# GENERAL

## SECTION INCLUDES

### Pressure-independent laboratory airflow control valves

## QUALITY ASSURANCE

### Materials and equipment shall be the catalogued products of manufacturers regularly engaged in production and installation of laboratory airflow control system components and shall be the manufacturer's latest standard design that complies with the specification requirements.

### Parts and labor warranty shall start on the date of substantial completion for a period of 5 years. Any materials or system performance problems shall be corrected by the manufacturer at no cost to the owner during the warranty period.

### Supplier shall have an in-place support facility within 300 miles of the site with technical staff, spare parts inventory, and all necessary test and diagnostic equipment.

### Installation as well as the startup, checkout and commissioning of the laboratory airflow control system components shall be by full-time employees of the control system manufacturer and shall be fully trained by the system manufacturer.

## SUBMITTALS

### Reference specification Section 23 05 00.

### The submittal shall include:

#### Manufacturer’s product data including all equipment components such as terminal devices, etc.

#### Shop drawings shall include schedule of air terminal devices with complete sizing data for each device.

## DELIVERY, STORAGE, AND HANDLING

### Store equipment and materials inside and protected from weather.

### Where control devices specified in this Section or on Drawings are indicated to be factory-mounted on equipment, arrange for shipping of control devices to unit manufacturer.

# PRODUCTS

## MANUFACTURERS

### Acceptable manufacturers:

#### Accuvalve AVT6000 series by Accutrol, LLC

#### Critical Room Control (CRC)

### This specification is based on the AVT6000 electronically pressure independent Accuvalve by Accutrol, LLC. Laboratory valves to be furnished and installed by the contractor and integrated into the UNL control system.

### Materials of Construction:

#### Valve Housing: 304SS

#### Shafts: 316SS

#### Shaft Bearings: Teflon

#### Seals: Viton with stainless steel valves

#### Airflow Sensors: Polycarbonate Plastic, UL94-VO

#### Control Module Enclosure: 16 Gauge aluminum

### Performance:

#### Accuracy: +/-5.0% of reading or 5 CFM (2 L/S; 8 CMH), whichever is greater

#### Speed of Response: < 1 second

#### Shut-Off Leakage Rate @ 3” wc valve DP: <1.5% FS max (round valves), <2% rectangular valves

#### Max. Operating Pressure: 3” wc differential pressure across valve

#### Failure mode: Fail Last Position or Fail Open/Closed

### Environmental:

#### Temperature:

##### Operating: 0 to 150 deg. F (-18 to 66 deg. C)

##### Storage: -40 to 150 deg. F (-40 to 66 deg. C)

#### Humidity: 0 to 90% non-condensing

### Electrical:

#### Input power:

##### 24VAC +/-20% 50-60Hz, 28VA max. for single valves, 55VA max. for dual valves

##### 24VDC +/-10%, 15W max. for single valves, 30W max. for dual valves

## INTERFACE TO BUILDING AUTOMATION SYSTEM

### Integrate with Building Automation System (BAS). Coordinate with UNL BSM.

# EXECUTION

## INSTALLATION

### Install all system components in accordance with manufacturer recommendations and requirements.

### Coordinate all work with Division 16 Contractor and other trades.

### Contractor and LACS Supplier shall coordinate the integration of the BAS and LACS systems with UNL BSM.

### Coordinate 120V power requirements and locations with Division 26 contractor.

### Install all airflow control devices in the ductwork and connect all airflow control valve linkages. The use of screws or rivets to connect ductwork to airflow control devices is not allowed unless expressly allowed by the LACS manufacturer and approved by the Engineer or Owner’s Representative.

### Provide and install all transitions.

### Provide and install insulation as required. Insulate all exposed areas of the supply air duct system.

END OF SECTION 23 36 50