## **MEPNN Supplier Scouting Opportunity Synopsis**

tion
2025-246
Hydronic Butterfly Valves
10
08/09/2025
DEW Construction (GC), our trade partner (Thomas Mechanical) need assistance sourcing BABAA compliant 3" butterfly valves for hydronic HVAC
ation
Regarding the duration of "Days to be scouted": the response is unfortunately hard a control of the full recommended 30 days. There is not enough
BAB before this project's Substantial Completion for DEW accounting for the
sourcing wait period, contact with MEP partners (if positive results are located), localed companies, pried to carding (or derging hurachine machine pinstall). shaping Vermont
Please see attached product data sheets for the cast iron 3" hydronic butterfly valves. Performance specifications are included with file name "230523 CSI Spec".
Body: Ductile Iron ASTM A536 (65-45-12) Bushings: Glass Reinforced Epoxy Resin Stem Seal: BUNA-N Shaft: 416 SS ASTM A276 Type 416 (Standard), 316 SS ASTM A276 Type 316 Seat: Peroxide Cured EPDM, BUNA-N (Nitrile) Disc: Aluminum Bronze, Ductile Iron A536 (Nickel Plated), 316 Stainless Steel CF8M
No
No
Yes
Butterfly valves reference standard MSS SP-67.

Section 4: Business Information			
Estimated potential business volume	Total quantity is (16 each) at 3" valve size.		
Estimated target price / unit cost information (if unavailable explain)	Total material cost for the 16ea 3" butterfly valves (non-compliant) = \$7,084.00.		
When is it needed by?	Immediate. This 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 05495		

**Additional Technical Comments** 

Additional Comments	
Is there other information you would like to include?	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.
	DEW Construction, BABAA Contact: Michael Snyder, Cell: (802) 798-4976, Email: msnyder@dewconstruction.com.

FORM CD-450 (REV. 10/18)	U.S. DEPARTMENT OF COMMERCE	X GRANT	COOPERATIVE AGREEMENT
		FEDERAL AWAR	D ID NUMBER
FINANCIAL AS	SISTANCE AWARD	60NANB23D159	
RECIPIENT NAME		PERIOD OF PERF	ORMANCE
Burlington School District		09/01/2023 - 08/31	/2026
STREET ADDRESS		FEDERAL SHARE	OF COST
150 Colchester Ave		\$9,900,000.00	
CITY, STATE ZIP		RECIPIENT SHAR	E-OF COST
Burlington, VT 05401-1422		\$0.00	
AUTHORITY		TOTAL ESTIMATE	ED COST
Consolidated Appropriations Act	, 2022	\$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.

X DEPARTMENT OF COMMERCE FINANCIAL ASSISTANCE STANDARD TERMS AND CONDITIONS

R & D AWARD

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

- X SPECIFIC AWARD CONDITIONS
- X 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.

X 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	DATE
SHIOU YUN LIU Digitally signed by SHIOU YUN LIU Date: 2023,09,15 08:23:32 -04'00'	
PRINTED NAME, PRINTED TITLE, AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	DATE
Tom Hanagan, Superintendent	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	41-98-00-00	\$9,900,000.00

## **Award Contact Information**

Contact Type	Contact Name	Email	Phone	
The second secon	Mr. Barry Gruessner	bgruessn@bsdvt.org	8028648462	
Administrative	Mr. Barry Gruessner	DGI dessil@bsdvi.org	0020010102	

## 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

Amendment: NEW

Recipient: Burlington School District

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

## 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

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

## 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

## **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

## Federal Program Officer:

Robert Slocum
National Institute of Standards and Technology
100 Bureau Drive
Gaithersburg, MD 20899

Email: 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.

Amendment: NEW

Recipient: Burlington School District

This av	vard h	as 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)
	<u>X</u> _	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 depositary 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: <a href="https://www.fiscal.treasury.gov/asap/">https://www.fiscal.treasury.gov/asap/</a>.

