

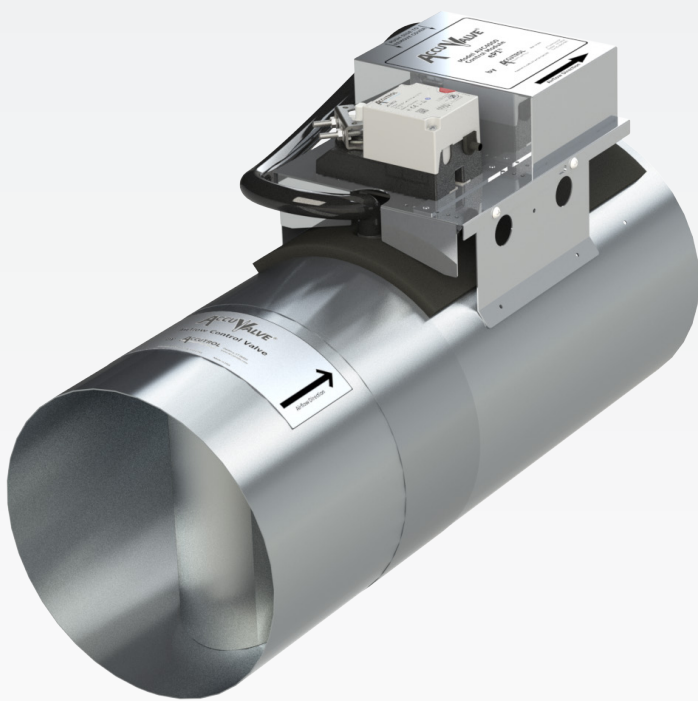


# Cage Rack Valve

## AVC6000/AVC4000/AVC2000

US Patent 7,543,759

*Specially Made for Vivarium Cage Racks*



### Innovative features of the AVC Cage Rack Valve!

- Intuitive Graphical User Interface Dashboard
- Software Selectable I/O
- BACnet® is Software Selectable (AVC6/AVC4 series)
- Bluetooth® Configuration Optional (AVC6/AVC4 series)

### Plus, these standard AccuValve features...

- Exceptionally Low Pressure Drop
  - Design System Pressure – as low as 0.05" (12.5 Pa)
- Electronic Pressure Independence
- Fast Speed of Response
- True Airflow Feedback
- No Straight Run Requirements
- Linear Control Response
- High Accuracy and Turndown
- Can be Mounted in Any Position
- Native BACnet® MS/TP (AVC6/AVC4 series)
- 5-Year Manufacturer Warranty

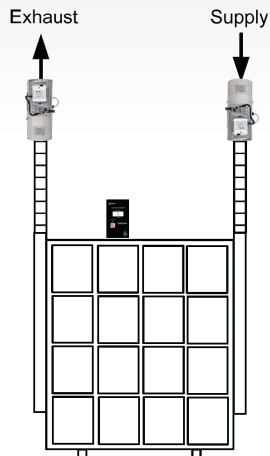
Manufactured in the USA.



The Accutrol AVC is an ISO 9001:2015 certified, electronically pressure independent AccuValve®.

It takes the revolutionary design of the exceptionally low pressure drop AccuValve and incorporates airflow control into the electronics.

The AVC provides true airflow measurement to ensure proper airflow into and out of vivarium cage racks. Instead of guessing whether the proper flows are being maintained, the AVC ensures that they are.



## Know Your Airflow Rates

Vivarium cage racks are a large investment for a research facility. Knowing the airflow rates is critical to protect that investment. It is imperative that the environment within each rack is maintained at

proper volumetric airflow rates.

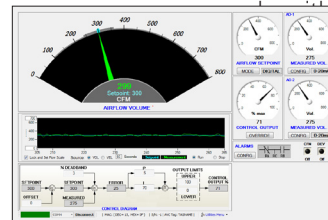
## True Airflow Sensing

The AccuValve cage rack valve provides true airflow sensing and an airflow controller built in to provide a technologically advanced electronic pressure independent airflow control system. In addition, the controller includes native BTL listed BACnet enabling your BAS to read and trend airflow rates and many other parameters at the front end. This allows you to



## Optional Airflow Monitor

The AVC6000 is also available with an optional airflow monitor that can be mounted in the vivarium. This shows the airflow set point as well as actual measured airflow. The monitor can be provided with a set point adjustment so changes can be



## Intuitive Insight Software

If changes need to be made to the controller you can use Accutrol's Insight software to access the controller through a simple, user-friendly interface.

## Overview

- Designed for critical environments
- Measures true airflow
- No straight-run requirement
- Exceptionally low pressure drop operation
  - Design system pressure - as low as 0.05" (12.5 Pa)
- High accuracy and turn-down with linear response
- Can be mounted in any position
- Controller/Actuator can be in an inverted position
- Integral access port
- No maintenance required
- 5-year manufacturer warranty standard

## Benefits

- Plug and play for cage rack
- True closed-loop airflow control
- Airflow set point and value available at front end via BACnet MS/TP (AVC6/AVC4 series)
- Optional local airflow monitor with alarm (AVC6 series)
- Demand based static pressure reset control "ready"
- Meets ASHRAE STD 90.1 without additional hardware
- Each rack can be set up as tracking pair
- USB user interface for field configuration
- Bluetooth® Configuration Optional (AVC6/AVC4 series)
- Intuitive graphical user interface dashboard

