

# MEPNN Supplier Scouting Opportunity Synopsis

## Section 1: General Information

Scouting Number	2025-244
Item to be Scouted	Water Heater
Days to be scouted	10
Response Due By	08/09/2025
Description	DEW Construction (GC), our trade partner (Thomas Mechanical, Inc.) need assistance sourcing a BABAA compliant commercial water heater, vacuum relief valve and aluminum water heater pan. This project is for the Burlington

## Section 2: Technical Information

Type of supplier being sought	Vermont Manufacturer
Reason	2nd Supplier
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Includes but is not limited to: material selection & preparation, cutting, shaping, component manufacturing, and welding
Provide dimensions / size / tolerances / performance specifications for the item	Please see attached submittal. See highlighted section for specifications equivalent to the Rheem Professional Prestige ProTerra Hybrid Electric Heat Pump, see pages 4 - 7.
List required materials needed to make the product, including materials of product components	Includes but is not limited to heat exchangers, advanced insulation, stainless steel, glass-lined steel, tank, heat exchanger, burner assembly, and control panel(s), protective coatings (like enamel or glass lining)
Are there applicable certification requirements?	No
Are there applicable regulations?	No
Are there any other standards, requirements, etc.?	No
Additional Technical Comments	

## Section 4: Business Information

Estimated potential business volume	(1) Unit for this project.
Estimated target price / unit cost information (if unavailable explain)	Cost of the water heater is \$1,182.00.
When is it needed by?	Immediate. The project is in active construction and 6 weeks away from substantial completion.
Describe packaging requirements	Packaging is to be determined by the manufacturer such that equipment arrives undamaged to the project site.
Where will this item be shipped?	South Burlington, VT.

## Additional Comments

Is there other information you would like to include?	<p>Funding Agency: Department of Commerce, National Institute of Standards and Technology. Attached for reference is the grant award letter provided to Burlington High School for this project.</p> <p>DEW Construction, BABAA Contact: Michael Snyder, Cell: (802) 798-4976, Email: msnyder@dewconstruction.com.</p>
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**FINANCIAL ASSISTANCE AWARD****FEDERAL AWARD ID NUMBER**

60NANB23D159

**RECIPIENT NAME**

Burlington School District

**PERIOD OF PERFORMANCE**

09/01/2023 - 08/31/2026

**STREET ADDRESS**

150 Colchester Ave

**FEDERAL SHARE OF COST**

\$9,900,000.00

**CITY, STATE ZIP**

Burlington, VT 05401-1422

**RECIPIENT SHARE-OF COST**

\$0.00

**AUTHORITY**

Consolidated Appropriations Act, 2022

**TOTAL ESTIMATED COST**

\$9,900,000.00

**CFDA NO. AND NAME**

11.617 Congressionally-Identified Projects

**PROJECT TITLE:**

Burlington Aviation Technology Center Facility

This Award Document (Form CD-450) signed by the Grants Officer constitutes an obligation of Federal funding. By signing this Form CD-450, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, the Form CD-450 must be signed by an authorized representative of the Recipient and returned to the Grants Officer. If not signed and returned without modifications by the Recipient within 30 days of receipt, the Grants Officer may unilaterally withdraw this Award offer and de-obligate the funds.

☒ DEPARTMENT OF COMMERCE FINANCIAL ASSISTANCE STANDARD TERMS AND CONDITIONS

R &amp; D AWARD

FEDERAL-WIDE RESEARCH TERMS AND CONDITIONS, AS ADOPTED BY THE DEPT. OF COMMERCE

☒ SPECIFIC AWARD CONDITIONS

☒ LINE ITEM BUDGET

☒ 2 CFR PART 200, UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS, AS ADOPTED PURSUANT TO 2 CFR § 1327.101

48 CFR PART 31, CONTRACT COST PRINCIPLES AND PROCEDURES

MULTI-YEAR AWARD. PLEASE SEE THE MULTI-YEAR SPECIFIC AWARD CONDITION.

☒ OTHER(S): U.S. DEPARTMENT OF COMMERCE, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
STANDARD TERMS AND CONDITIONS FOR EXTRAMURAL CONSTRUCTION PROJECTS, MAY 11, 2023

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER

SHIOU YUN LIU

Digitally signed by SHIOU YUN  
LIU  
Date: 2023.09.15 08:23:32 -04'00'

Shiou Liu

DATE

PRINTED NAME, PRINTED TITLE, AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL

Tom Flanagan, Superintendent



DATE

9/18/23

Award Number: 60NANB23D159, Amendment Number 0

Federal Program Officer: Robert Slocum

Requisition Number: 195161

Employer Identification Number: 471351664

UEI Number: VCCSKXGSMEJ5

Recipient ID: 1155128

Requestor ID: 1155128

**Award ACCS Information**

Bureau	FCFY	Project-Task	Organization	Object Class	Obligation Amount
57	2023	1959000-000	10-19-0195-00-00-00-00	41-98-00-00	\$9,900,000.00

**Award Contact Information**

Contact Type	Contact Name	Email	Phone
Administrative	Mr. Barry Gruessner	bgruessn@bsdvt.org	8028648462

**NIST Grants Officer:**

Shiou Liu  
100 Bureau Drive, MS 1650  
Gaithersburg, MD 20899-1650  
(301) 975-8245

**NIST Grants Specialist:**

LaShae Green  
100 Bureau Drive, MS 1650  
Gaithersburg, MD 20899-1650  
(301) 975-3070

**NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
2022 CONGRESSIONALLY IDENTIFIED CONSTRUCTION GRANT PROGRAM  
FINANCIAL ASSISTANCE  
SPECIFIC AWARD CONDITIONS**

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**1. Description of Work:**

The National Institute of Standards and Technology (NIST) hereby enters into this grant number 60NANB23D159 with Burlington School District to support the work described in the proposal entitled “Burlington Aviation Technology Center Facility” dated November 17, 2022, and any revisions received during the application review, which are hereby incorporated into this award by reference.

The scope of work for this project is anticipated to provide a total building space in the range of 30,000 to 45,000 gross SF to include classrooms, offices, shops/tech areas, storage, hangar space and general building facilities with the intent to educate up to 150 high school students and adults each year with the technical center housing aviation for 11<sup>th</sup> and 12<sup>th</sup> graders as well as adult programs that finishes the airframe and powerplant training.

Work will be completed in accordance with the schedule submitted by Burlington School District in the Project Management and Schedule dated November 17, 2022.

The Burlington School District shall diligently pursue the development of the project to ensure completion within this time schedule and shall promptly notify NIST in writing of any event that could substantially delay meeting any of the prescribed time limits for the project as set forth above. The Burlington School District further acknowledges that failure to meet the development time schedule may result in NIST taking action to suspend or terminate the Award in accordance with the regulations set forth at 2 CFR § 200.339.

Where the terms of this award and the proposal differ, the terms of this award shall prevail.

**2. Recipient Contact Information:**

**Administrative:**

Barry Gruessner  
Grants Director  
Burlington School District  
150 Colchester Avenue  
Burlington, VT 05401-1422  
Telephone: 802-864-8462  
Email: [bgruessn@bsdvt.org](mailto:bgruessn@bsdvt.org)



NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

**Authorized Representative:**

Tom Flanagan  
Superintendent  
Burlington School District  
150 Colchester Avenue  
Burlington, VT 05401-1422  
Telephone: 802-865-5332  
Email: [tflanagan@bsdvt.org](mailto:tflanagan@bsdvt.org)

**3. NIST Award Contact Information:**

**Grants Officer:**

Michelle Shiouyun Liu  
National Institute of Standards and Technology  
100 Bureau Drive, Mail Stop 1650  
Gaithersburg, MD 20899-1650  
Telephone: 301-975-8245  
Email: [shiouyun.liu@nist.gov](mailto:shiouyun.liu@nist.gov)

**Grants Specialist:**

LaShae Green  
National Institute of Standards and Technology  
100 Bureau Drive, Mail Stop 1650  
Gaithersburg, MD 20899-1650  
Telephone: 301-975-3070  
Email: [lashae.green@nist.gov](mailto:lashae.green@nist.gov)

**Federal Program Officer:**

Robert Slocum  
National Institute of Standards and Technology  
100 Bureau Drive  
Gaithersburg, MD 20899  
Email: [robert.slocum@nist.gov](mailto:robert.slocum@nist.gov)

**4. Award Payments:**

This award is hereby funded through advanced payments using the Department of Treasury's Automated Standard Application for Payments (ASAP) system. Payments will be issued in accordance with 2 CFR § 200.305 and the Department of Commerce Financial Assistance Standard Terms and Conditions, B.02, dated November 12, 2020.