## 6. Period of Performance and Funding Limitations:

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

# 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: <a href="http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf">http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf</a>.

## 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 <a href="http://go.usa.gov/SBYh">http://go.usa.gov/SBYh</a> and <a href="http://go.usa.g

# 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.

Amendment: NEW

Recipient: Burlington School District

All SF-425 and Performance Progress Reports must be submitted to: <u>GReports@nist.gov</u>, 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 <u>GReports@nist.gov</u> 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: <a href="https://www.commerce.gov/oam/policy/financial-assistance-policy">https://www.commerce.gov/oam/policy/financial-assistance-policy</a>.

## 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: <u>UGAM@nist.gov</u>, within the prescribed timeframes identified in the terms and conditions of the award.

Amendment: NEW

Recipient: Burlington School District

Unfunded award action requests and related correspondence, including justification to support the request, sent to the mailbox <u>must</u> 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 <u>UGAM@nist.gov</u> 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:

Amendment: NEW

Recipient: Burlington School District

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:

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

Amendment: NEW

Recipient: Burlington School District

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.

<u>NOTE:</u> The Recipient must submit a <u>draft</u> Environmental and Historic Review with all initial required project information listed above in Items #1 – #3 to NIST via <u>UGAM@nist.gov</u> no later <u>than 60 calendar days</u> 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:

Amendment: NEW

Recipient: Burlington School District

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

Amendment: NEW

Recipient: Burlington School District

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: <a href="https://www.whitehouse.gov/wp-content/uploads/2023/02/Investing-in-America-Brand-Guide.pdf">https://www.whitehouse.gov/wp-content/uploads/2023/02/Investing-in-America-Brand-Guide.pdf</a>. 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:

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.

**End of Specific Award Conditions** 

OMB Number: 4040-0008 Expiration Date: 02/28/2025

NOTE: Certain Federal assistance programs require additional of		N - Construction Programs	n. 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)
Administrative and legal expenses	\$	\$	\$
Land, structures, rights-of-way, appraisals, etc.	\$	\$	\$
Relocation expenses and payments	\$	\$	\$
Architectural and engineering fees	\$ 947,427.00	\$ 547,427.00	\$ 400,000.00
5. Other architectural and engineering fees	\$ 50,000.00	\$	\$ 50,000.00
6. Project inspection fees	\$ 600,000.00	\$	\$ 600,000.00
7. Site work	\$ 7,050,000.00	\$	\$ 7,050,000.00
8. Demolition and removal	\$	\$	\$
9. Construction	\$	\$	\$
10. Equipment	\$	\$	\$
11. Miscellaneous	\$	\$	\$
12. SUBTOTAL (sum of lines 1-11)	\$ 8,647,427.00	\$ 547,427.00	\$ 8,100,000.00
13. Contingencies	\$ 1,800,000.00	\$	\$ 1,800,000.00
14. SUBTOTAL	\$ 10,447,427.00	\$ 547,427.00	\$ 9,900,000.00
15. Project (program) income	\$	\$	\$
16. TOTAL PROJECT COSTS (subtract #15 from #14	\$ 10,447,427.00	\$ 547,427.00	\$ 9,900,000.00
	FEDERAL FUND	ING	a
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage she Enter the resulting Federal share.	\$ 9,900,000.00		

## SECTION 23 0523 GENERAL-DUTY VALVES FOR HVAC PIPING

Job #10424

Cost #\_\_\_\_
Construction Set

Received 11/7/2024

DEW CONSTRUCTION

#### **PART 1 GENERAL**

#### 1.01 SECTION INCLUDES

- A. Ball valves.
- B. Butterfly valves.
- C. Check valves.

