and with keypad or touch-sensitive display located on front of control enclosure. In either imperial or metric units, display the following information:
 - a. Date and time.
 - b. Operating or alarm status.
 - c. Operating hours.
 - d. Outdoor-air temperature if required for chilled-water reset.
 - e. Temperature and pressure of operating set points.
 - f. Entering and leaving temperatures of chilled water.
 - g. Refrigerant pressures in evaporator and condenser.
 - h. Saturation temperature in evaporator and condenser.
 - i. No cooling load condition.
 - j. Elapsed time meter (compressor run status).
 - k. Pump status.
 - l. Antirecycling timer status.
 - m. Percent of maximum motor amperage.
 - n. Current-limit set point.
 - o. Number of compressor starts.
4. Control Functions:
 - a. Manual or automatic startup and shutdown time schedule.
 - b. Entering and leaving chilled-water temperatures, control set points, and motor load limits.
 - c. Current limit and demand limit.
 - d. External chiller emergency stop.
 - e. Antirecycling timer.
 - f. Automatic lead-lag switching.
 - g. Variable evaporator flow.
5. Manually Reset Safety Controls: The following conditions shall shut down chiller and require manual reset:
 - a. Low evaporator pressure or high condenser pressure.
 - b. Low chilled-water temperature.
 - c. Refrigerant high pressure.
 - d. High or low oil pressure.
 - e. High oil temperature.
 - f. Loss of chilled-water flow.
 - g. Control device failure.
6. Trending: Capability to trend analog data of up to five parameters simultaneously over an adjustable period and frequency of polling.
7. Security Access: Provide electronic security access to controls through identification and password with at least three levels of access: view only; view and operate; and view, operate, and service.
8. Control Authority: At least four conditions: Off, local manual control at chiller, local automatic control at chiller, and automatic control through a remote source.
9. Interface with DDC System for HVAC: Factory-installed hardware and software to enable the DDC system for HVAC to monitor, control, and display chiller status and alarms.
 - a. ASHRAE 135 (BACnet) communication interface with the DDC system for HVAC shall enable the DDC system for HVAC operator to remotely control and monitor the chiller from an operator workstation. Control features and monitoring points displayed locally at chiller control panel shall be available through the DDC system for HVAC.

P. Insulation:

1. Material: Closed-cell, flexible elastomeric, thermal insulation complying with ASTM C534, Type I for tubular materials and Type II for sheet materials.
2. Thickness: 3/4 inch or 1-1/2 inches
3. Factory-applied insulation over cold surfaces of chiller components.
 - a. Adhesive: As recommended by insulation manufacturer and applied to 100 percent of insulation contact surface. Seal seams and joints.
4. Apply protective coating to exposed surfaces of insulation to protect insulation from weather.

2.3 PACKAGED, PORTABLE REFRIGERANT RECOVERY UNITS

- A. Packaged, portable unit consisting of compressor, air-cooled condenser, recovery system, tank pressure gages, filter-dryer, and valving that allows for switching between liquid and vapor recovery mode. Refrigerant recovery unit shall be factory mounted on an ASME-constructed and -stamped refrigerant storage vessel that is sized to hold the full refrigerant charge of the largest chiller furnished.

2.4 SOURCE QUALITY CONTROL

- A. Perform functional tests of chillers before shipping.
- B. Factory run test each air-cooled chiller with water flowing through evaporator.
- C. Factory performance test air-cooled chillers, before shipping, according to AHRI 550/590:
 1. Test the following conditions:
 - a. Design conditions indicated.
 - b. Reduction in capacity from design to minimum load in steps of 25 with condenser air at design conditions.
 - c. At five point(s) of varying part-load performance to be selected by Owner at time of test.
 2. Allow Owner access to place where chillers are being tested. Notify Architect 14 days in advance of testing.
 3. Prepare test report indicating test procedures, instrumentation, test conditions, and results. Submit copy of results within one week of test date.
- D. Factory sound test air-cooled chillers, before shipping, according to AHRI 370:
 1. Test the following conditions:
 - a. Design conditions indicated.
 - b. Chiller operating at calculated worst-case sound condition.
 - c. At five point(s) of varying part-load performance to be selected by Owner at time of test.
 2. Allow Owner access to place where chillers are being tested. Notify Architect 14 days in advance of testing.
 3. Prepare test report indicating test procedures, instrumentation, test conditions, and results. Submit copy of results within one week of test date.

- E. Factory test and inspect evaporator and condenser according to ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
- F. For chillers located outdoors, rate sound power level according to AHRI 370.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine chillers before installation. Reject chillers that are damaged.
- B. Examine roughing-in for equipment support, anchor-bolt sizes and locations, piping, and electrical connections to verify actual locations, sizes, and other conditions affecting chiller performance, maintenance, and operations before equipment installation.
 - 1. Final chiller locations indicated on Drawings are approximate. Determine exact locations before roughing-in for piping and electrical connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CHILLER INSTALLATION

- A. Install chillers on support structure indicated.
- B. Maintain manufacturer's recommended clearances for service and maintenance.
- C. Charge chiller with refrigerant and fill with oil if not factory installed.
- D. Install separate devices furnished by manufacturer and not factory installed.

3.3 CONNECTIONS

Comply with requirements for piping specified in Section 23 2113 "Hydronic Piping," Section 23 2116 "Hydronic Piping Specialties". Drawings indicate general arrangement of piping, fittings, and specialties.

- A. Install piping adjacent to chiller to allow service and maintenance.
- B. Evaporator Fluid Connections: Connect to evaporator inlet with shutoff valve, strainer, flexible connector, thermometer, and plugged tee with pressure gage. Connect to evaporator outlet with shutoff valve, balancing valve, flexible connector, flow switch, thermometer, plugged tee with shutoff valve and pressure gage, and drain connection with valve. Make connections to chiller with a flange or mechanical coupling.
- C. Connect each chiller drain connection with a union and drain pipe, and extend pipe, full size of connection, to floor drain. Provide a shutoff valve at each connection.

3.4 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.
 2. Verify that refrigerant charge is sufficient and chiller has been leak tested.
 3. Verify that pumps are installed and functional.
 4. Verify that thermometers and gages are installed.
 5. Operate chiller for run-in period.
 6. Check bearing lubrication and oil levels.
 7. Verify proper motor rotation.
 8. Verify static deflection of vibration isolators, including deflection during chiller startup and shutdown.
 9. Verify and record performance of fluid flow and low-temperature interlocks for evaporator and condenser.
 10. Verify and record performance of chiller protection devices.
 11. Test and adjust controls and safeties. Replace damaged or malfunctioning controls and equipment.
- B. Inspect field-assembled components, equipment installation, and piping and electrical connections for proper assembly, installation, and connection.
- C. Prepare test and inspection startup reports.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain chillers. Video record the training sessions.

END OF SECTION 23 6426.13