Payments for allowable costs may be drawn down as needed by the Recipient enrolled in ASAP. Funds may be requested through ASAP by the authorized *Payment Requestor* who is the individual designated by the Recipient to access Federal funds.

NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

This award has the following control or withdrawal limits set in ASAP:

- ☐ None
- ☐ Agency Review required for all withdrawals (see explanation below)
- ☐ Agency Review required for all withdrawal requests over  
\$ \_\_\_\_\_ (see explanation below)
- ☒ Maximum Draw Amount controls (see explanation below)
  - \$ \_\_\_\_\_ each month
  - \$ \_\_\_\_\_ each quarter
  - \$0.00 \_\_\_\_\_ Max drawdown amount

**Explanation:**

**Environmental & Historic Compliance Requirements**

A total of \$9,900,000.00 in Federal funding is hereby withheld until the requirements identified in Specific Award Condition (SAC) #17 Environmental and Historic Review is satisfied. A Six-Month Expenditure Plan may be submitted to request funding for expenditures limited to Environmental and Historic Requirement compliance as identified in SAC #17.

In addition, the final site selection for the Burlington Aviation Technology Center Facility must be provided to NIST and approved by NIST prior to advertisement of construction. All federal funding is hereby withheld until this requirement is satisfied, as identified in SAC #19 Final Site Selection, below.

**5. Return Payments for Funds Withdrawn through ASAP:**

Funds that have been withdrawn through ASAP may be returned to ASAP via the Automated Clearing House (ACH) or via FEDWIRE. The ACH or FEDWIRE transaction may only be completed by the Recipient's financial institution. Full or partial amounts of payments received by a Payment Requestor/Recipient Organization may be returned to ASAP. All funds returned to the ASAP system will be credited to the ASAP Suspense Account. The Suspense Account allows the Regional Financial Center to monitor returned items and ensure that funds are properly credited to the correct ASAP account. Returned funds that cannot be identified and classified to an ASAP account will be dishonored and returned to the originating depository financial institution (ODFI). The Payment Requestor/Recipient Organization should notify the NIST Grants Office and provide a reason whenever return payments are made.

It is essential that the Payment Requestor/Recipient Organization provide its financial institution with ASAP account information (ALC, Recipient ID and Account ID) to which the return is to be credited. Additional detailed information is accessible at:  
<https://www.fiscal.treasury.gov/asap/>.

**6. Period of Performance and Funding Limitations:**

NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

The period of performance and budget incorporated into this award cover a 3-year period of performance and provide for a maximum total amount of \$9,900,000.00 in Federal funding. This award is being fully funded via this award action.

The maximum amount of NIST funding in support of this award will not exceed the amount specified in the award documents, unless otherwise amended in writing by the NIST Grants Officer. The Department of Commerce is not liable for any obligations, expenditures, or commitments which involve any amount in excess of the Federal funds being made available pursuant to this award.

**7. Request for Application - 2022 Congressionally Identified Construction Grant Program:**

The Department of Commerce, National Institute of Standards and Technology Request for Application (RFA) No. 2022-NIST-RFA-CICGP-01, dated October 18, 2022, is incorporated by reference into this award. It is accessible at:

<https://www.grants.gov/web/grants/view-opportunity.html?oppId=344108>

**8. Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements:**

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements as published in the *Federal Register* on December 30, 2014 (79 FR 78390) is incorporated by reference into this award. It is accessible at:

<http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf>.

**9. Uniform Administrative Requirements, Cost Principles and Audit Requirements**

Through 2 C.F.R. § 1327.101, the Department of Commerce adopted Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which apply to awards in this program. Refer to <http://go.usa.gov/SBYh> and <http://go.usa.gov/SBg4>. Awards issued pursuant to this program may be subject to specific award conditions as authorized by 2 C.F.R. § 200.208.

**10. Deviation to the Department of Commerce Financial Assistance Standard Terms and Conditions, Section A.01 "Reporting Requirements":**

The Recipient must submit a Federal Financial Report (SF-425) and Performance Progress Report on a quarterly basis for the periods ending March 31, June 30, September 30, and December 31, or any portion thereof.

Reports are due no later than 30 calendar days following the end of each reporting period. A final SF-425 and Performance Progress Report must be submitted within 120 days after the expiration of the period of performance.

All SF-425 and Performance Progress Reports must be submitted to: [GReports@nist.gov](mailto:GReports@nist.gov), within the prescribed timeframes identified in the terms and conditions of the award.

The Recipient organization name, NIST award number, and reporting period must be included in the email subject line. The Recipient contact information should be included in the body of the message. To the greatest extent possible, SF-425 and Performance Progress Reports should be submitted together in the same email.

SF-425 and Performance Progress Reports must not be sent directly to NIST personnel (e.g. Grants Specialist, Grants Officer, Administrative Assistant, GMD Division Chief, Federal Program Officer, etc.).

Any SF-425 or Performance Progress Reports sent directly to NIST personnel will be returned to the sender with instructions on how to submit through the [GReports@nist.gov](mailto:GReports@nist.gov) mailbox.

No other correspondence may be sent through this mailbox; timely responses to any other inquiries received in this mailbox are not guaranteed. The mailbox will not be used for any other purpose except for purposes identified above.

**11. Department of Commerce Financial Assistance Standard Terms and Conditions:**

As indicated on the Form CD-450 for this award, the Department of Commerce Financial Assistance Standard Terms and Conditions (ST&C) issued November 12, 2020, are incorporated by reference into this award. The Department's ST&C, as well as a link to 2 CFR Part 200, are accessible at: <https://www.commerce.gov/oam/policy/financial-assistance-policy>.

**12. NIST Standard Terms and Conditions for Extramural Construction Projects:**

As indicated on the Form CD-450 for this award, the National Institute of Standards and Technology Standard Terms and Conditions for Extramural Construction Projects (Construction ST&Cs) dated May 11, 2023 are incorporated by reference into this award. The Construction ST&Cs are accessible at [NIST Standard Terms and Conditions for Extramural Construction Projects | NIST](#).

**13. Unfunded Grant Actions Mailbox (UGAM):**

Requests for unfunded award actions, which include, but are not limited to, requests for no-cost extension, change in key personnel, change in scope of work, and budget revisions must be submitted to: [UGAM@nist.gov](mailto:UGAM@nist.gov), within the prescribed timeframes identified in the terms and conditions of the award.

NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

Unfunded award action requests and related correspondence, including justification to support the request, sent to the mailbox must contain the following information in the email subject line: (1) Recipient name; (2) NIST award number; (3) Principal Investigator/Project Director; and (4) Action being requested (e.g. no cost extension, change in key personnel, etc.).

Unfunded award action requests must not be sent directly to NIST personnel (e.g. Grants Specialist, Grants Officer, Administrative Assistant, GMD Director, Federal Program Officer, etc.).

Any requests sent directly to NIST personnel will be returned to the sender with instructions on how to submit through the UGAM@nist.gov mailbox.