#### 1.02 REFERENCE STANDARDS

- A. ASME B1.20.1 Pipe Threads, General Purpose (Inch).
- B. ASME B16.5 Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24 Metric/Inch Standard.
- C. ASME B31.9 Building Services Piping.
- D. ASTM A126 Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
- E. ASTM A536 Standard Specification for Ductile Iron Castings.
- F. MSS SP-67 Butterfly Valves.
- G. MSS SP-68 High Pressure Butterfly Valves with Offset Design.
- H. MSS SP-72 Ball Valves with Flanged or Butt-Welding Ends for General Service.
- I. MSS SP-110 Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

#### 1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on valves including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.

#### 1.04 QUALITY ASSURANCE

- A. Manufacturer:
  - 1. Obtain valves for each valve type from single manufacturer.
  - 2. Company must specialize in manufacturing products specified in this section, with not less than three years of documented experience.

### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Prepare valves for shipping as follows:
  - 1. Minimize exposure of operable surfaces by setting plug and ball valves to open position.
  - 2. Protect valve parts exposed to piped medium against rust and corrosion.
  - 3. Protect valve piping connections such as grooves, weld ends, threads, and flange faces.
- B. Use the following precautions during storage:
  - 1. Maintain valve end protection and protect flanges and specialties from dirt.

## PART 2 PRODUCTS

### 2.01 APPLICATIONS

- A. Listed pipe sizes shown using nominal pipe sizes (NPS) and nominal diameter (DN).
- B. Provide the following valves for the applications if not indicated on drawings:
  - 1. Throttling (Hydronic): Ball.
  - 2. Isolation (Shutoff): Butterfly and Ball.
- C. Required Valve End Connections for Non-Wafer Types:

- 1. Steel Pipe:
  - a. Size 2-1/2 inch and Larger: Grooved ends.
- 2. Copper Tube:
  - a. Size 2 inch and Smaller: Threaded ends, except solder-joint valve-ends.
  - b. Size 2-1/2 inch and Larger: Grooved ends.

#### D. Chilled Water Valves:

- 1. Size 2 inch and Smaller, Brass and Bronze Valves:
  - a. Threaded ends.
  - b. Ball: Full port, one piece, brass trim.
  - c. Swing Check: Bronze disc, Class.
- 2. Size 2-1/2 inch and Larger, Iron Valves:
  - a. 2-1/2 inch to 4 inch: Flanged ends.
  - b. Ball: 2-1/2 NPS to 10 inch, Class 150.
  - c. Single-Flange Butterfly: 2-1/2 inch to 12 inch, aluminum-bronze disc, EPDM seat, 200 CWP.
- E. Heating Hot Water Valves:
  - 1. 2 NPS and Smaller, Brass and Bronze Valves:
    - a. Threaded ends.
    - b. Ball: Full port, one piece, brass trim.
  - 2. Size 2-1/2 inch and Larger, Iron Valves:
    - a. 2-1/2 inch to 4 inch: Threaded ends.
    - b. Ball: 2-1/2 inch to 10 inch. Class 150.
    - c. Butterfly: High performance, single flange, Class 150.

#### 2.02 GENERAL REQUIREMENTS

- A. Valve Pressure and Temperature Ratings: No less than rating indicated; as required for system pressures and temperatures.
- B. Valve Sizes: Match upstream piping unless otherwise indicated.
- C. Valves in Insulated Piping: Provide 2 inch stem extensions and the following features:
  - 1. Gate Valves: Rising stem.
  - 2. Ball Valves: Extended operating handle of non-thermal-conductive material, and protective sleeve that allows operation of valve without breaking the vapor seal or disturbing insulation.
  - 3. Butterfly Valves: Extended neck.
  - 4. Memory Stops: Fully adjustable after insulation is installed.
- D. Valve-End Connections:
  - 1. Threaded End Valves: ASME B1.20.1.
  - 2. Pipe Flanges and Flanged Fittings 1/2 inch through 24 inch: ASME B16.5.
- E. General ASME Compliance:
  - 1. Building Services Piping Valves: ASME B31.9.

### 2.03 BRONZE, BALL VALVES

- A. General:
  - 1. Fabricate from dezincification resistant material.
  - 2. Copper alloys containing more than 15 percent zinc are not permitted.
- B. One Piece, Reduced Port with Bronze Trim:
  - 1. Comply with MSS SP-110.
  - 2. CWP Rating: 400 psi.
  - 3. Body: Bronze.
  - 4. Ends: Threaded.

- 5. Seats: PTFE.
- 6. Stem: Bronze.
- 7. Ball: Chrome plated brass.
- C. Two Piece, Standard Port and Full Port with Bronze or Brass Trim:
  - 1. Comply with MSS SP-110.
  - 2. WSP Rating: 150 psi.
  - 3. WOG Rating: 400 psi.
  - 4. Body: Forged bronze or dezincified-brass alloy.
  - 5. End Connections: Pipe thread or solder.
  - 6. Seats: PTFE.
  - 7. Stem: Bronze or brass.
  - 8. Ball: Chrome plated brass.

#### 2.04 IRON, BALL VALVES

- A. Split Body, Full Port:
  - 1. Comply with MSS SP-72.
  - 2. CWP Rating: 200 psi.
  - 3. Body: ASTM A126, gray iron.
  - 4. Ends: Flanged.
  - 5. Seats: PTFE.
  - 6. Stem: Stainless steel.
  - 7. Ball: Stainless steel.

### 2.05 IRON, SINGLE FLANGE BUTTERFLY VALVES

- A. Wafer Style:
  - 1. Comply with MSS SP-67, Type I.
  - 2. Wafer Style, CWP Ratings:
    - a. Sizes 2 to 12 inch: 200 psi.
    - b. Sizes 14 to 24 inch: 150 psi.
    - c. Vacuum Service: Down to 29.9 in-Hg.
  - 3. Body Material: ASTM A126 cast iron or ASTM A536 ductile iron.
  - 4. Stem: One or two-piece stainless steel.
  - 5. Seat: NBR.
  - 6. Disc: Aluminum-bronze.

### 2.06 HIGH-PERFORMANCE, SINGLE FLANGE BUTTERFLY VALVES

- A. Lug type; Bidirectional dead end service without downstream flange:
  - 1. Comply with MSS SP-68.
  - 2. Class 150: CWP Rating: 285 psi at 100 degrees F.
  - 3. Body: Provide carbon steel, cast iron, ductile Iron, or stainless steel.
  - 4. Seat: Metal or reinforced PTFE.
  - Offset stem: Stainless steel.
  - 6. Disc: Carbon steel.

#### 2.07 BRONZE, SWING CHECK VALVES

A. Class 125: CWP Rating: 200 psig (1380 kPa) and Class 150: CWP Rating: 300 psig (2070 kPa).

#### PART 3 EXECUTION

### 3.01 EXAMINATION

A. Discard all packing materials and verify that valve interior, including threads and flanges, are completely clean without signs of damage or degradation that could result in leakage.

- B. Verify valve parts to be fully operational in all positions from closed to fully open.
- C. Confirm gasket material to be suitable for the service, to be of correct size, and without defects that could compromise effectiveness.
- D. Should valve is determined to be defective, replace with new valve.

## 3.02 INSTALLATION

- A. Provide unions or flanges with valves to facilitate equipment removal and maintenance while maintaining system operation and full accessibility for servicing.
- B. Provide separate valve support as required and locate valve with stem at or above center of piping, maintaining unimpeded stem movement.

**END OF SECTION** 

	McFarland Johnson
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PROJECT NAME: BSD Aviation Technology Center	SUBMITTAL NO.: 230523-1
CONTRACTOR: DEW Construction Corp.	DATE:
FUNDING AGENCY NO.: Burlington School District	M-J PROJ. NO.: <u>18715.02</u>
TECH SPECIFICATION NO.: 23 0523	NOTE: ONLY ONE TECH SPEC. PER SUBMITTAL PLEASE.