## Compare Technologies

| Key Criteria                         | AccuValve®                      | Compact Cage Rack Venturi       |
|--------------------------------------|---------------------------------|---------------------------------|
| Pressure drop                        | <0.3" Maximum; typically < 0.2" | >0.6" Minimum; typically >1.25" |
| Accuracy (airflow)                   | +/-5% of reading or 5 CFM       | +/-10% of reading or 5 CFM      |
| Active airflow measurement           | ✓                               | ✗                               |
| Closed loop control                  | ✓                               | ✗                               |
| Local airflow monitor available      | ✓                               | ✗                               |
| Local alarm capable                  | ✓                               | ✗                               |
| Available in SS construction         | ✓                               | ✗                               |
| Native BACnet®                       | ✓                               | ✗                               |
| Operates without straight duct runs  | ✓                               | ✓                               |
| Built in inspection door             | ✓                               | ✗                               |
| Can be mounted in any plane          | ✓                               | ✗                               |
| ASHRAE static pressure reset ready   | ✓                               | ✗                               |
| Critical parts out of the air stream | ✓                               | ✗                               |
| Up to date electronic control        | ✓                               | ✗                               |
| Bluetooth® Configuration Optional    | ✓                               | ✗                               |

***Don't risk your vivarium investment with outdated mechanical valves.  
The AccuValve Cage Rack Valve delivers sustainable, 21<sup>st</sup> century design.***

## Operating Pressure Selector

| Valve Size<br>(mm)           | Eng Units | Airflow Range |                        |     |      |     |      |     |       |         |
|------------------------------|-----------|---------------|------------------------|-----|------|-----|------|-----|-------|---------|
|                              |           | Minimum       | Maximum Design Airflow |     |      |     |      |     |       | Maximum |
| 6" (152)<br>without reducers | CFM       | 30            | 69                     | 143 | 174  | 206 | 230  | 254 | 315   | 330     |
|                              | L/S       | 14            | 33                     | 67  | 82   | 97  | 108  | 120 | 149   | 156     |
|                              | CMH       | 51            | 117                    | 243 | 296  | 350 | 391  | 432 | 535   | 561     |
| Operating Pressure           | "W.C.     | < 0.01        | 0.025                  | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | 0.45  |         |
|                              | Pa        | < 2.5         | 6.25                   | 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

Please reference individual specification sheets for the AVC6000, AVC4000 and AVC2000 AccuValves.

## Ordering Guides

Please see the following page for Ordering Guides.

Your representative is:



## AVC Cage Rack AccuValve® Ordering Guide

AVC    -   -

### AVC Series Models

6 = AVC6000  
4 = AVC4000  
2 = AVC2000

### Valve Housing Material

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

### Size (see diagram below)

06 = 6" Diameter

### Actuator Type

#### AVC6000 Series Options

03 = Fail Last Position 2-10V (high speed)  
05 = Fail Safe Position 2-10V (high speed)  
07 = Fail Last Position 2-10V (standard speed)

#### AVC4000 Series Options

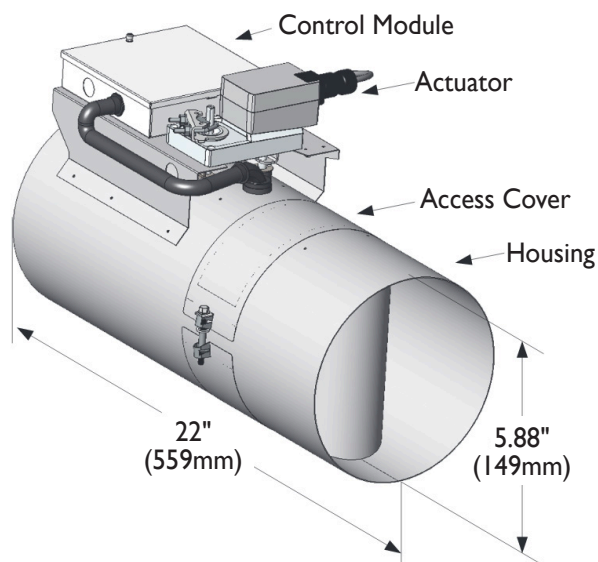
17 = Fail Last Position 2-10V (standard speed)

#### AVC2000 Series Options

17 = Fail Last Position 2-10V (standard speed)

### Options

A = AccuNet (AVC6 series only)  
F = Flanges  
I = Insulation  
W = Wireless Blue Tooth Configuration (AVC6 and AVC4 series)



## AFM Cage Rack Remote Airflow Monitor Ordering Guide (AVC6000 series only)

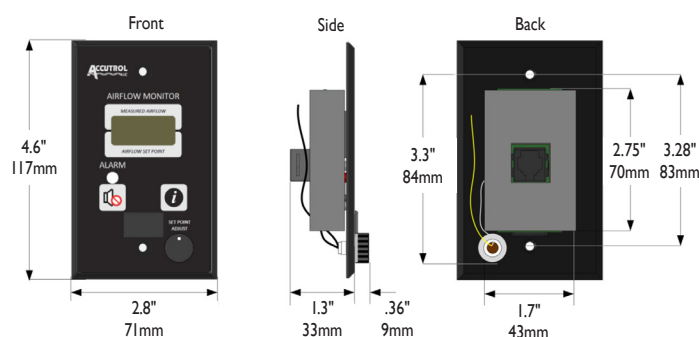
AFM  -

### Model

2 = AVC Air Flow Monitor and Alarm  
3 = AVC Air Flow Monitor and Alarm with Setpoint Adjustment

### Cable

000 = No Cable  
025 = 25' Plenum Rated Cable  
050 = 50' Plenum Rated Cable  
075 = 75' Plenum Rated Cable  
100 = 100' Plenum Rated Cable



## Duct Transition Ordering Guide

T1  - 0 6 - 0 4

### Material

1 = Galvanized  
2 = 304SS

### Valve Side

### Duct Side

