# ACCUVALVE® MODEL AVT6500 SUBMITTAL

## MODEL CODE

⚠ ***WARNING:*** *NOT FOR USE WITH PERCHLORIC ACID*

**AVT6 5 ☐☐ - ☐☐ - ☐☐☐**

**VALVE HOUSING MATERIAL**

5 = PFA COATED 304SS, 20 GAUGE

**SIZE**

08 = 08" DIAMETER
10 = 10" DIAMETER
12 = 12" DIAMETER
14 = 14" DIAMETER

**OPTIONS**

BLANK = NO OPTIONS
A = ACCUNET®
B = BACnet MS/TP
W = WIRELESS BLUETOOTH

**ACTUATOR**

02 = FAIL LAST POSITION (FLP), 0-10V, 2 SEC
03 = FAIL LAST POSITION (FLP), 2-10V, 2 SEC
04 = FAIL OPEN/CLOSED (FSP), 0-10V, 2 SEC
05 = FAIL OPEN/CLOSED (FSP), 2-10V, 2 SEC

***MODEL CODE NOTES:***
*1. Actuator Type "4 and 5" factory default is set to "fail open".*

## OPERATING RANGE

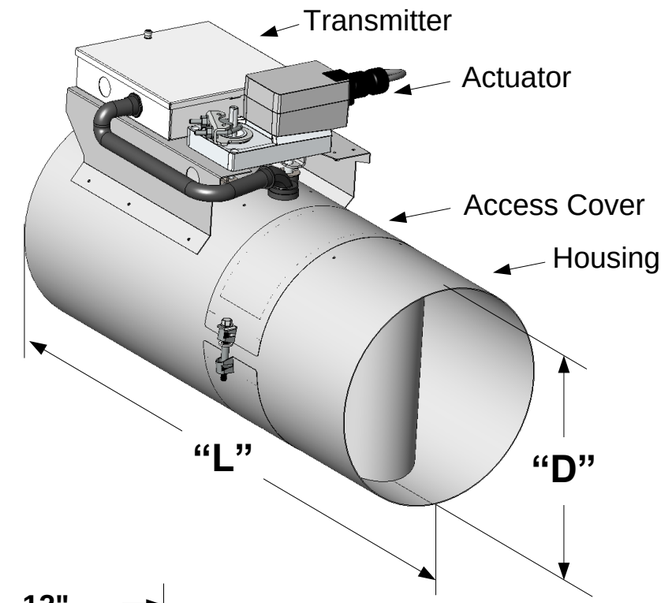
| Valve Model | Min. Flow Measured | | | Full Scale Range | | |
|---|---|---|---|---|---|---|
| | **CFM** | L/S | CMH | **CFM** | L/S | CMH |
| **AVT6508-XX** | **80** | 38 | 136 | **800** | 378 | 1359 |
| **AVT6510-XX** | **120** | 57 | 204 | **1300** | 613 | 2209 |
| **AVT6512-XX** | **180** | 85 | 306 | **1790** | 845 | 3041 |
| **AVT6514-XX** | **250** | 118 | 425 | **2750** | 1298 | 4672 |

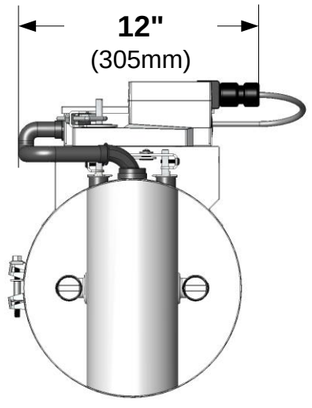
## MATERIALS

| Materials Exposed to the Airstream | |
|---|---|
| Housing | PFA Coated, 304 Stainless Steel |
| Compression Section | PFA Coated, 304 Stainless Steel |
| Static Regain Section | PFA Coated, 304 Stainless Steel |
| End Plate | PFA Coated, 304 Stainless Steel |
| Blades | PFA Coated, 304 Stainless Steel |
| Shafts | PFA Coated, 316 Stainless Steel |
| Shaft Bearings | Teflon ® |
| Vortex Sensors | Kynar® PVDF |
| Sensor Tubing | Viton Rubber |
| Compression Seals | Viton Rubber |
| Machine Screws | PFA Coated, 304 Stainless Steel |
| Rivets | PFA Coated, 304 Stainless Steel |

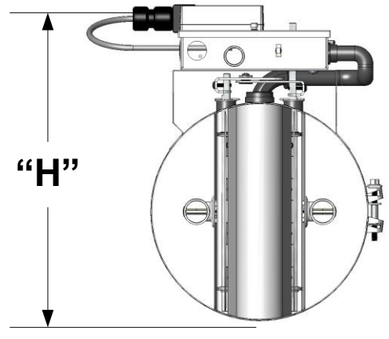
## SIZE AND WEIGHT

| Valve Model | Valve Dimensions | | | | | | Weight | |
|---|---|---|---|---|---|---|---|---|
| | "D" | | "L" | | "H" | | | |
| | **in.** | mm | **in.** | mm | **in.** | mm | **Lbs.** | kg |
| **AVT6508-XX** | **7.88** | 200 | **24** | 610 | **13** | 381 | **16** | 7.3 |
| **AVT6510-XX** | **9.88** | 250 | **24** | 610 | **15** | 432 | **20** | 9.1 |
| **AVT6512-XX** | **11.88** | 300 | **27** | 686 | **17** | 483 | **26** | 11.8 |
| **AVT6514-XX** | **13.88** | 350 | **30** | 762 | **19** | 533 | **30** | 13.6 |




Inlet




Discharge


ACCUTROL LLC
21 Commerce Dr
Danbury, CT 06810
Tel: 203-445-9991
*accutrolllc.com*


***Accutrol Representative:***

**SUBMITTAL DRAWING**
**PFA Coated, Round AccuValve®**
**Model AVT6500**



| | | | |
|---|---|---|---|
| DWG. NO: | AVT6500 SUBMITTAL DWG | | |
| REVISION: | A | ECN: | 2399 |
| REV. DATE: | 9-13-18 | SHEET: 1 OF: 3 | |

# INSTALLATION INSTRUCTIONS

***WARNING:*** *Use eye protection, cut-resistant gloves and clothing suitable for working with sheet metal. Failure to do so may result in personal injury.*

1. Read all instructions prior to beginning installation.

2. Verify the tag number located on the valve label matches the HVAC schedule.

3. Locate the duct section which the valve is servicing and select a suitable mounting location for the valve. The recommended mounting position is vertical as shown in Figure 1. If vertical mounting is not possible and the valve is installed in a horizontal duct run, the valve shall be positioned with the transmitter on the top as shown in Figure 2.

***NOTE:*** *The AccuValve® does not require straight inlet duct runs to operate properly, however it's always best to locate the valve away from transitions and bends to minimize impact on system static pressure. Also be sure to select a location that will provide a minimum clearance of 14 inches (356 mm) unobstructed access to the control module, actuator and valve access cover.*

4. Provide an opening in the selected duct section sized appropriately for the valve being installed.

***NOTE:*** *A slip-fit valve will require an opening approximately 2" (51mm) smaller than the valve length.*

5. Install duct hangers within 12 inches (305 mm) from each end of the valve. Reference Sheet 1 for valve weights.

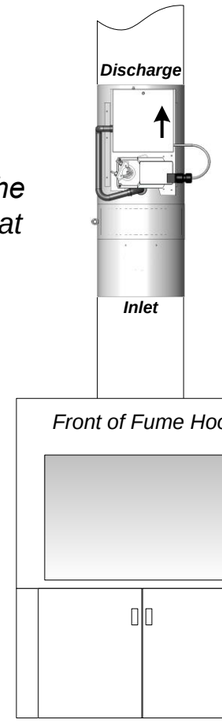
***WARNING:*** *Use duct hangers and hardware designed to support the total load of valve and associated duct sections. Failure to do so may result in serious personal injury or death.*

6. Install the valve into the duct in accordance with the Airflow Direction Label located on the valve. Position valve for easy access to the control module side and secure to duct per Figure 3.

***NOTE:*** *Screws, nuts, fasteners, duct sealant, and hangers are not provided by Accutrol LLC.*

## Figure 1

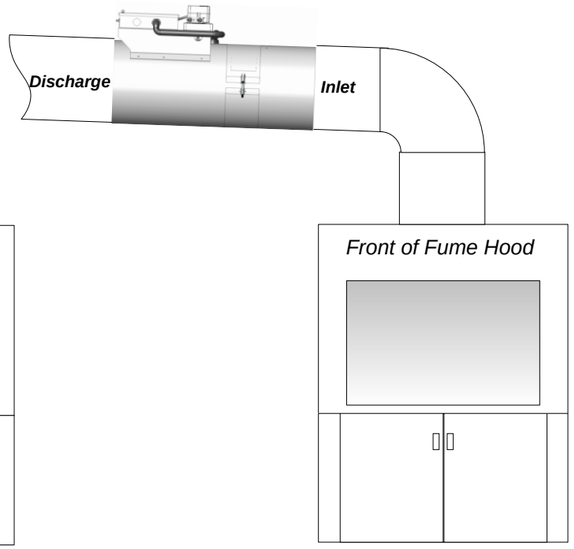
Install in Vertical Duct




## Figure 2

Position AccuValve with Controller at Top

***NOTE:*** *To reduce the potential for condensation pooling inside the duct or valve, the duct shall be pitched towards the fume hood.*

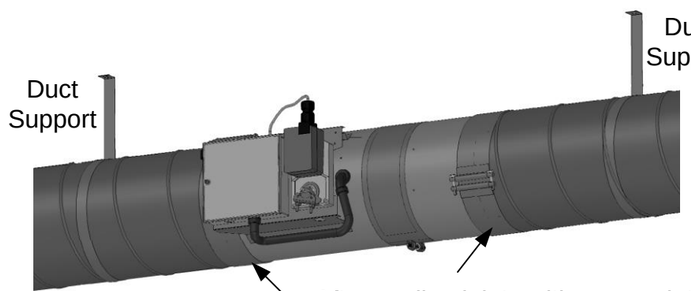



***CAUTION:*** *Handle valve with care. Do not scratch the PFA coating on inside surfaces of valve and do not drive screws through valve housing.*

## Figure 3

**Standard Slip-fit Valve Secured Using Draw Bands**

*(Draw Bands are Sold Separately)*




***NOTE:*** *Reference Accutrol Drawband Clamp Submittal Drawing for installation details.*

After sealing joints with appropriate type of tape, secure both ends using draw band clamps.

ACCUTROL LLC
21 Commerce Dr
Danbury, CT 06810
Tel: 203-445-9991
***accutrolllc.com***

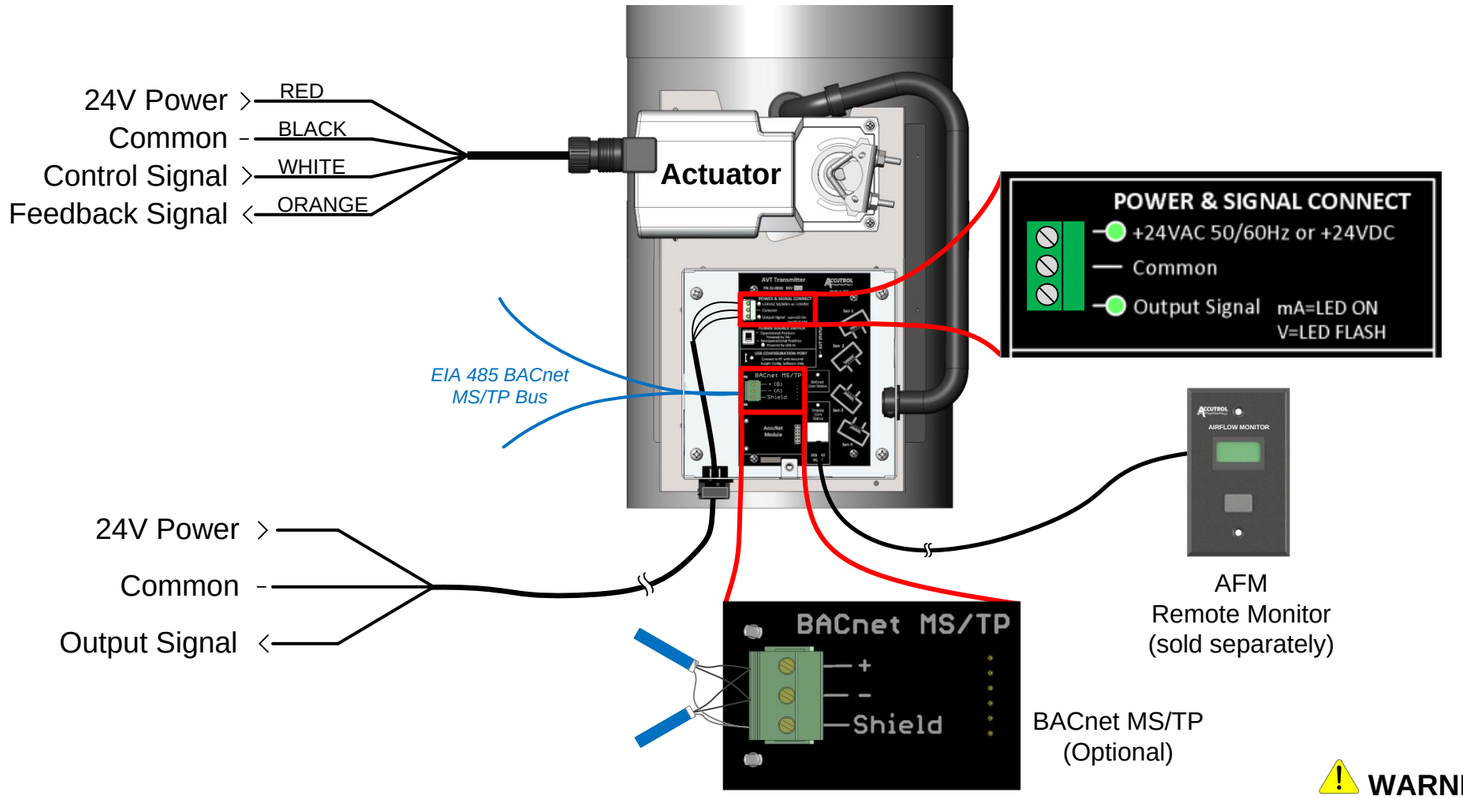
***Accutrol Representative:***

**SUBMITTAL DRAWING**
**PFA Coated, Round AccuValve®**
**Model AVT6500**



| | | | |
|---|---|---|---|
| DWG. NO: | AVT6500 SUBMITTAL DWG | | |
| REVISION: | A | ECN: | 2399 |
| REV. DATE: | 9-13-18 | SHEET: 2 OF: 3 | |

# WIRING INSTRUCTIONS




## TRANSMITTER ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| Power Supply: | 24 VAC +/- 20% 50/60 Hz, 4 VA max (8.5 VA max with remote monitor)<br>24 VDC +/- 10% 1.5 W max (3.5 W max with remote display) |
| Output Signal: | 0-20mA, 4-20mA, 0-10V, 2-10V, 0-5V, or 1-5V (Software Config.)<br>12-bit Resolution<br>Capable of driving 1K-ohm load |
| Configuration: | USB Type C Connector, Wireless Bluetooth (Optional) |
| Power Source Switch: | Selects alternate power source for configuration when main power is not available by drawing 5V from PC connected to USB config. port |
| BACnet MS/TP *(Optional)*: | EIA 485 2-wire BACnet MS/TP, Galvanically Isolated<br>Data Rates 9600, 19200, 38400, 57600, 76800 and 115200<br>1/8 Unit Load Receiver Input Impedance<br>Network bias and EOL Termination not provided within the Transmitter |
| Remote Monitor *(Sold Separately)*: | LCD, 2 lines x 8 characters with white LED backlight<br>Includes USB Configuration Port and Factory Cable |
| Terminal Plugs: | 3-position, vertical pluggable, screw on top, wire size 12-30 AWG |

**Transmitter and Actuator**
Connect the power and signal wires to the Actuator and Transmitter per the diagram. For more details on the actuator, reference the appropriate actuator submittal drawing listed in the table below.

⚠ **CAUTION**: Maintain polarity if the power source is used to power multiple devices otherwise equipment may be damaged.

⚠ **CAUTION**: Do not use the transmitter enclosure as a junction box. The only wires entering the transmitter enclosure shall be wires connected to the transmitter otherwise equipment may be damaged.

**Optional AccuNet Module**
Reference AccuNet Field Manual.

**Optional BACnet MS/TP Module**
Connect the 2-wire EIA 485 BACnet MS/TP bus to the AVT6000 transmitter per the diagram. Network bias and EOL termination are not provided by the AVT6000.

**Remote Monitor AFM (Sold Separately)**
Plug one end of the factory cable into the back of the remote monitor and plug the other end into the AVT6000 Display Port.

⚠ **WARNING**: During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. This work shall be performed by a licensed electrician or qualified individual who has been properly trained in handling live electrical equipment. Failure to follow all electrical safety precautions when exposed to live electrical components may result in serious injury or death.

## ACTUATOR ELECTRICAL SPECIFICATIONS

For actuator specifications, reference the Actuator Drawing per table below.

| AVT6000 Model | Actuator Type | Actuator Drawing # |
|---|---|---|
| AVT6XXX-02 | 0-10V, Fail Last Position | 20-0008 |
| AVT6XXX-03 | 2-10V, Fail Last Position | 20-0009 |
| AVT6XXX-04 | 0-10V, Fail Open or Closed | 20-0010 |
| AVT6XXX-05 | 2-10V, Fail Open or Closed | 20-0011 |

ACCUTROL LLC
21 Commerce Dr
Danbury, CT 06810
Tel: 203-445-9991
*accutrolllc.com*

***Accutrol Representative:***

**SUBMITTAL DRAWING**
**PFA Coated, Round AccuValve®**
**Model AVT6500**



| | | | |
|---|---|---|---|
| DWG. NO: | AVT6500 SUBMITTAL DWG | | |
| REVISION: | A | ECN: | 2399 |
| REV. DATE: | 9-13-18 | SHEET: 3 OF: 3 | |