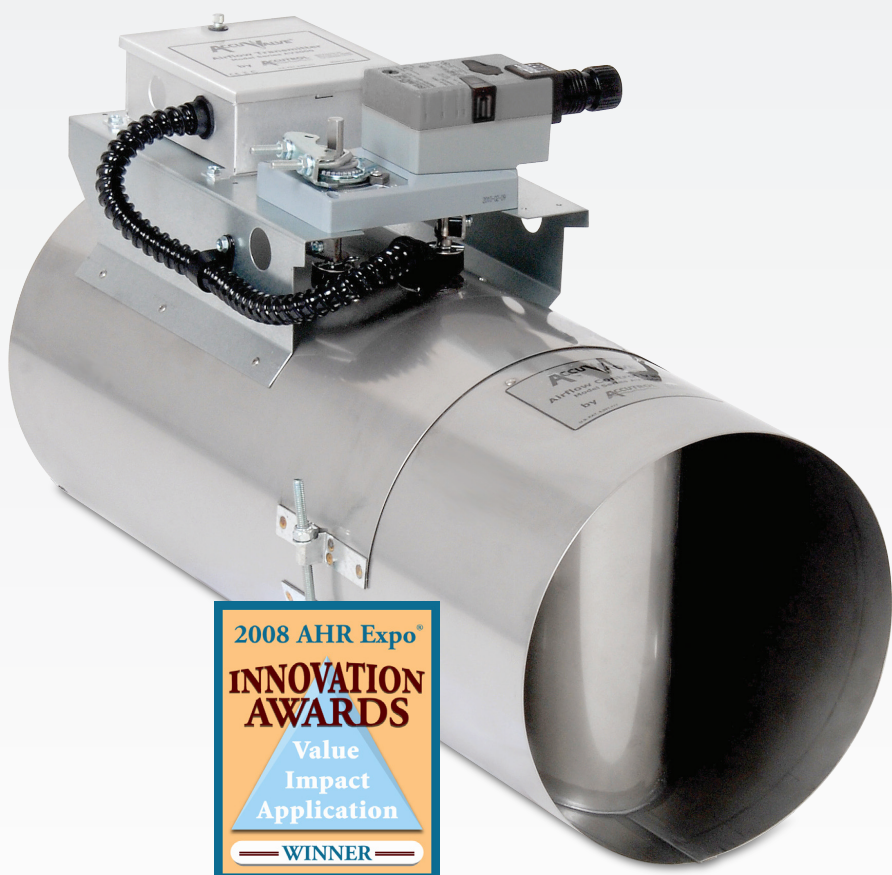




High Temperature AVC5000

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

Specially Made for High Temperature Applications



- Exceptionally Low Pressure Drop
 - Design System Pressure – as low as 0.05" (12.5 Pa)
- Electronic Pressure Independent
- Fast Speed of Response
- Constant Volume / Multi-Position Constant Volume
- Variable Volume
- Tracking Pair
- Fume Hood Control / Specialty Exhaust
- Native BACnet® MS/TP
- Intuitive Graphical User Interface Dashboard
- 5-Year Manufacturer Warranty

Manufactured in the USA.



The Accutrol AVC5000 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. The High Temperature AVC5000 is specifically designed for critical airflow control for high temperature applications in critical environments where fast speed of response and precise airflow measurement is required. The integral native BACnet® MS/TP allows direct communication to the Building Automation System (BAS) where desired.

Intuitive Insight Software

The AVC5000 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.



The Dashboard of Accutrol's Insight Software

Overview

- Designed for critical environments
- Fast speed of response
- 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 scheduled maintenance required
- 5-year manufacturer warranty standard

Benefits

- Plug and play operation (can be factory programmed)
- True closed-loop airflow control
- Native BACnet MS/TP
- Valve position available via BACnet MS/TP
- Demand based static pressure reset control "ready" Meets ASHRAE STD 90.1 without additional hardware
- Set point offset for intuitive bias programming for tracking pair
- USB user interface for field configuration
- Intuitive graphical user interface dashboard

Standard Control Information

Constant Volume Application

- Single set point
- Dry contact input (up to 4 discreet set points determined by 2 dry-contact inputs)
- BACnet® MS/TP programmed set point value
- Airflow output to BAS is available either through hardwired analog output or BACnet MS/TP
- Valve position is available either through hardwired analog output or BACnet MS/TP

Variable Volume Applications

- Analog input (set point received via analog output from another controller)
- BACnet MS/TP programmed set point value
- Airflow output to BAS is available either through hardwired analog output or BACnet MS/TP
- Valve position is available either through hardwired analog output or BACnet MS/TP