No other correspondence may be sent through this mailbox; timely responses to any other inquiries received in this mailbox are not guaranteed. The mailbox will not be used for any other purpose except for purposes identified above.

Requests that are processed will be authorized via a Form CD-451 Amendment to the Financial Assistance Award or a Non-Funded Administrative Change Letter.

**14. Supervision of the Recipient's Staff and Associates and Compliance with NIST Policies on Use of Federal Facilities and Equipment:**

Consistent with Department of Commerce Financial Assistance Standard Terms and Conditions, Section A.05, nothing in this award will be construed as authorizing the Recipient or its employees, agents, or assigns to act as an agent or assign of NIST, and the Recipient must exercise all diligence to ensure that no third party construes the Recipient as an actual, ostensible, or apparent agent of NIST. For purposes of this award, the use of the term "personnel" herein includes all third parties, such as contractors, subrecipients, students, fellows, or others participating under the direction of the Recipient's programs. The Recipient acknowledges that it is independent of NIST in the performance of the approved projects, and that the Recipient assumes full and sole responsibility for all benefits and protections of the Recipient's personnel and agents whose services are utilized by the Recipient in the execution of this award.

Accordingly, the Recipient must control the means and manner of its personnel's activities on the project, including those conducted on a NIST campus, on Recipient property, and at other locations for the project. The Recipient must directly provide a salary, stipend, or other funding to the personnel, and must establish the work schedule and tenure for the personnel. The Recipient is the supervisor of record for the personnel and will coordinate with NIST as needed to ensure that the research remains consistent with NIST program objectives.

**15. Estimated Useful Life:**

The estimated useful life of the building renovation portion of this project is 15 years from when the date on which the Certificate of Occupancy for the renovations is issued.

**16. Property Trust Relationship and Public Notice Filings for Grant-Acquired Property:**

In accordance with 2 CFR § 200.316 (Property trust relationship), real property, equipment, and intangible property, that are acquired or improved with a Federal award must be held in trust by the non-Federal entity (*i.e.*, Recipient or Subrecipient) as trustee for the beneficiaries of the project or program under which the property was acquired or improved. This trust relationship exists throughout the duration of the property's estimated useful life, as determined by the Grants Officer in consultation with the Program Office, during which time the Federal Government retains an undivided, equitable reversionary interest in the property (Federal Interest). The non-Federal entity must comply with all use and disposition requirements and restrictions as set forth in 2 C.F.R. §§ 200.310 (Insurance coverage) through 200.316 (Property trust relationship), as applicable, and in the terms and conditions of the Federal award.

The Grants Officer may require a non-Federal entity (*i.e.*, a Recipient or Subrecipient) to execute and to record (as applicable) a statement of interest, financing statement (Form UCC-1), lien, mortgage or other public notice of record to indicate that real or personal property acquired or improved in whole or in part pursuant to this award is subject to the Federal Interest, and that certain use and disposition requirements apply to the property. The statement of interest, financing statement (Form UCC-1), lien, mortgage or other public notice must be acceptable in form and substance to the NIST Grants Officer and must be placed on record in accordance with applicable State and local law, with continuances re-filed as appropriate. In such cases, the NIST Grants Officer may further require the non-Federal entity to provide a written statement from a licensed attorney in the jurisdiction where the property is located, certifying that the Federal Interest has been protected, as required under the award and in accordance with applicable State and local law. The attorney's statement, along with a copy of the instrument reflecting the recordation of the Federal Interest, must be promptly returned to the Grants Officer.

Without releasing or excusing the non-Federal entity from these obligations, the non-Federal entity, by execution of the financial assistance award or by expending Federal financial assistance funds (in the case of a subrecipient), authorizes the NIST Grants Officer to file such notices and continuations as it determines to be necessary or convenient to disclose and protect the Federal Interest in the property. The NIST Grants Officer may elect not to release any or a portion of the Federal award funds until the non-Federal entity has complied with this provision and any other applicable award terms or conditions, unless other arrangements satisfactory to the NIST Grants Officer are made.

**17. Environmental and Historic Review:**



NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

The Recipient must comply with all applicable requirements, environmental and historic preservation laws, Executive Orders, regulations, standards, and guidance, and identify to NIST any impact a project may have on the environment or historic resources.

**Project implementation may not begin prior to the completion of a review of potential environmental impacts, per the National Environmental Policy Act of 1969 (42 U.S.C. 4321, et. seq.) (NEPA) and Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. § 470, et. seq.).**

The completion of NEPA compliance activities will result in one of the following: a Categorical Exclusion, an Environmental Assessment/Finding of No Significant Impact (EA/FONSI), or an Environmental Impact Statement. A decision document will not be issued until all required consultations, including, Section 7 of the Endangered Species Act (16 U.S.C. §1531, et. seq.), and any other required consultations are complete. The Recipient must also address compliance with all other applicable federal, state, and local environmental laws and regulations.

Under Section 106 of the NHPA, federal agencies, and by extension recipients of federal grant funds, must evaluate the potential effects of any proposed projects (“undertakings”) on properties listed on, or eligible for listing on, the National Register of Historic Places. Grant recipients are encouraged to initiate Section 106 consultation with relevant State Historic Preservation Offices (SHPOs) or, in the case of institutions located on tribal lands, the proper Tribal Historic Preservation Office (THPO) as directed by NIST. NIST will remain involved in resolution in the event of an adverse effect determination.

**A Environmental and Historic Review, to include any required consultations under NEPA and Section 106 of the NHPA, must be completed no later than six months after the award start date; unless a formal request for extension is submitted and approved by the Grants Officer. The Recipient must comply with all conditions placed on the project as the result of the consultation processes. The Recipient may not expend any federal grant funds, except as authorized by the Grants Officer pursuant to approval of the 6-month expenditure plan (discussed below).**

The Recipient is required to provide the following information that will enable NIST to make a preliminary determination regarding the potential impact of the proposed project on environmental and historic resources:

**1. A thorough description of all proposed project activities, particularly buildings and other capital improvement activities that will be conducted. Include: (i) the area and extent of earthwork (drilling, excavation, fill, blasting, dredging, etc.), (ii) environmental communication, documentation, or permitting (planned, pending, or in place), (iii) any determination upon the project by any department of environment or other agency or office, (iv) floodplain mapping on the site itself or any adjacent or contiguous property, (v) any special interest in the project or the site, (vi) any public meetings planned or held regarding the on the site itself or adjacent or contiguous property, (vii) any threatened or**

endangered species or any migratory birds or bald or golden eagles on the site itself or adjacent or contiguous property, or (viii) any essential fish habitat or any portion of the National Wild and Scenic River System or Coastal Barrier System or navigable waters on the site itself or adjacent or contiguous property, (ix) any waters of any stream or other body of water “proposed or authorized, permitted or licensed to be impounded, diverted, or otherwise controlled or modified”, (x) any identified or potential wetland on the site itself or any adjacent or contiguous property, (xi) any hazardous or regulated substances or Superfund activity on the site itself or adjacent or contiguous property, and/or (xii) any invasive species on the site itself or adjacent or contiguous property.

2. Maps of the project area and ground-level and aerial photographs with installation/renovation locations clearly marked on the buildings impacted. Free online resources, such as Google maps or similar images, are acceptable.

3. For the list of buildings, referenced in Item #1, state the year those buildings were first constructed as well as the dates of any subsequent major renovations. For buildings that are 45 years old or older, provide photos of installation sites, as well as exterior and interior photos of the building. Provide any property relevant to this application which is (i) within the viewshed of a registered historic property or (ii) within a historic district or (iii) registered as historic itself or (iv) noted to be historically or architecturally significant in any study or article of public interest. Provide any communication, documentation, or permitting under the project, e.g., determination upon the project by a SHPO and/or THPO.

**NOTE: The Recipient must submit a draft Environmental and Historic Review with all initial required project information listed above in Items #1 – #3 to NIST via UGAM@nist.gov no later than 60 calendar days after award start date, unless an extension has been requested in writing by the Recipient and approved by the Grants Officer.**

Follow-on information may be required for NIST to determine the level of impacts of the project on environmental and historic resources. If consultation is required, grantees are encouraged to initiate consultation as referenced above and must provide NIST with relevant documentation of the consultation process. Once appropriate and applicable consultations have been completed, and environmental review documentation has been completed, NIST will review all documentation and determine whether the review sufficiently addresses all resource areas and whether the project may qualify for an approval decision.

Once the above information is provided, NIST will review and provide guidance on the next steps that the recipient should take regarding required consultations and/or environmental and historic preservation documentation required to make environmental determinations. Next steps may include, but are not limited to, the submittal and completion of the following:



1. The completion of any required consultations as described above where applicable and directed by NIST, to include consultations with the SHPO and/or THPO and the appropriate federally-recognized Native American tribes (if applicable), under Section 106 of the NHPA, and/or consultations with the USFWS under Section 7 of the ESA;
2. The completion of environmental review and issuance by NIST of a decision document, as described above, that meets the requirements of NEPA; and
3. Compliance with all other applicable federal, state, and local environmental laws and regulations.

The Recipient is required to provide any information requested by NIST in a timely and effective manner to ensure both initial and ongoing compliance with environmental and historic preservation laws, regulations, and best practices. All such information must be sent to the FPO.

The Recipient shall notify NIST within 24 hours upon receipt of any notices of foreclosure; notices for continuing consultation received from the SHPO, THPO or other consulting party; or notices of noncompliance received from consulting authorities or regulatory agencies. These notices shall be sent to the FPO. Projects which, after consultation with appropriate agencies, are determined to be ineligible for a CE will require the development of an EA/FONSI. The Recipient may wish to coordinate with NIST to rescope or descope the proposed project to avoid or minimize impacts to environmental and historic resources.

Any change to the approved project scope, resulting from consultations or for other reasons, that have the potential for altering the nature or extent of environmental or cultural resources impacts must immediately be brought to the attention of NIST and will be re-evaluated for compliance with applicable regulatory requirements.

For all ground disturbing activities in the vicinity of known archaeological sites or suspected or known burials, the Recipient must ensure that an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards monitors ground disturbance, and if any potential archeological resources or buried human remains are discovered, then the Recipient must immediately cease construction in that area and notify NIST and the interested SHPO, THPO, and tribes. Such construction activities may then only continue with the written approval of NIST.

#### **6-Month Expenditure Plan**

While this SAC is in effect, the Recipient shall submit, in advance of any program fund drawdowns from ASAP.gov, a 6-month expenditure plan that presents the proposed expenditure of award funds prior to the completion of the environmental review process, including any preliminary procurement activities. The NEPA Coordinator and the Federal

Preservation Officer will review the plan and provide recommendations to the Federal Program Officer and the Grants Officer for final approval to ensure that the proposed activities and expenditures are reasonable and necessary in the context of environmental and historical compliance. Approval of the Grants Officer is required prior to fund drawdowns of the 6-Month Expenditure Plan through ASAP.gov.

The allowable use of funds for preliminary expenditures prior to beginning project implementation includes, but is not limited to, the initiation of activities necessary to meet the project completion requirements as specified in the award including environmental and historic preservation requirements:

1. Required environmental and historic preservation consultation activities;
2. Purchase or lease of equipment, or entering into binding contracts to do so; and
3. Purchase of applicable or conditional insurance.

The allowable use of preliminary expenditure funds is limited; must not result in an irrevocable commitment of resources; and is only allowed after inclusion in and approval of a 6-month expenditure plan.

#### **18. Signage and Public Acknowledgement Requirements:**

a. Signs - The Recipient is encouraged to include project signage, satisfactory in form and content to NIST, that identifies the nature of the project and indicates that “the project is funded by the Consolidated Appropriations Act, 2022.” In addition, guidelines for project signage, including an emblem and corresponding logomark, is available in the Official Investing in America Emblem Style Guide: <https://www.whitehouse.gov/wp-content/uploads/2023/02/Investing-in-America-Brand-Guide.pdf>. Costs associated with signage must be reasonable and limited. The Recipient is encouraged to use recycled or recovered materials when procuring signs. Signs should not be produced or displayed if doing so results in unreasonable cost, expense, or recipient burden. Any construction site sign should be displayed throughout the construction phase of the project in an easily visible location directly linked to the work taking place. The Recipient is responsible to maintain the sign in good condition throughout the construction period.

b. Plaque - Any plaque installed at the discretion of the Recipient, citing the origins or history of the project, should identify the project as a “project funded by Consolidated Appropriations Act, 2022.”

c. Communications - Any banner or other message intended for public display on the project site should remain within the spirit of transparency and public information provided herein.

#### **19. Final Site Selection:**

NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

Within 60 calendar days of the award start date, the Recipient must provide to the Federal Program Officer and Grants Specialist identified in this award, a final site selection for the Burlington Aviation Technology Center Facility. The site selection must be approved by NIST prior to advertisement of construction. All grant funding will be withheld until this Specific Award Condition is deemed satisfied in writing by the NIST Grants Officer.

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**End of Specific Award Conditions**

### BUDGET INFORMATION - Construction Programs

*NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.*

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
2. Land, structures, rights-of-way, appraisals, etc.	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
3. Relocation expenses and payments	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
4. Architectural and engineering fees	\$ <input type="text" value="947,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="400,000.00"/>
5. Other architectural and engineering fees	\$ <input type="text" value="50,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="50,000.00"/>
6. Project inspection fees	\$ <input type="text" value="600,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="600,000.00"/>
7. Site work	\$ <input type="text" value="7,050,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="7,050,000.00"/>
8. Demolition and removal	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
9. Construction	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
10. Equipment	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
11. Miscellaneous	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
12. SUBTOTAL (sum of lines 1-11)	\$ <input type="text" value="8,647,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="8,100,000.00"/>
13. Contingencies	\$ <input type="text" value="1,800,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="1,800,000.00"/>
14. SUBTOTAL	\$ <input type="text" value="10,447,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="9,900,000.00"/>
15. Project (program) income	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ <input type="text" value="10,447,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="9,900,000.00"/>
<b>FEDERAL FUNDING</b>			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.			Enter eligible costs from line 16c Multiply X <input type="text" value="100"/> % \$ <input type="text" value="9,900,000.00"/>



**SECTION 22 3000**  
**PLUMBING EQUIPMENT**

Job #	10424
Cost #	
Construction Set	
Received	11/7/2024
DEW CONSTRUCTION	

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Water Heaters:
  - 1. Commercial hybrid heat-pump electric.
- B. In-line circulator pumps.

**1.02 REFERENCE STANDARDS**

- A. UL 174 - Standard for Household Electric Storage Tank Water Heaters.

**1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.
- B. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittals procedures.
- B. Product Data:
  - 1. Provide electrical characteristics and connection requirements.
- C. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Certifications:
  - 1. Water Heaters: NSF approved.
  - 2. Electric Water Heaters: UL listed and labeled to UL 174.
  - 3. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.
- C. Identification: Provide pumps with manufacturer's name, model number, and rating/capacity identified by permanently attached label.
- D. Performance: Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, operate within 25 percent of midpoint of published maximum efficiency curve.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

**1.07 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer warranty for domestic water heaters.

**PART 2 PRODUCTS**

**2.01 WATER HEATERS**

- A. Commercial Hybrid Heat-Pump Electric:
  - 1. Type: Factory-assembled and wired, electric, vertical storage.
  - 2. Performance: See schedule on drawings.
  - 3. Electrical Characteristics: See schedule on drawings.
  - 4. Tank: Glass lined welded steel; 4 inch diameter inspection port, thermally insulated with minimum 2 inches glass fiber encased in corrosion-resistant steel jacket; baked-on enamel finish.