COMPONENT NO.	DESCRIPTION	M-J ACTION
23 0523	GENERAL DUTY VALVES FOR HVAC PIPING	NET

M-J ACTION:

**NET** – NO EXCEPTION TAKEN

**R&R** – REVISE AND RESUBMIT

MCN – MAKE CORRECTIONS NOTED

**REJ** – REJECTED

SSI - SUBMIT SPECIFIED ITEM

## **REVIEW COMMENTS:**

### **CONTRACTOR'S CERTIFICATION:**

THE CONTRACTOR CERTIFIES THAT THEY HAVE REVIEWED THE ENCLOSED DOCUMENTS AND THEY ARE IN GENERAL CONFORMANCE WITH THE PROJECT DOCUMENTS.

Date	
Ву	•
Title	

THIS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION GIVEN IN THE CONSTRUCTION DOCUMENTS. CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. APPROVAL OF A SPECIFIC ITEM SHALL NOT INCLUDE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THE CONTRACTOR IS RESPONSIBLE FOR; DIMESIONS TO BE CONFIRMED AND CORRELATED AT THE JOBSITE: INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESS OR TO THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION; COORDINATION OF THE WORK WITH THAT OF ALL OTHER TRADES AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER



Date _	01/09/25	By	WH	
_				



## LD141/WD141 Series

Resilient Seated Butterfly Valve

## LEAD FREE





Job Name:	
Job Location:	
Engineer:	
Contractor:	
Tag:	
PO#:	
Rep:	
Wholesale Dist.:	

### **DESCRIPTION**

The Apollo\* LD141/WD141 Series Ductile Iron Butterfly Valves are ideal for use in Industrial and Commercial/HVAC/Mechanical applications. The WD141 Series is a wafer style valve and the LD141 Series is a companion lug style. Available in sizes 2" - 24" lug and 2" - 12" wafer. Contact customer support for lug sizes 28" - 48".

#### **FEATURES**

- Compatible with ANSI 125# & 150# Flanges
- ISO 5211 Top Plate Allows Choice of Apollo® Pneumatic Actuators and Gear Operators
- Conforms to MSS SP-67 & API 609
- LD141 Series Suitable for End of Line Service (Bidirectional Dead End Service) to Rated Pressure (2"-24")
- 3" 24" meet performance requirements of AWWA C-504

## **PERFORMANCE RATING**

• Pressure Rating: 2" to 12": 200 psi 14" to 24": 150 psi

#### **APPROVALS**

- NSF/ANSI 372 Lead Free
- NSF/ANSI 61 Water Quality\*
- CRN: OC/2102CL
- MSS SP67-2002a

#### **OPTIONS**

-SF: Silicone Free (Available)

#### MATERIAL OPTIONS **BODY**

• Ductile Iron ASTM A536, (65-45-12)

#### **DISC MATERIAL**

- Aluminum Bronze (2"-20" Only)
- Ductile Iron A536 Nickel Plated
- 316 Stainless Steel, CF8M

#### **SEAT MATERIAL**

• EPDM\*: -20°F to 250°F Intermittent

• BUNA-N: 10°F to 180°F \*Peroxide Cured EPDM

#### **OPERATOR**

- (-0) None
- (-1) 10 Position Handle
- Gear Operator (12" Handwheels) • (-2)
- (-3) Infinite Position Handle w/ Optional Memory Stop
- (-4) Locking Handle
- (-5) Gear Operator w/ Chain Wheel
- (-7) Locking Gear Operator
- (-8) Locking Gear Operator w/ Chain Wheel

#### STANDARD MATERIAL LIST

SIANDAI	RD MAI ERIAL LIST
BODY	Ductile Iron ASTM A536
BUSHINGS	Glass Reinforced Epoxy Resin
STEM SEAL	Buna-N
SHAFT	416 SS ASTM A276 Type 416 (Standard) 316 SS ASTM A276 Type 316
CEAT	Peroxide Cured EPDM
SEAT	Buna-N (Nitrile)
	Aluminum Bronze (2"-20")
DISC	Ductile Iron / A536 Nickle Plated
	316 Stainless Steel / CF8M

#### **SPECIFICATIONS**

3/413/	E 017E	T	ORQUE RAT	ING *(IN-L	В)	FLOW	WEIGH	IT (LB)	
VALV	E SIZE	FUI	LL RATED PI	RESSURES (	PSI)	C, FULL	WD141	1.0141	GEAR RATIO
IN.	MM	∆P 50	ΔP 100	∆P 150	∆P 200	ÓPEN	WDI41	LD141	RATIO
2	50	100	106	111	117	115	6	9	30:1
2.5	65	150	163	176	189	196	8	10	30:1
3	80	207	220	232	244	302	9	(11)	30:1
4	100	290	323	357	390	600	11	18	30:1
5	125	423	481	540	598	1022	15	22	30:1
6	150	599	691	783	875	1579	18	26	30:1
8	200	1060	1183	1307	1430	3136	32	43	50:1
10	250	1671	1872	2074	2275	5340	47	66	50:1
12	300	2568	2795	3023	3250	8250	-	102	50:1
14	350	2640	3070	3500	N/A	11917	-	148	50:1
16	400	4260	4880	5500	N/A	16388	-	200	80:1
18	450	6287	7243	8200	N/A	21705	-	277	80:1
20	500	8360	9180	10000	N/A	27908	-	410	300:1
24	600	15427	16813	18200	N/A	43116	-	592	300:1

(16 ea) @ 3"

Quantities:

\*Lubricating Media Surface

\*LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with Federal Public Law 111-380. ANSI 3rd party approved and listed.



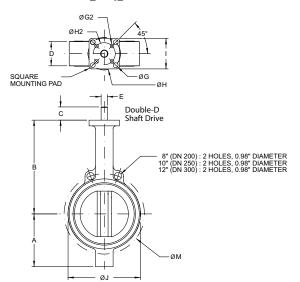
<sup>\*</sup>applies to bronze and stainless steel disc models



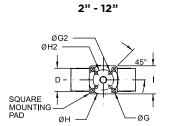
# LD141/WD141 Series Resilient Seated Butterfly Valve

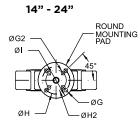
## LEAD FREE

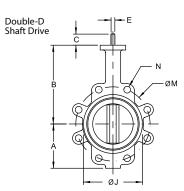


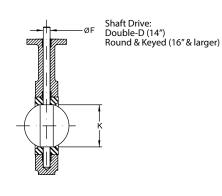


#### **LD MODEL**









#### **DIMENSIONS**

			DIMENSIONS (IN.)																
SIZE (IN.)	SIZE DN	А	В	С	D	E	ØF	ØG	ØG2	KEY	ØН	ØH2	ı	۵٦	К	DISC CHORD	М	N (WD)	N (LD)
2	50	3.25	6.375	1.25	1.75	0.394	0.496	0.375			2.756		2.699	4	2.09	1.113	4.75	0.688	.625-11
2.5	65	3.75	6.880	1.25	1.88	0.394	0.496	0.375			2.756		2.699	4.75	2.54	1.706	5.50	0.688	.625-11
3	80	4.00	7.130	1.25	1.88	0.394	0.496	0.375			2.756		2.699	5.13	3.09	2.450	6.00	0.688	.625-11
4	100	4.88	7.880	1.25	2.13	0.472	0.621	0.375			2.756		2.699	6.75	4.09	3.488	7.50	0.688	.625-11
5	125	5.38	8.380	1.25	2.25	0.551	0.745	0.375			2.756		2.699	7.75	4.85	4.296	8.50	0.813	.750-10
6	150	5.88	8.880	1.25	2.25	0.551	0.745	0.375			2.756		2.699	8.63	6.13	5.697	9.50	0.813	.751-10
8	200	7.13	10.250	1.75	2.50	0.669	0.870	0.563	0.438		4.921	4.015	4.606	10.56	7.89	7.468	11.75	0.813	.750-10
10	250	8.25	11.500	1.88	2.75	0.866	1.120	0.563	0.438		4.921	4.015	4.606	13.06	9.89	9.484	14.25	0.938	.875-9
12	300	9.75	13.250	1.88	3.13	0.945	1.244	0.563			4.921		4.606	16	11.89	11.456	17.00	0.938	.875-9
14*	350	11.00	14.500	1.88	3.13	0.945	1.244	0.563			4.921		Ø5.91	17.13	13.38	13.000	18.75	1.060	1.00-8
16*	400	12.00	15.750	2.00	3.50		1.313	0.563		0.313	4.921		Ø5.91	20	15.38	14.970	21.25	1.060	1.00-8
18*	450	14.38	16.630	2.00	4.25		1.500	0.813		0.375	6.496		Ø8.27	21.38	17.38	16.847	22.75	1.250	1.125-7
20*	500	14.63	18.880	2.50	5.25		1.625	0.813		0.375	6.496		Ø8.27	23.31	19.38	18.650	25.00	1.250	1.125-7
24*	600	18.00	22.130	2.75	6.13		2.000	0.813		0.500	6.496		Ø8.27	27.88	23.38	22.558	29.50	1.380	1.25-7

LD141 Series Only





## LD141/WD141 Series

Resilient Seated Butterfly Valve

## LEAD FREE

### PART NUMBER MATRIX (2" - 24") For valves 28"-48", reference SS1187

LD	141	06	В	E	1	1 -A (LD ONLY)
MODEL	SERIES	SIZE (IN.)	DISC MATERIAL	SEAT MATERIAL	SHAFT	OPERATOR
LD - LUG BODY	141 - APOLLO INTERNATIONAL™ (DUCTILE IRON)	02 - 2"	B - ALUMINUM BRONZE**	E - BLACK EPDM	1 - 416 SS	0 - BARE SHAFT
WD - WAFER BODY	145 - ASSEMBLED & TESTED IN USA (DUCTILE IRON)	25 - 2.5"	D - DUCTILE IRON A536	-20° F TO 250° F	(STANDARD)	1 - 10 POSITION HANDLE
		03 - 3"	NICKEL PLATED	-29° C TO 121° C	2 - 316 SS	2 - GEAR OPERATOR - DIRECT MOUNT
		04 - 4"	S - STAINLESS STEEL, CF8M	N - BLACK BUNA-N		3 - INFINITE POSITION HANDLE
		05 - 5"		10° F TO 180° F		4 - LOCKING HANDLE
		06 - 6"		-12° C TO 82° C		5 - GEAR OPERATOR W/ CHAINWHEEL
		08 - 8"		V - BLACK VITON® B†		7 - LOCKING GEAR OPERATOR
		10 - 10"		-20° F TO 300° F -29° C TO 149° C		8 - LOCKING GEAR OPERATOR W/CHAINWHEEL
		14 - 14"		(145 SERIES ONLY)		-SF - SILICONE FREE ASSEMBLY
	141 - SIZES 14"- 24"	16 - 16"				
		18 - 18"				
	NOTE: LD-141 LUG STYLE ONLY	20 - 20"				
		24 - 24"				

Certification - Product complies with NSF/ANSI 372 and NSF/ANSI 61 lead content requirements. \*NSF 61 does not apply to ductile iron disc

#### **EXAMPLE:**

WD141-06-BE-11 = 6" WD141 Series, Ductile Iron Wafer Body, Aluminum Bronze Disc, Black EPDM Seat, 416 SS Shaft with 10 Position Handle



<sup>\*\*</sup>Aluminum/Bronze Disc Available on 2"-20" only. 24" Stainless Disc offered at bronze pricing.

<sup>†</sup>Viton is primarily used for process applications, and has not been included in the scope of our Lead Free approvals