

Request for Quotation: SB1341-16-RQ-0387

Please submit a quotation for the items listed/ described in the attached Specification Documents:

This RFQ is issued under the authority of FAR Part 13. The provisions and clauses attachment are applicable to this solicitation and the resultant purchase order.

Send your quote to my attention NLT COB: 05/17/2016

Reference PR# NB645070-16-03300 Item Name: Closed- Loop Computer Controlled Pneumatic Pumps
Quantity: 2 Each

Brand Name or Equal to: Model Pneu Wave-Milli-2X Manufactured by Cor Solutions, LLC

Competition Requirement: Total Small Business Set- Aside

Basis for Award of contract: Lowest Price Technically Acceptable Offer

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION:

1. A firm fixed price quotation meeting all requirements described in the attached Specification document;
2. For the purpose of evaluation of technical acceptability, the Contractor shall include the make and model of the products, manufacturer sales literature or other product literature, which CLEARLY DOCUMENTS that the offered product(s) meet or exceed all of the requirements. The contractor may include any other information that is deemed necessary.
3. Specify product country of origin/ manufacture in accordance with FAR 52.225-2.
4. Confirmation of the Contractor's concurrence with the following: The Government's terms and conditions, identified herein, shall govern this purchase order. In the event of a conflict between the Government's terms and conditions and the Contractors terms and conditions, the Government's terms and conditions, identified herein, shall prevail.

Thank You,

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STATEMENT OF WORK

TITLE: Procurement of a pneumatic pumps for fluid delivery

LAB REQUESTING SERVICE: Material Measurement Laboratory, Biomolecular Measurement Division

I. BACKGROUND INFORMATION

The Material Measurement Laboratory's Bioprocess Measurements Group performs a variety of experiments in microfluidic devices. Critical to these experiments is the ability to deliver precise and controlled flow rates of fluids to microfluidic devices for long times (*i.e.* several days). A microprocessor-controlled pneumatically actuated pump would allow us to increase the performance of our devices by being able to deliver essentially infinite volumes of fluid with no flow pulsation. Traditional, mechanically actuated pumps (screw driven single-stroke syringe pumps and multiple-stroke piston pumps, continuous peristaltic pumps) invariably result in some level of pulsation in the fluid flow rate, which can adversely affect the microfluidic device performance. Further, syringe pump can only deliver a finite volume of fluid before they have to be removed and refilled. In contrast pneumatically actuated pumps are essentially pulsation free and can delivery fluid from arbitrarily large fluid reservoirs, which will increase the functionality of microfluidic devices. The pumps will be used to facilitate chemical reactions in microfluidic devices for the production of protein-like nanoparticles.

II. SCOPE OF WORK

Commercially available "turn-key" pneumatic pumps that provide flow rates appropriate for microfluidic devices are relatively new (though pneumatic pumps in general are an established technology), thus only a few companies supply appropriate hardware. This request for the acquisition of pumps that provide closed-loop computer controlled fluid flow over the range several microliters per minute to several hundred microliters per minute as is appropriate for most microfluidic devices.

III. SPECIFICATIONS

The Contractor shall provide two (2) closed-loop computer controlled pneumatically actuated pumps for controlled fluid flow, model PneuWave-Milli-2X made by CorSolutions, or equivalent. The Contractor shall install the instruments and provide training as described below. The salient characteristics of the brand name product are the following:

- Each individual pump must be able to independently control the flow rate of two separate individual fluid streams.
- Each pump must contain necessary compressors to appropriately pressurize the fluid container.
- Each pump must be able to deliver an arbitrary, preprogramed flow program where the flow rate is adjusted as a function of time.

- Each pump must be able to operate in a “stand-alone” mode where the pump can be operated and adjusted through its front panel without the need of an external computer.
- Each pump must be simultaneously controllable from a single NIST-supplied computer with contractor-supplied software, *i.e.* both pumps can be controlled at the same time from a single NIST-supplied computer
- All pump hardware including flow meters, flow controllers, pneumatics and microprocessors must be in a single instrument enclosure.
- Each pump will be able to deliver fluid from a variety of common laboratory fluid containers (e.g. conical “Falcon[®]” tubes, glass autoclave jars, standard reagent containers, etc)
- Each pump must be able to control, at the operator’s discretion, either the pressure of the pressurized fluid container or the rate of fluid flow from the fluid container.
- Each pump must be able to pressurize the fluid containers with arbitrary user-supplied inert gases (e.g. air, nitrogen, argon, helium, etc.).
- Each pump must be able to deliver a controlled volumetric flow rate of between 30 microliters per minute and 1000 microliters per minute of aqueous solutions of a viscosity of approximately 1 centipoise.
- Each pump can be adjusted and calibrated for delivery fluids with different physical properties than water (*i.e.* different densities, different thermal conductivities, and different viscosities).
- The PID control parameters (Proportional, Integral and Differential) of the closed-loop feedback algorithm can be adjusted to accommodate different flow systems.
- Each pump must be able to log and store its operational parameters in common exportable formats (e.g. CSV, text, XLS, etc.) for diagnostics and troubleshooting.
- Each pump must be a single, integrated unit (*i.e.* single enclosure) and fit within a space 30 inches wide by 30 inches deep.

System Requirements:

Installation:

The Contractor shall install the instruments in Building 227, Room B243, at NIST Gaithersburg, MD. Installation shall include, at a minimum, uncrating/unpacking of all equipment, set-up and hook-up of all equipment, start-up, demonstration of specifications, and removal of all trash. Instrument must operate to manufacturer’s specifications upon installation. Installation will take place during normal business hours, between 8:30 am and 5:00 pm Eastern Time, Monday through Friday except Federal Holidays, and will be coordinated with the NIST Technical Point of Contact (TPOC).

Warranty:

The Contractor shall provide, at a minimum, a one year warranty for the equipment. The warranty shall cover all parts, labor and travel. The warranty shall commence upon successful completion of delivery, installation, training and demonstration of all required specifications.

Training:

Include training at NIST for up to 3 NIST personnel covering normal operation, troubleshooting, and routine maintenance. Training will be provided during normal business hours, between 8:30am and 5:00pm Eastern Time, Monday through Friday, except Federal Holidays, and will be coordinated with the NIST Technical Point of Contact (TPOC) to ensure maximum availability of NIST personnel. The training may be completed on-site at NIST immediately after installation and demonstration of specifications. Installation and training shall occur no later than 70 days from date of award.

IV. PERIOD OF PERFORMANCE

The period of performance shall be 70 days from date of award or sooner.

V. PLACE OF PERFORMANCE

All work shall be completed at the Contractor’s facility. Installation of the instrument and training shall be accomplished at NIST, Gaithersburg, Maryland. Normal duty hours are Monday through Friday, 8:30 a.m. to 5:00 p.m. with the exception of Federal holidays.

VI. DELIVERABLES

<i>Description</i>	<i>Quantity</i>	<i>Due Date</i>
Delivery of Two channel pneumatic pump	Two(2)	60 days after award of this requirement.
Installation pneumatic pumps	Once	70 days after award of this requirement.
Operations and maintenance manual for the analytical instrument	One (1)	70 days after award of this requirement.
Training of NIST personnel at NIST, Gaithersburg, MD	Once	70 days after award of this requirement.

VII. PERFORMANCE REQUIREMENT SUMMARY

The Contractor shall demonstrate that all performance standards in this statement of work have been met.

VIII. RISK ASSESSMENT

The HSPD-12 Security Risk Level assigned to this Task Order is: Low

IX. GENERAL INFORMATION

Safety: The Contractor employee shall be responsible for knowing and complying with NIST installation safety prevention regulations (<http://www-i.nist.gov/mml/safety/policies/index.htm>.) Such regulations include, but are not limited to, general safety, fire prevention, and waste disposal.

Security: NIST is a restricted campus. An identification badge is required for access for entry into buildings and also is shown to the armed Security Police when entering the campus.

Identification Badges: Contractor employees shall comply with NIST identification and access requirements. The Contractor employee is responsible for absences due to expired identification and access documents. Each Contractor employee shall wear a visible identification badge provided by the NIST Security Office. The badge must show the full name, title, and if required by NIST, the words "Contractor" in front. The Contractor employee shall turn in the NIST identification badge and vehicle pass to the TPOC, COR, or Contracting Officer (CO) upon termination of their services under this contract.

Vehicle Registration: All Contractor employees must register their vehicles with the NIST Security Office to gain access to the campus. A valid driver's license, Government-furnished civilian ID, proof of insurance and current registration must be presented to the NIST Security Office, at which time a NIST vehicle pass will be issued. The pass shall be displayed on the vehicle's rear view mirror in accordance with instructions. The Contractor employee shall follow NIST procedures for removal and turn-in of the vehicle pass upon termination of services under this contract.

X. PERSONNEL

Technical Point of Contact (TPOC):

Name: Dr. Wyatt N. Vreeland

Phone: 301-975-8513 -or- 301-975-8683

Email: wyatt.vreeland@nist.gov

The following provisions apply to this acquisition:

FAR 52.212-1 Instructions to Offerors-Commercial Items;
FAR 52.212-3 Offerors Representations and Certifications- Commercial Items.
CAR 1352.233-70 Agency Protests
CAR 1352.233-71 GAO and Court of Federal Claims Protest

Offerors must complete annual representations and certifications on-line at www.sam.gov in accordance with FAR 52.212-3 Offerors Representations and Certifications-Commercial Items.

The following FAR clauses and subparagraphs apply to this acquisition:

52.212-4 Contract Terms and Conditions-Commercial Items;
52.212-5 Contract Terms and Conditions Required to implement Statutes or Executive Orders-Commercial Items including subparagraphs:
52.209-10, Prohibition on Contracting with Inverted Domestic Corporations
52.219-6, Notice of Total Small Business Aside
52.219-13 Notice of Set-Aside of Orders
52.219-28, Post-Award Small Business Program Re-Representation;
52.222-19, Child Labor-Cooperation with Authorities and Remedies;
52.222-21, Prohibition of Segregated Facilities;
52.222-26, Equal Opportunity;
52.223-18, Contractor Policy to Ban Text Messaging While Driving;
52.225-1, Buy American Act
52.225-13 Restriction on Certain Foreign Purchases
52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration; and

Department of Commerce Agency-Level Protest Procedures Level above the Contracting Officer is also incorporated. It can be downloaded at www.nist.gov/admin/od/contract/agency.htm.

FAR 52.247-34, FOB Destination

FAR 52.232-40 -- Providing Accelerated Payment to Small Business Subcontractors

CAR 1352.201-70: Contracting Officers Authority;
CAR 1352.209-73: Compliance with Laws;
CAR 1352.209-74: Organization Conflict of Interest;
CAR 1352-246-70: Place of Acceptance