



AVC2000

US Patents 6,991,177 & 7,543,759

Laboratories, Life Sciences, Healthcare



Innovative features for the AVC2000!

- Intuitive Graphical User Interface Dashboard
- Software Configurable

Plus, these standard AccuValve features...

- Exceptionally Low Pressure Drop
 - Design System Pressure – as low as 0.05" (12.5 Pa)
- Electronic Pressure Independence
- True Airflow Feedback
- No Straight Run Requirements
- Linear Control Response
- High Accuracy and Turndown
- Can be Mounted in Any Position
- 5-Year Manufacturer Warranty

Manufactured in the USA.

The Accutrol AVC2000 is an electronically pressure independent AccuValve®. It takes the revolutionary design of the exceptionally low pressure drop AccuValve and builds airflow control into the electronics.

Features & Benefits

The AVC2000 is designed for critical environment airflow control in laboratories, life science and healthcare facilities where precise airflow measurement and control is required. The AccuValve's award winning design incorporates:

Exceptionally Low Pressure Drop

AccuValve's award winning design incorporates a streamlined compression section and a carefully designed static regain section. These features provide lower pressure drop, lower noise level and better flow measurement conditions than any other available technology.

True Airflow Measurement

The integral high accuracy vortex airflow sensing provides high turndown while maintaining accuracies of 5% of reading over the flow range, ensuring precise airflow control.

No Straight Run Requirements

There are no straight duct runs required before or after the valve, making application of the valve very simple. The air compression in the valve provides laminar airflow throughout the airflow range providing repeatable airflow measurement regardless of inlet or outlet conditions.

Simple Layout and Installation

All parts of the AccuValve are accessible from the front of the valve simplifying installation requirements. In addition, the valve can be mounted at any angle and rotated 360°.

ASHRAE Standard 90.1 Compliant without need for additional hardware

ASHRAE Standard 90.1 calls for the reset of the static pressure setpoint in VAV systems equipped with DDC controls. The AccuValve design allows the Building Automation System to provide this benefit to the owner without the requirement of any additional hardware or complexity. This is unique to the AccuValve for critical environments.

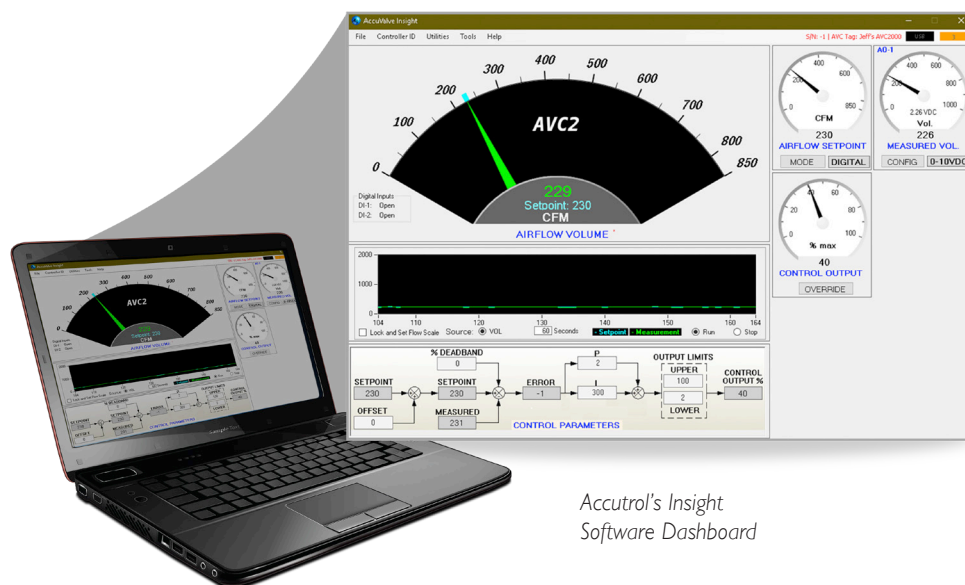
Intuitive Insight Software

The AVC2000 also incorporates a simple and intuitive graphical user interface which enables the user to configure the valve for their specific requirements. Accutrol's Insight software, provided free of charge, insures that the owner is not required to contact the manufacturer of the airflow control system when changes are required in the field.

Standard Control Information

Constant Volume Application

- Single set point
- Dry contact input (up to 4 discreet set points determined by 2 dry-contact inputs)
- Airflow output or valve position is available through hardwired analog output