Tracking Pair Configurations

- Lead AVC analog output is wired directly to tracking AVC analog input
- Lead AVC setpoint can be pre-programmed at factory as analog input, digital inputs or BACnet MS/TP
- Airflow output to BAS is available either through hardwired analog output or BACnet MS/TP
- Valve position is available either through hardwired analog output or BACnet MS/TP

Fume Hood Control Applications

- The AVC5000 incorporates a selectable Fume Hood Mode, which will configure the AVC to operate as a fume hood controller using AFC5000 Local Fume Controller Display and Accutrol Sash Sensor(s)
- The AVC5000 allows multiple occupancy / set back mode changes through dry contact closures
- Configurable purge mode function
- Configurable alarm functions
- Air flow output to BAS is available either through hardwired analog output* or BACnet MS/TP
 - * Recommended hardwired connection when utilizing airflow signal for lab airflow balancing
- Face velocity output to BAS is available either through hardwired analog output or BACnet MS/TP
- Sash position or valve position output to BAS is available either through hardwired analog output or BACnet MS/TP
- Fume hood control specific BACnet MS/TP available read/write points

Additional Accutrol Product Reference *Accutrol AVC Fume Hood Control System*

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
12"x36" (305x915)	CFM	520	2005	2875	3523	4172	4681	5191	6400
	L/S	245	946	1357	1663	1969	2209	2450	3020
	CMH	883	3407	4885	5986	7088	7954	8820	10874
12"x48" (305x1220)	CFM	700	2522	3625	4426	5228	5850	6473	8000
	L/S	330	1190	1711	2089	2467	2761	3055	3776
	CMH	1189	4285	6159	7520	8882	9940	10998	13592
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

BEST ←

GOOD

Optimum Energy Efficiency

* 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 guide for iPhone and iPad application is also available to assist with AccuValve selections.



Specifications

ELECTRICAL

Input Power	24VAC ±20% 50/60Hz 28VA max. for round, 12"x18" and 12"x24" 55VA max. for 12"x36" and 12"x48" 24VDC ±10% 15W max. for round, 12"x18" and 12"x24" 30W max. for 12"x36" and 12"x48"
Analog Inputs	AI-1, AI-2 and AI-3: (jumper configurable) Voltage 0-10VDC range, 100K ohm impedance Current 0-20mA range, 500 ohm impedance Resistance 20K ohm range, 500uA Current Source AI-2 and AI-3 also include 100K ohm range, 100uA current source 12-bit resolution
Digital Inputs	2 dry-contact inputs
Analog Outputs	0-20mA, 4-20mA, 0-10v, 2-10v, 0-5v or 1-5v (software configurable) 12-bit resolution V-out capable of driving 1K ohm load
Alarm Relay Output	DPDT, NC/NO contacts, Rated load 1A @ 30VDC or 0.3A @ 125VAC Max. operating voltage = 125VAC or 60VDC Max. carry current = 1A Max. switching capacity = 37VA, 30W
Network Com Port	EIA 485 2-wire BACnet MS/TP Full Master Node State Machine Data Rates 9600, 19200, 38400, 57600, 76800 and 115200 DIP Switch provided for setting the MAC address ¼ Unit load receiver input impedance Network bias and EOL termination not provided within the AVC
Configuration Port	USB 2.0, Isolated, Mini connector
Status Indicators	LED status indicators for Power, Alarm, Analog output, BACnet communications, USB communications and AVC status
Terminal Blocks	2 and 3 position vertical pluggable screw terminal blocks

PERFORMANCE

Accuracy	±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 (model AVC516x-xx) <1.5% FS max. Round valves with blade seals (model AVC516x-xx-S) <0.5% FS max. Standard rectangular valves (model AVC526x-xx) <2% FS max. Rectangular valves with blade seals (model AVC526x-xx-S) <1% FS max.
Max. Operating Pressure	3"wc differential pressure across valve
Failure Mode	Fail Last Position or Fail Open/Closed (selectable by model code)

ENVIRONMENTAL

Temperature

Operating	0° to 350° F (-18° to 177° C)
Storage	-40° to 150° F (-40° to 66° C)

Humidity 0% to 90% non-condensing

MATERIALS OF CONSTRUCTION

Valve Housing	304SS (20 Gauge)
Shafts	316SS
Shaft Bearings	Teflon®
Seals	Viton
Airflow Sensors	303SS
Control Module Enclosure	16 Gauge aluminum

Ordering Guides

Please see the following page for Ordering Guides.

AVC5000 High Temperature AccuValve® Ordering Guide

AVC 5 - -

Shape

- 1 = Round
- 2 = Rectangular

Valve Housing Material

- 6 = High Temperature, 304SS, 20 Gauge

Actuator Type

- 3 = Fail Last Position (FLP)
- 5 = Fail Open/Close (FSP)

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
- 36 = 12"h x 36"w
- 48 = 12"h x 48"w

Options

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

* Blade seals are standard on all 6" valves

Your representative is:

