MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2026-626
Item to be Scouted	BABA: Plumbing and Mechanical Valves
Days to be scouted	14
Response Due By	11/24/2026
Description	Valves and backflow prevention assemblies are mechanical plumbing and fluid-control components designed to regulate, control, isolate, and protect potable water distribution systems, hydronic heating and cooling systems, and other valves, and backflow prevention devices manufactured from materials such as brass, bronze, stainless steel, ductile iron, and other corrosion-resistant alloys.

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	BABA
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Valves control the flow, pressure, direction, and distribution of liquids and gases throughout piping systems. Depending on their design and application, they may operate manually, automatically, pneumatically, or electrically. Backflow preventers are specifically engineered to prevent contaminated or non-potable water from reversing direction and entering clean potable water supplies. These assemblies typically incorporate internal check valves, relief mechanisms, shutoff valves, and test ports to maintain system integrity and allow periodic inspection and testing. Minnesota 2. Metal Casting and Forming Metal valve bodies and backflow preventer housings are produced through casting, forging, or other metal-forming processes. - Casting: Molten brass, bronze, or iron is poured into precision molds to create valve bodies, housings, and internal components. - Forging: Heated metal billets are compressed into specific shapes to produce stronger components with improved structural integrity. - Forming: Sheet metal and other metal stock may be cut, bent, stamped, or formed into brackets, covers, and supporting components. 3. CNC Machining and Component Fabrication After casting or forming, components undergo precision machining to achieve required dimensions and tolerances. Machining operations may include: - CNC milling and turning. - Drilling and tapping threaded connections. - Boring and reaming internal passages. - Thread cutting for pipe connections. - Grinding and surface finishing. - Machining sealing surfaces and valve seats. These operations ensure proper alignment, sealing, and compatibility between internal valve components. 4. Surface Treatment and Finishing Metal components undergo finishing processes to improve corrosion resistance, durability, and appearance. Common processes include: - Sandblasting and deburring. - Chemical cleaning and passivation. - Protective coatings and plating. - Epoxy coating for certain iron valve bodies. - Polishing and surface finishing. - Application of protective finishes to brass and bronze components. 5. Internal Component Manufacturing Internal components are manufactured or sourced separately and prepared for final assembly. These may include: - Rubber diaphragms and sealing gaskets. - Stainless steel springs. - Check valve discs and seats. - Retaining rings and fasteners. - Pressure-regulating mechanisms. - Relief valve assemblies.

- Test cocks and shutoff components.

Backflow prevention assemblies require specialized internal check-valve mechanisms and, depending on the design, differential pressure relief components.

6. Assembly

Individual components are assembled into completed valves or backflow prevention devices.

Assembly operations include:

- Installation of valve stems, handles, and actuators.
- Installation of check valves and internal springs.
- Placement of seals, O-rings, and diaphragms.
- Installation of pressure-regulating and relief mechanisms.
- Assembly of covers, housings, and access components.
- Installation of test ports and shutoff valves.

7. Pressure Testing and Quality Control

Completed products undergo inspection and testing to verify performance, safety, and reliability.

Testing may include:

- Hydrostatic pressure testing.
- Shell and body leakage testing.
- Seat leakage testing.
- Operational and functional testing.
- Flow capacity and pressure-drop testing.
- Backflow prevention performance testing.
- Dimensional and visual inspections.
- Verification of material and component specifications.

Backflow prevention assemblies may also require certified performance testing in accordance with applicable standards and approval requirements.

8. Final Finishing, Packaging, and Distribution

Following successful testing, products are cleaned, labeled, and prepared for shipment.

Final operations include:

- Application of manufacturer identification and model numbers.
- Installation of product labels and certification markings.
- Preparation of installation and maintenance documentation.
- Protective packaging to prevent damage during transportation.
- Palletizing and shipment to distributors, wholesalers, contractors, and commercial customers.

Provide dimensions / size / tolerances / performance specifications for the item	Nominal pipe sizes 1/2" – 12" Small-diameter valve sizes 1/2" – 2" Large-diameter valve sizes 2-1/2" – 12" Connection types NPT threaded, flanged, grooved, soldered Valve body materials Brass, bronze, stainless steel, ductile iron Internal components Stainless steel, brass, engineered polymers Sealing materials EPDM, Buna-N, silicone, PTFE Operating mechanism Manual, automatic, spring-loaded, electrically actuated Typical body length 4" – 36"+ depending on size and design Typical assembly weight 2 – 300+ lbs depending on size and configuration 2. Performance Specifications Performance Characteristic Typical Specification Maximum working pressure 150–300 PSI, model dependent Common commercial pressure rating 175 PSI Operating temperature 33°F – 180°F Maximum temperature Up to 250°F or higher for certain valve designs Flow capacity Dependent on valve size, design, and pressure drop Pressure regulation Model-specific adjustable pressure ranges Leakage resistance Designed to provide leak-tight shutoff within applicable product standards Corrosion resistance Brass, bronze, stainless steel, or protective coatings Backflow protection Prevents reverse flow through mechanical check-valve assemblies Serviceability Replaceable internal components and seals on many models
List required materials needed to make the product, including materials of product components	Brass and bronze alloys. Stainless steel. Ductile iron and cast iron. Copper and other approved metal alloys. Engineering plastics and polymers. Rubber and elastomer materials for seals, gaskets, and diaphragms. Stainless steel springs and internal mechanical components.
Are there applicable certification requirements?	Yes
Certification(s) required	UL
Are there applicable regulations?	No
Are there any other stndards, requirements, etc.?	Yes

Details	ASSE 1013 Reduced Pressure Principle (RPZ) Backflow Prevention Assemblies. ASSE 1015 Double Check Backflow Prevention Assemblies. ASSE 1012 Backflow Preventers with Intermediate Atmospheric Vent. ASSE 1020 Pressure Vacuum Breaker Assembly. ASSE 1024 Dual Check Valve-Type Backflow Preventers. ASSE 1047 Reduced Pressure Detector Assembly Backflow Preventers for fire protection applications. ASSE 1048 Double Check Detector Assembly Backflow Preventers for fire protection applications. AWWA C510 Double Check Valve Backflow Prevention Assemblies. AWWA C511 Reduced-Pressure Principle Backflow Prevention Assemblies. CSA B64 Series Canadian standards for backflow prevention devices and assemblies. ASME B16.34 Valve pressure-temperature ratings, materials, dimensions, tolerances, testing, and marking. ASME B16.10 Face-to-face and end-to-end dimensions for valves. ASME B16.5 Pipe flanges and flanged fittings, including pressure classes and dimensions. ASME B1.20.1 General-purpose pipe threads, including NPT connections. AWWA C508 Swing-check valves for waterworks service. AWWA C509 Resilient-seated gate valves for water supply service. AWWA C515 Reduced-wall resilient-seated gate valves for water supply service. AWWA C504 Rubber-seated butterfly valves for waterworks service. AWWA C550 Protective interior coatings for valves and hydrants. UL 262 Gate valves for fire protection service.
Additional Technical Comments	The products manufactured by Watts, Zurn, and NECO are used in commercial, institutional, healthcare, industrial, residential, and municipal plumbing applications. They are commonly installed in domestic water systems, mechanical rooms, boiler systems, HVAC piping networks, fire protection systems, and building water service connections. These products are manufactured through processes that may include metal casting, forging, machining, molding, component assembly, surface finishing, pressure testing, and quality-control inspections. Finished assemblies are designed to meet applicable plumbing codes, pressure ratings, material specifications, and industry performance standards. Primary Applications: - Domestic potable water distribution systems. - Commercial and institutional plumbing systems. - HVAC hydronic heating and chilled-water systems. - Boiler and mechanical equipment connections. - Water pressure regulation and flow control. - Prevention of cross-connections and potable water contamination. - Industrial and municipal water distribution systems.

Section 4: Business Information

Estimated potential business volume	For the build of a 6 story, 92-unit multifamily project with underground parking, Vertical PTAC's, split systems, RTU's, and snowmelt system.
Estimated target price / unit cost information (if unavailable explain)	This is unavailable due to design and taking place, potential rerouting of piping, cost of labor, cost of product at time of purchase. shipping.
When is it needed by?	Immediate
Describe packaging requirements	palletized, groups of 6, etc.
Where will this item be shipped?	Minneapolis, MN

Additional Comments

Is there other information you would like to include?	Funding: MHFA, Minnesota Housing Finance Agency POC: Nick Hoelscher, nick.h@noorcmpanies.com