Accutrol's Insight
Software Dashboard

Operating Pressure Selector

| Valve Size (mm) | Eng Units | Airflow Range | | | | | | | |
|----------------------|-----------|---------------|------------------------|------|------|------|------|------|---------|
| | | Minimum | Maximum Design Airflow | | | | | | Maximum |
| 6" (152) | CFM | 30 | 99 | 143 | 174 | 206 | 230 | 254 | 315 |
| | L/S | 14 | 47 | 67 | 82 | 97 | 108 | 120 | 149 |
| | CMH | 51 | 168 | 243 | 296 | 350 | 391 | 432 | 535 |
| 8" (203) | CFM | 80 | 252 | 367 | 447 | 528 | 589 | 650 | 800 |
| | L/S | 38 | 119 | 173 | 211 | 249 | 278 | 307 | 378 |
| | CMH | 136 | 428 | 624 | 760 | 897 | 1000 | 1104 | 1359 |
| 10" (254) | CFM | 120 | 428 | 606 | 733 | 860 | 958 | 1056 | 1300 |
| | L/S | 57 | 202 | 286 | 346 | 406 | 452 | 498 | 614 |
| | CMH | 204 | 727 | 1030 | 1245 | 1461 | 1627 | 1794 | 2209 |
| 12" (305) | CFM | 180 | 591 | 840 | 1016 | 1192 | 1326 | 1461 | 1790 |
| | L/S | 85 | 279 | 396 | 479 | 563 | 626 | 690 | 845 |
| | CMH | 306 | 1004 | 1427 | 1726 | 2025 | 2253 | 2482 | 3041 |
| 14" (356) | CFM | 250 | 979 | 1364 | 1624 | 1884 | 2079 | 2275 | 2750 |
| | L/S | 118 | 462 | 644 | 766 | 889 | 981 | 1074 | 1298 |
| | CMH | 425 | 1663 | 2317 | 2759 | 3201 | 3533 | 3865 | 4672 |
| 12"x18" (305x457) | CFM | 260 | 1003 | 1437 | 1761 | 2086 | 2341 | 2596 | 3200 |
| | L/S | 123 | 473 | 678 | 831 | 984 | 1104 | 1225 | 1510 |
| | CMH | 442 | 1704 | 2441 | 2992 | 3544 | 3977 | 4411 | 5437 |
| 12"x24" (305x610) | CFM | 350 | 1261 | 1812 | 2213 | 2614 | 2925 | 3237 | 4000 |
| | L/S | 165 | 595 | 855 | 1044 | 1234 | 1381 | 1528 | 1888 |
| | CMH | 595 | 2142 | 3079 | 3760 | 4441 | 4970 | 5500 | 6796 |
| Operating Pressure | "W.C. | < 0.01 | 0.05 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | 0.45 |
| | Pa | < 2.5 | 12.5 | 25 | 37.5 | 50 | 62.5 | 75 | 112.5 |



* Minimum operating pressure when tested in accordance with ANSI/ASHRAE 130-2008

For further assistance in making your AccuValve selections, please refer to the AccuValve Selection Guide for Operating Pressure. An AccuValve selection tool for iPhone, iPad and Android devices is also available to assist with AccuValve selections.

Specifications

ELECTRICAL

| | |
|---------------------------|--|
| Input Power | 24VAC \pm 20% 50/60Hz, 17 VA 24VDC \pm 10%, 9W |
| Digital Inputs | 2 dry-contact inputs |
| Analog Output | Software configurable 0-20mA, 4-20mA, 0-10v, 2-10v, 0-5v or 1-5v 12-bit resolution V-out capable of driving 1K ohm load |
| Configuration Port | USB 2.0, Isolated, "C" type connector |
| Status Indicators | LED for AVC status |
| Terminal Blocks | |
| Power | 2-Position, pluggable, 12-30 AWG |
| IO | 5 position, 16-30 AWG |

PERFORMANCE

| | |
|--|--|
| Accuracy | \pm 5% 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 | Standard round valves (size 06 through 14) <1.5% FS max. Round valves with blade seals (size 08 through 14) <0.5% FS max. Standard rectangular valves (size 18 and 24) <2% FS max. Rectangular valves with blade seals (size 18 and 24) <1% FS max. |
| Max. Operating Pressure | 3"wc differential pressure across valve |
| Failure Mode | Fail Last Position |

ENVIRONMENTAL

| | |
|--------------------|--------------------------------|
| Temperature | |
| Operating | -20° to 165° F (-29° to 74° C) |
| Storage | -40° to 165° F (-40° to 74° C) |
| Humidity | 0% to 90% non-condensing |

MATERIALS OF CONSTRUCTION

| | |
|------------------------|--|
| Valve Housing | Aluminum (16 Gauge) 304SS (20 Gauge) 316SS (20 Gauge) |
| Shafts | 316SS |
| Shaft Bearings | Teflon® |
| Seals | EPDM with aluminum valves Viton with stainless steel valves |
| Airflow Sensors | Polycarbonate plastic, UL94-VO |

Ordering Guides

Please see the following page for Ordering Guides.

AVC2000 AccuValve® Ordering Guide



Valve Housing Material

- 2** = 304SS, 20 Gauge
- 3** = 316SS, 20 Gauge
- 4** = Aluminum, 16 Gauge

Size

- 06** = 6" Diameter
- 08** = 8" Diameter
- 10** = 10" Diameter
- 12** = 12" Diameter
- 14** = 14" Diameter
- 18** = 12"h x 18"w
- 24** = 12"h x 24"w

Options

- Blank = No Options
- F** = Flanges
- I** = Insulation
- S** = Tight Shut-off*

*Blade seals are standard on all 6" valves

Actuator Type

- 17** = Fail Last Position, 2-10v (Standard Speed)

Your representative is:

