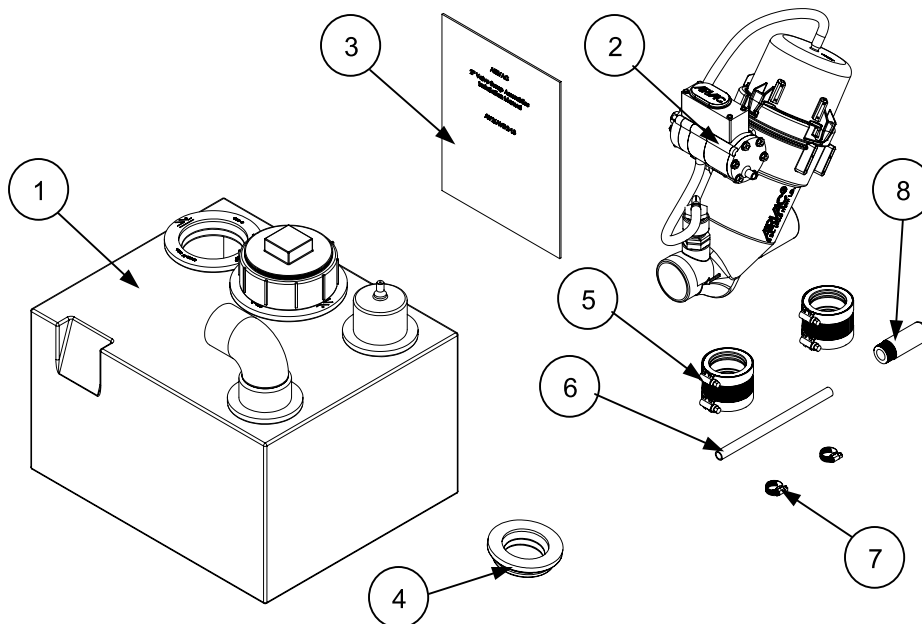


# Installation Manual For 2-INCH VALVE ASSEMBLY W/ 10 GALLON SUMP

**Applies to product number: AV2/AVD2-13**

Remove kit and accessories from shipping container. Verify all components received match the drawing and parts list below and are in good condition.



Item #	Part #	Description	Quantity
1	AVIND138	SUMP ASSEMBLY	1
2	AV2PPLH/ACLO	2" VALVE W/ CONTROLLER	1
3	IMAV2SUMP2	INSTALLATION MANUAL	1
4	GROM2	2" GROMMET	1
5	NH2	2" NO-HUB COUPLING	2
6	TUBE3/8	TUBING, 3/8"ID	2.08
7	CLAMP3/8-5/8	STAINLESS HOSE CLAMP	2
8	AC53	FILTER	1

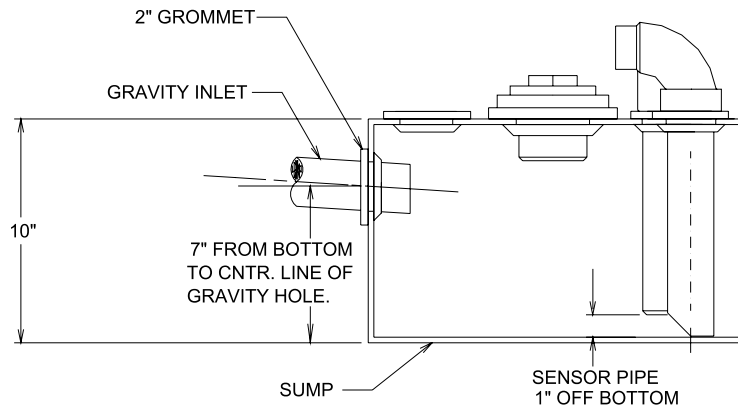
**OPERATIONAL VACUUM RANGE:** 8 – 20inHg [.41bar - .68bar]