5. Controls: Automatic immersion water thermostat; externally adjustable temperature range from 60 to 180 degrees F, flanged or screw-in nichrome elements, high temperature limit thermostat.
6. Accessories:
  - a. Water Connections: Brass.
  - b. Dip Tube: Brass.
  - c. Drain valve.
  - d. Anode: Magnesium.
  - e. Temperature and Pressure Relief Valve: ASME labeled.
7. Heating Elements: Flange-mounted immersion elements; individual elements sheathed with Incoloy corrosion-resistant metal alloy, rated less than 75 W/sq in.

## **2.02 IN-LINE CIRCULATOR PUMPS**

- A. Casing: Bronze, rated for 125 psig working pressure, with stainless steel rotor assembly.
- B. Impeller: Bronze.
- C. Shaft: Alloy steel with integral thrust collar and two oil lubricated bronze sleeve bearings.
- D. Seal: Carbon rotating against a stationary ceramic seat.
- E. Drive: Flexible coupling.
- F. Performance: See schedule on drawings.
- G. Device to be provided with the packaged mixing valve system scheduled on drawings and shown in elevation on plans.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install plumbing equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any.
- B. Coordinate with plumbing piping and related fuel piping work to achieve operating system.
- C. Pumps:
  1. Decrease from line size with long radius reducing elbows or reducers. Support piping adjacent to pump such that no weight is carried on pump casings. Provide supports under elbows on pump suction and discharge line sizes 4 inches and over.
  2. Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, and operate within 25 percent of midpoint of published maximum efficiency curve.

**END OF SECTION 22 3000**



**DEW Construction**  
277 Blair Park Road, Suite 130  
Williston, Vermont 05495  
P: (802) 872-0505

**Project: 10424 Burlington Tech Center Aviation**  
200 DaVinci Drive  
South Burlington, Vermont 05403

## Submittal #223000-1.0 - Water Heater - PD 223000 - Plumbing Equipment

<b>Revision</b>	0	<b>Submittal Manager</b>	Becky St. George (DEW Construction)
<b>Status</b>	Open	<b>Date Created</b>	Dec 11, 2024
<b>Issue Date</b>		<b>Spec Section</b>	223000 - Plumbing Equipment
<b>Responsible Contractor</b>	Thomas Mechanical, Inc.	<b>Received From</b>	Leslie Davis (Thomas Mechanical, Inc.)
<b>Received Date</b>	Jan 6, 2025	<b>Submit By</b>	Dec 16, 2024
<b>Final Due Date</b>	Jan 21, 2025	<b>Lead Time</b>	
		<b>Cost Code</b>	
<b>Location</b>		<b>Type</b>	Product Information
<b>Submittal Package</b>			
<b>Approvers</b>	Michael Snyder (DEW Construction), Mike Eckhardt (McFarland Johnson)		
<b>Ball in Court</b>	Michael Snyder (DEW Construction)		
<b>Distribution</b>	Adam Frosino (McFarland Johnson), Becky St. George (DEW Construction), Deanna Utter (Sheet Metal Specialists), Leslie Davis (Thomas Mechanical, Inc.), Liza MacAuley (Thomas Mechanical, Inc.), Marty Spaulding (PCI - Capital Project Consulting), Mike Eckhardt (McFarland Johnson), Neil Valley (Thomas Mechanical, Inc.), Ron Snyder (PCI - Capital Project Consulting), Sara Bosworth (DEW Construction)		
<b>Description</b>	<b>2025-01-07: R0</b>  Included in this submittal are the following:  1. Rheem Proterra Hybrid Electric Water Heater - PD & SD ( <b>spec manuf. &amp; product</b> )		

### Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Michael Snyder		Jan 7, 2025			
Mike Eckhardt		Jan 21, 2025			



#### SHOP DRAWING / SUBMITTAL REVIEW

Checking is only for conformity to the design concept of the project and compliance with the information given in the contract documents and specifications. The Trade Partner is responsible for dimensions, to be confirmed and correlated at the project site, for information that pertains solely to the fabrication, the techniques of construction and for the coordination of their work with all trades.

**Project #: 10424 – Burlington Tech Center Aviation @ BTV**

**Reviewed By: Michael Snyder, LEED AP BD+C**      **Date: 2025-01-07**



**Thomas Mechanical Inc.**  
**90 Ethan Allen Drive**  
**South Burlington, VT 05403**  
Phone (802) 865-9119  
Fax (802) 865-9501

## **Submittal Cover Sheet:**

Project Name: **BSD Aviation Technical Center**

Date: **01/06/2025**

Architect: **Freeman French Freeman, Inc.**

Contractor: **DEW Construction**

Engineer: **MCFarland - Johnson**

Specification Section: **Mechanical 22/23**

Revision:

Submitted per Specification Section: **Plumbing Equipment**

Drawing #/Detail Reference:

Supplier: **FW Webb**

Manufacturer: **Various**

Substitution:

Color Selection Required:

Lead Time Upon Approval:

IOM Included:

Items Submitted:

**Plumbing Equipment: Water Heater**

**Tagged: DWH-1**

VENDOR PART	VENDOR	DESCRIPTION	PAGE
PROPH40T2RH400-30	Rheem	HP RHEEM PROTERRA 40GAL HYBRID ELEC	88
0556031	Watts	Lfn36m1 3/4 3/4 In Lead Free Brass Vacuum Relief Valve, Male Npt, Protective Cap	92
34084	Oatey Manufacturing	26 In. Aluminum Water Heater Pan	94



The new degree of comfort.®



Residential Electric  
**Professional Prestige ProTerra**  
Hybrid Electric Heat Pump Water Heaters

## Professional Prestige® ProTerra® Hybrid Electric Heat Pump is the most efficient water heater available

### Efficiency

- Up to 4.07 UEF reduces operating cost
- ENERGY STAR® certified
- Title 24 Compliant (JA13 Ready)

### Performance

- Delivers hot water faster than most standard electric water heaters – 60-87 gallons first-hour delivery, depending on model
- Ambient operating range: 37-145° F is widest in class, offering more heat pump operation annually; designed to meet Northern Climate Spec (Tier 4)
- Quiet Operation

### Easy Installation

- Universal top and side water connections
- Quick access to electrical junction box
- Duct ready design
- Easily replaces a standard electric water heater

### Integration

- Electronic control for easy temperature adjustment and mode management
- Audible alarm for service alerts
- EcoNet® Wi-Fi\* and free mobile app gives users control over water heater, allowing for customizable temperature, vacation settings, energy savings and system monitoring at home or away
- Demand Response Ready with built-in EcoPort™ (CTA-2045 Port)
- Easily add leak detection and prevention with the leak sensor and shut-off valve kit (part# SP21265A sold separately)

### Operation Modes

- Energy Saver
- Heat Pump
- High Demand
- Electric
- Vacation/Away: 2-28 days (or placed on hold indefinitely)

### Plus...

- Premium grade anode rod extends the life of the tank
- Dip tube diffuser reduces sediment improving efficiency and tank life
- 3/4" NPT water inlet and outlet; 3/4" condensate drain connections
- Incoloy stainless steel resistor elements
- Dry-fire protection
- Easy access, top mounted washable air filter
- 2" Non-CFC foam insulation
- Enhanced flow brass drain valve
- Temperature and pressure relief valve installed
- Design certified to NSF/ANSI 372 (Lead Content)

### Warranty

- 10-Year limited tank and parts warranty  
See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



## Professional Prestige ProTerra Hybrid Electric Heat Pump

40, 50, 65 and 80-Gallon Capacities  
208-240 Volt / 1 PH  
30 and 15 Amp Electric



LEED Points = 3

\*Wi-Fi broadband internet connection required.

See specifications chart on next page.



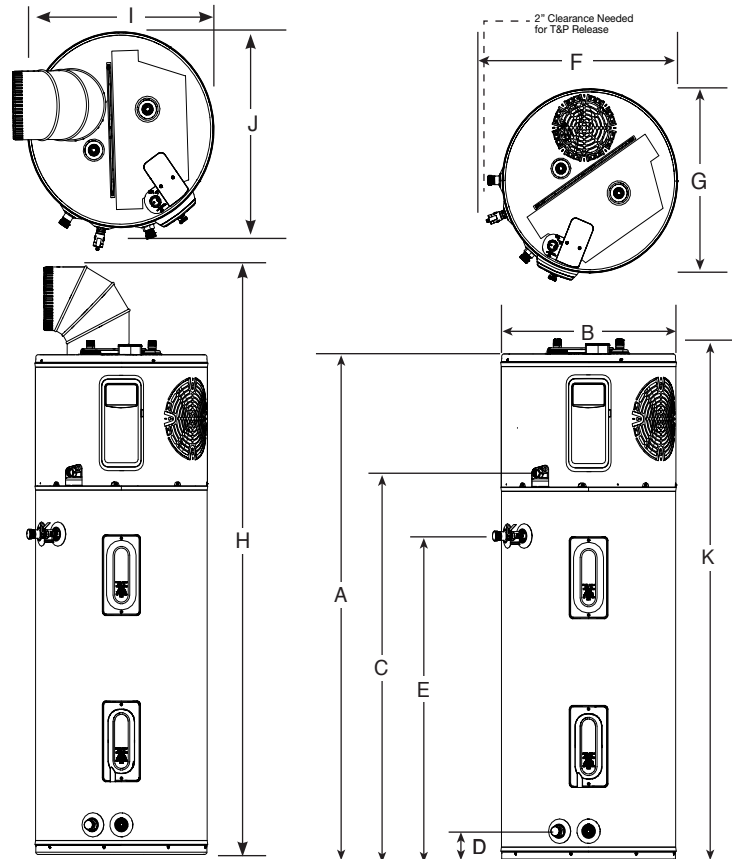
INTEGRATED HOME COMFORT

05/24 WP FORM NO. HP-400-NO SO

## Professional Prestige® ProTerra Hybrid Electric Heat Pump Specifications

DESCRIPTION					ENERGY INFO		FEATURES					SHIPPING WEIGHTS	
NOMINAL GALLON CAPACITY	RATED GALLON CAPACITY	MODEL NUMBER	MODEL VARIANT	ELECTRIC BREAKER SIZE	UNIFORM ENERGY FACTOR (UEF)	COMPRESSOR BTU/H	UEF FIRST HR. RATING G.P.H.	RECOVERY IN G.P.H. 90° F RISE	ELEMENT WATTAGE	TOTAL UNIT WATTAGE	MAX AMPS	UNIT WT. (LBS.)	APPROX. SHIP WT. (LBS.)
<b>ProTerra 30 Amp</b>													
40	36	PROPH40 T2 RH400-30	702303	30	3.83	4,200	60	27	4,500	5,000	21	166	184
50	45	PROPH50 T2 RH400-30	702300	30	3.88	4,200	67	27	4,500	5,000	21	185	203
65	59	PROPH65 T2 RH400-30	702302	30	4.05	4,200	76.6	27	4,500	5,000	21	245	289
80	72	PROPH80 T2 RH400-30	702344	30	4.07	4,200	87	27	4,500	5,000	21	261	306
<b>ProTerra 15 Amp</b>													
40	36	PROPH40 T2 RH400-15	702293	15	3.45	4,200	46	16	2,250	2,750	12	166	184
50	45	PROPH50 T2 RH400-15	702297	15	3.75	4,200	52	16	2,250	2,750	12	185	203
65	59	PROPH65 T2 RH400-15	702292	15	3.55	4,200	54	16	2,250	2,750	12	245	289
80	72	PROPH80 T2 RH400-15	702295	15	3.70	4,200	67	16	2,250	2,750	12	261	306

Uniform Energy Factor and rated gallon capacity based on Department of Energy (DOE) requirements.  
All units have integrated Wi-Fi control board.

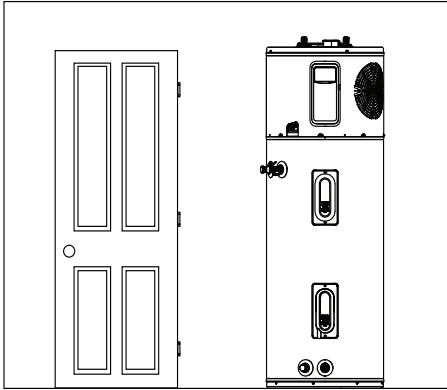


DESCRIPTION		DIMENSIONS (SHOWN IN INCHES)											
NOMINAL GALLON CAPACITY	MODEL NUMBER	A	B	C	D	E	F	G	H	I	J	K	
40	PROPH40	62-5/16	20-1/4	47	3-5/8	39-5/8	25-3/8	20-1/2	78-7/8	20-1/4	21-3/4	64-15/16	
50	PROPH50	61-3/4	22-1/4	47	3-5/8	39-5/8	27-3/8	22-1/2	78-5/8	22-1/4	21-3/4	64-3/8	
65	PROPH65	64-3/16	24-1/4	49	3-7/8	42-3/8	29-1/2	24-5/8	81-1/8	24-1/4	25-13/16	66-13/16	
80	PROPH80	74-3/16	24-1/4	59	3-7/8	42-3/8	29-1/2	24-5/8	91	24-1/4	25-11/16	76-13/16	

## Hybrid Electric Heat Pump Water Heater Installation Guidelines to Provide Optimal Efficiency

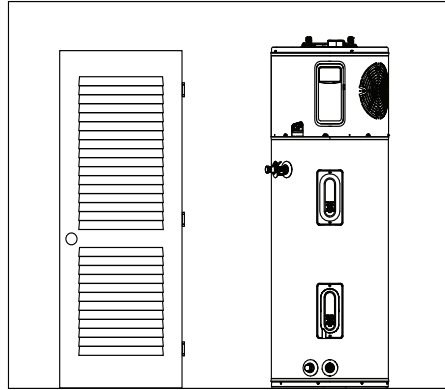
### Heater: Not Ducted

Room size: Larger than 700 ft<sup>3</sup> (e.g. 7' x 10' x 10').  
Requirements: No additional ventilation needed.



### Heater: Not Ducted

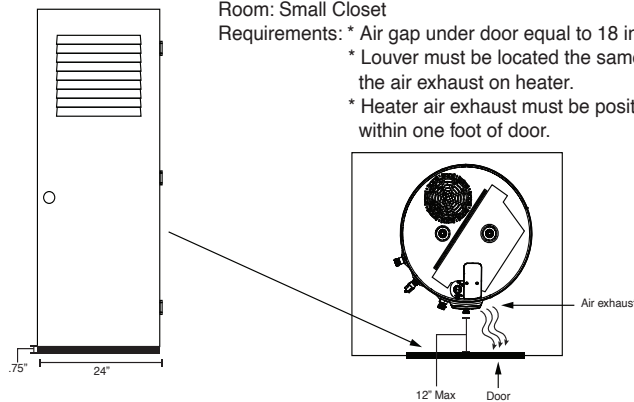
Room size: Smaller than 700 ft<sup>3</sup> (e.g. 7' x 10' x 10').  
Requirements: Full louvered door OR two louvers top and bottom. See below.



### Heater: Not ducted

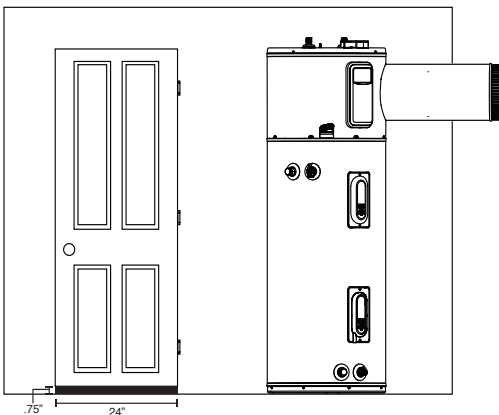
Room: Small Closet

Requirements: \* Air gap under door equal to 18 in<sup>2</sup> (0.75" clearance).  
\* Louver must be located the same height on door as the air exhaust on heater.  
\* Heater air exhaust must be positioned towards louver within one foot of door.



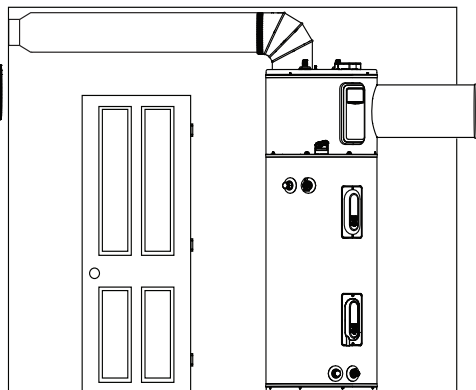
### Heater: Ducted with inlet OR outlet duct

Room size: Any size room  
Requirements: Air gap under door equal to 18 in<sup>2</sup> (0.75" clearance)



### Heater: Ducted with inlet AND outlet duct

Room size: Any size room  
Requirements: No additional ventilation needed.



**NOTE:** Heat pump water heater will operate in rooms less than 700 ft<sup>3</sup> down to 450 ft<sup>3</sup> but at reduced energy efficiency and reduced performance output. Reduced energy efficiency and performance has not been evaluated by Rheem Manufacturing and not recommended for optimal performance of the unit. When unit is operated in a small enclosure, a door or wall with a minimum of 2.3 sq ft of louvers is recommended to provide proper air changes for unit function.



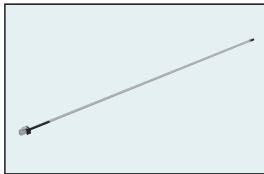
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Residential Electric  
**Professional Prestige ProTerra**  
 Hybrid Electric Heat Pump Water Heaters

## Hybrid Electric Heat Pump Accessories List

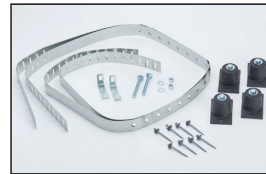
PART NUMBER	DESCRIPTION	USE FOR
AP19134	Leak Sensor	Automatic detection of internal and external leaks
AS50618A	Shutoff Valve	Automatic shut off of water supply to unit
SP20882	Earthquake Isolation Kit	Installations in seismic regions
SP20883	Vibration Isolation Kit	Installation on non-concrete floors
SP20884	8" Diameter UL Certified Termination Kit	Termination to the outside or to the attic with 8" diameter
SP20885	7" Diameter UL Certified Termination Kit	Termination to the outside or to the attic with 7" diameter
SP20886	6" Diameter UL Certified Termination Kit	Termination to the outside or to the attic with 6" diameter
SP20887	5" Diameter UL Certified Termination Kit	Termination to the outside or to the attic with 5" diameter
SP20888	8" Collar for Flex Venting	Exhaust only to the outside ducting configuration (no inlet duct)
SP20889	25' Flexible 8" Diameter Duct Kit	For up to 25' of ducting
SP20890	Rigid Elbow Duct Kit	Installation in tight places where space needs to be minimized
<b>UPGRADE KIT</b>		
SP21265A	Kit - Automatically Shutoff Valve Assembly	Add leak detector, shutoff valve and S.O.V. extension harness for top connection setup



Leak Sensor



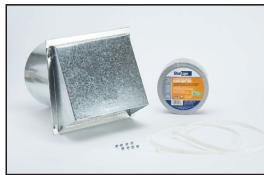
Shutoff Valve



Earthquake Isolation Kit



Vibration Isolation Kit



8" Diameter UL Certified Termination Kit



7" Diameter UL Certified Termination Kit



6" Diameter UL Certified Termination Kit



5" Diameter UL Certified Termination Kit



8" Collar for Flex Venting

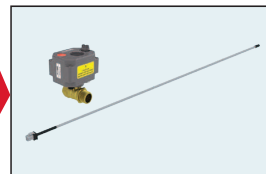


25' Flexible 8" Diameter Duct Kit



Rigid Elbow Duct Kit

**UPGRADE KIT** (for ProTerra models without LeakGuard only) – Add leak detector and shutoff valve to protect from water damage



Leak Sensor & Shutoff Valve Kit

In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.

Rheem Water Heating • 1115 Northmeadow Parkway, Suite 100  
 Roswell, Georgia 30076 • [www.rheem.com](http://www.rheem.com)

Rheem Canada Ltd./Ltée • 125 Edgeware Road, Unit 1  
 Brampton, Ontario L6Y 0P5 • [www.rheem.ca](http://www.rheem.ca)



INTEGRATED HOME COMFORT

ES-LFN36

## For Water Heater/Tank Applications

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# LEAD FREE\*

## Model LFN36-M1 Vacuum Relief Valve

Sizes: 1/2" – 3/4" Male NPT

### Features

- Low profile
- All Lead Free\* brass body
- Protective cap
- Suitable for low pressure steam and water service
- Tested and rated to ANSI Z21.22
- CSA certified
- The LFN36-M1 features Lead Free\* construction to comply with Lead Free\* installation requirements.

### Applications

- Domestic water heaters and supply tanks
- Table top heaters
- Jacketed steam kettles
- Unit heaters
- Low pressure steam systems
- Steam coil heaters

**Note:** Vacuum relief valves are not designed or approved as backsiphonage backflow preventers. For protection against backsiphonage install Watts Series 288A vacuum breakers.

### Standards

Tested and rated to ANSI Z21.22

CSA certified

### Specifications

A Watts Model LFN36-M1 Vacuum Relief Valve shall be installed on domestic hot water supply tanks/ heaters/ unit heaters/ steam kettles as indicated on plans. The vacuum relief valve shall be ANSI Z21.22 rated and CSA certified. The vacuum relief valve shall have an all brass body and include a protective cap for automatic venting of a closed system to atmosphere when a vacuum is created. The Lead Free\* Vacuum Relief Valve shall comply with state codes and standards, where applicable, requiring reduced lead content. The Watts LFN36-M1 Vacuum Relief Valve permits air to enter and prevent vacuum conditions that could siphon the water from the system, resulting in collapse of a tank or water heater or equipment burn out. The valve shall be a Watts Model LFN36-M1.



LFN36-M1

Design certified by



Tested and rated under "ANSI Z21.22  
Relief Valves for Hot Water Supply Systems".

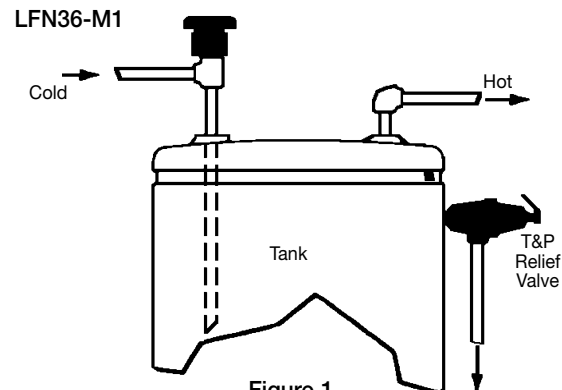


Figure 1

Domestic Hot Water Supply Tanks and Heaters  
with Top Supply

### NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

### NOTICE

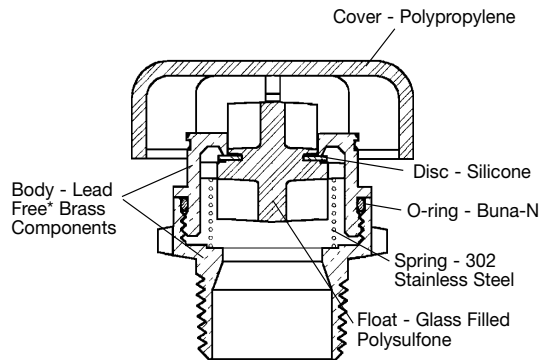
Inquire with governing authorities for local installation requirements

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



## Materials

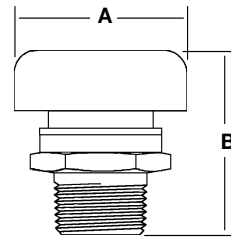


## Pressure – Temperature

Maximum steam working pressure: 15 psi (1.03 bar)

Maximum temperature: 250°F (121°C)

## Dimensions-Weights



SIZE	DIMENSIONS				WEIGHT	
	in.	mm	in.	mm	oz.	gr
1/2	2	50	2	50	4	113
3/4	2	50	2	50	4	113

## Capacity

SIZE	MODEL	VENTING CAPACITY	
		CFM	LPM
1/2	LFN36-M1	15	425
3/4	LFN36-M1	15	425

## Typical Installations

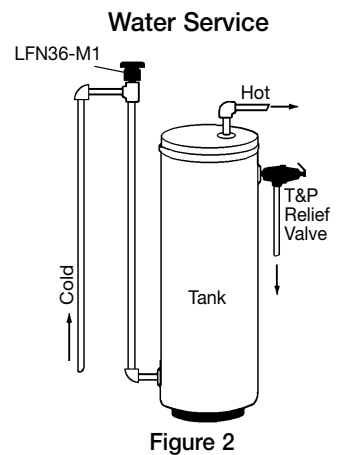


Figure 2  
Domestic Hot Water Supply Tanks and Heaters with Bottom Feed

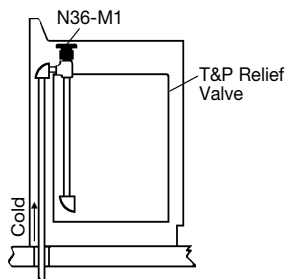


Figure 3  
Table Top Heaters

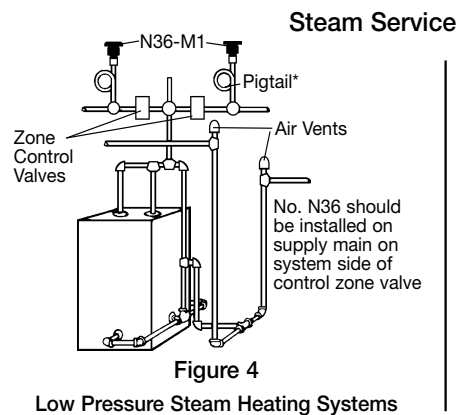


Figure 4  
Low Pressure Steam Heating Systems

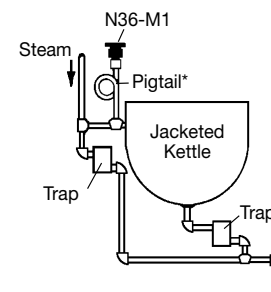


Figure 5  
Jacketed Kettles

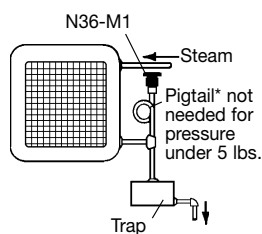


Figure 6  
Unit Heaters

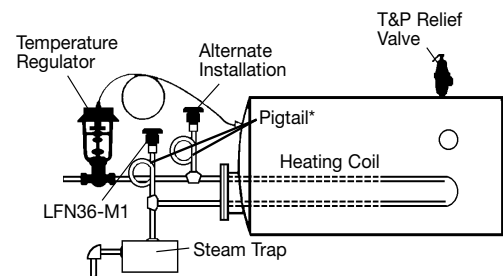


Figure 7  
Steam Coil Heaters

\*Note: When used for steam service, be sure to use pigtail to prevent live steam from damaging N36 valve.

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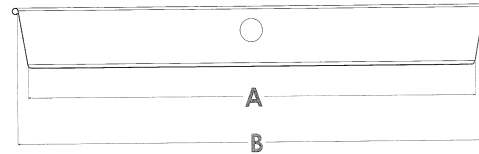
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TECHNICAL SPECIFICATION

## ALUMINUM WATER HEATER PANS



**Engineering Specification:** Oatey Aluminum Water Heater Pans can be installed under gas or electric water heaters to protect from water damage. Available with 1" PVC, 1-½" PVC or 1" CPVC drain fittings to allow for connection to indirect drain.

### Job Reference



- (All dimensions in inches)
- ♦ Manufactured from 28 gauge Aluminum
  - ♦ Pre-cut side opening accommodates drain fitting
  - ♦ Pan depth is minimum 2-½"

✓	Prod. No.	Description	Qty	Inside Diameter (A)	Outside Diameter (B)
		<b>WATER HEATER PANS WITH 1" CPVC FITTING</b>			
	34170	18" Aluminum Water Heater Pan - Bulk	6	18	19
	34171	20" Aluminum Water Heater Pan - Bulk	6	20	21
	34172	22" Aluminum Water Heater Pan - Bulk	6	22	23
	34173	24" Aluminum Water Heater Pan - Bulk	6	24	25
	34174	26" Aluminum Water Heater Pan - Bulk	6	26	27
	34176	28" Aluminum Water Heater Pan - Bulk	6	28	29
	34175	30" Aluminum Water Heater Pan - Bulk	6	30	31
		<b>WATER HEATER PANS WITH 1" PVC FITTING</b>			
	34189	18" Aluminum Water Heater Pan - Bagged	6	18	19
	34079	18" Aluminum Water Heater Pan - Bulk	6	18	19
	34151	20" Aluminum Water Heater Pan - Bulk	6	20	21
	34185	20" Aluminum Water Heater Pan - Bagged	6	20	21
	34186	20" Aluminum Water Heater Pan - Bagged	6	20	21
	34152	22" Aluminum Water Heater Pan - Bulk	6	22	23
	34153	24" Aluminum Water Heater Pan - Bulk	6	24	25
	34078	24" Aluminum Water Heater Pan - Bagged	6	24	25
	34154	26" Aluminum Water Heater Pan - Bulk	6	26	27
	34187	26" Aluminum Water Heater Pan - Bagged	6	26	27
	34156	28" Aluminum Water Heater Pan - Bulk	6	28	29
	34085	30" Aluminum Water Heater Pan - Bulk	6	30	31
		<b>WATER HEATER PANS WITH 1.5" PVC FITTING</b>			
	34081	20" Aluminum Water Heater Pan - Bulk	6	20	21
	34082	22" Aluminum Water Heater Pan - Bulk	6	22	23
	34083	24" Aluminum Water Heater Pan - Bulk	6	24	25
	34105	24" Aluminum Water Heater Pan - Bagged	6	24	25
	34084	26" Aluminum Water Heater Pan - Bulk	6	26	27
	34103	28" Aluminum Water Heater Pan - Bulk	6	28	29
		<b>WATER HEATER PANS WITHOUT FITTING &amp; WITHOUT HOLE</b>			
	34092	22" Aluminum Water Heater Pan - Bulk	6	22	23
	34093	24" Aluminum Water Heater Pan - Bulk	6	24	25
	34157	24" Aluminum Water Heater Pan - Bulk	6	24	25
		<b>WATER HEATER PAN ADAPTERS</b>			
	34086	1-½" PVC Adapter	12	--	--
	34088	1" PVC Adapter	12	--	--
	34089	1" CPVC Adapter	12	--	--

Data is subject to manufacturing tolerances.