**RECOMMENDED VACUUM:** 12 – 20inHg [.54bar - .68bar]

**PEAK FLOW CAPABILITY:** Short Period: 15gpm [56.78 liter/minute]  
Continuous: 7.5gpm [28.39 liter/minute]

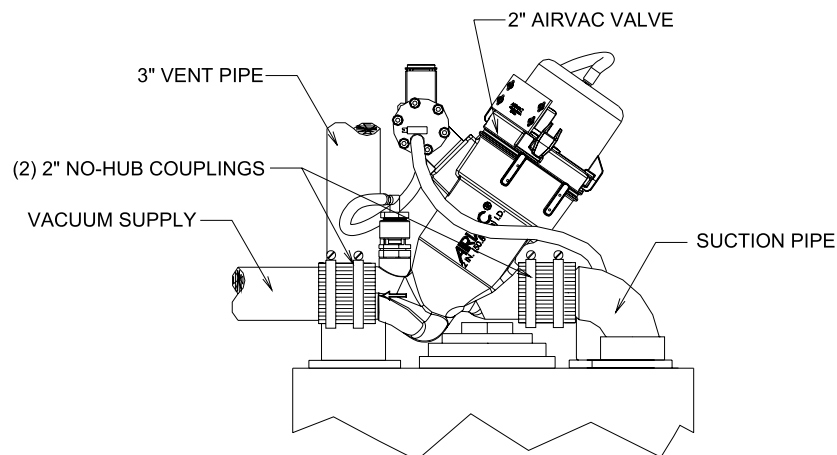
## 1) Installation Procedure

1. Position sump in desired location.
2. Locate position for the gravity inlet (See Figure 1-1).
3. Using a 2.75" hole saw, cut a hole in the sump for the gravity inlet. Be sure to remove any material that falls inside of the sump.
4. Install the 2" grommet into the hole and run the gravity inlet pipe through the grommet. (See Figure 1-1)



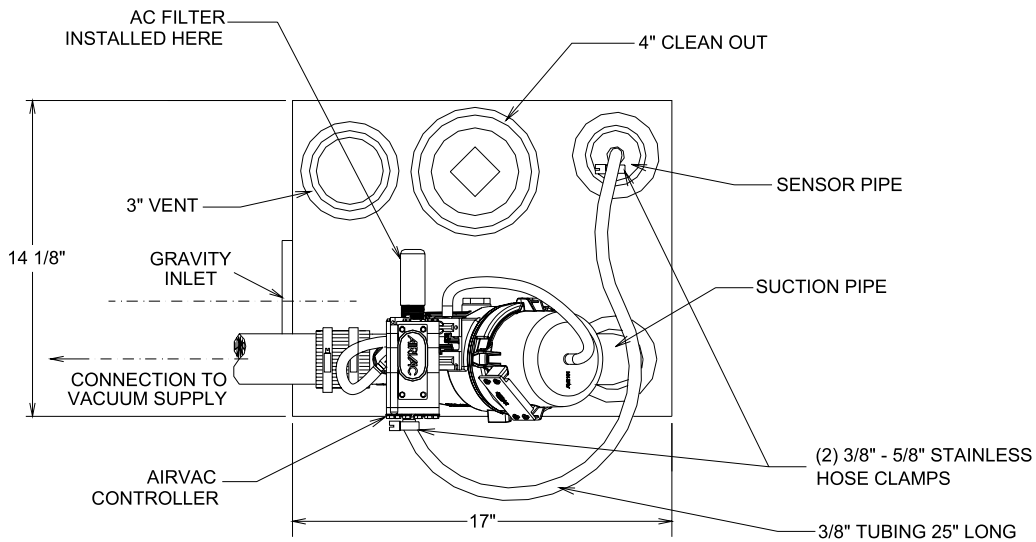
**FIGURE 1-1: FRONT CUTAWAY VIEW OF SUMP ASSEMBLY**

5. Vent the sump by installing a piece of 3" PVC pipe into the empty grommet on the top of the sump (See Figures 1-2 & 1-3). The vent pipe may be run to any desired location but at minimum it must:
  - Extend into the sump no more than 3" past the grommet
  - Be open to atmosphere
  - Extend vertically above any connected fixture's overflow point
  - Not be reduced to less than 3" diameter
6. Install the 2" valve between the suction pipe and vacuum supply line using the 2 - 2" No-Hub couplings (See Figure 1-2).



**FIGURE 1-2: FRONT VIEW OF SUMP ASSEMBLY W/ VALVE & VENT**

7. With a stainless hose clamp at each end, connect the 25" piece of 3/8" tubing from the sensor pipe to the AIRVAC Controller and tighten clamps. THIS CONNECTION IS CRITICAL TO PROPER OPERATION AND MUST NOT LEAK (See Figure 1-3).
8. Finally, slide the Filter over the 5/8" breather port on the AIRVAC Controller (See Figure 1-3). Once vacuum is supplied to the system the unit is ready for operation.



**FIGURE 1-3: TOP VIEW OF AV2/AVD2-13 SUMP ASSEMBLY**

## 2) Test Operation

Following installation, add water to the sump through the vent pipe, gravity line or cleanout until the valve opens. The valve should empty the sump of liquid and then allow 2 to 4 seconds of air admittance time. If a problem occurs, please see the troubleshooting procedure in section 3.

### 3) Troubleshooting Procedures

#### Valve is not sealing, losing vacuum through vent.

The discharge valve is obstructed, disassemble and repair.

Typical causes are low vacuum, short cycle, or allowing construction debris into the sump.

#### Valve will not cycle.

How much vacuum is available at the valve?

BELOW 12" – Inadequate vacuum for proper discharge operation.

Incorrect piping installation causing vacuum loss or system piping waterlogged. Possibly low vacuum provided by vacuum station.

ABOVE 12" – Check tubing for proper connections and kinked tubing.

Check sensor pipe for blockage. In rare instances, it is possible for it to become blocked by material buildup such as grease.

#### Valve does not empty sump of liquid and give 2 to 4 seconds of air.

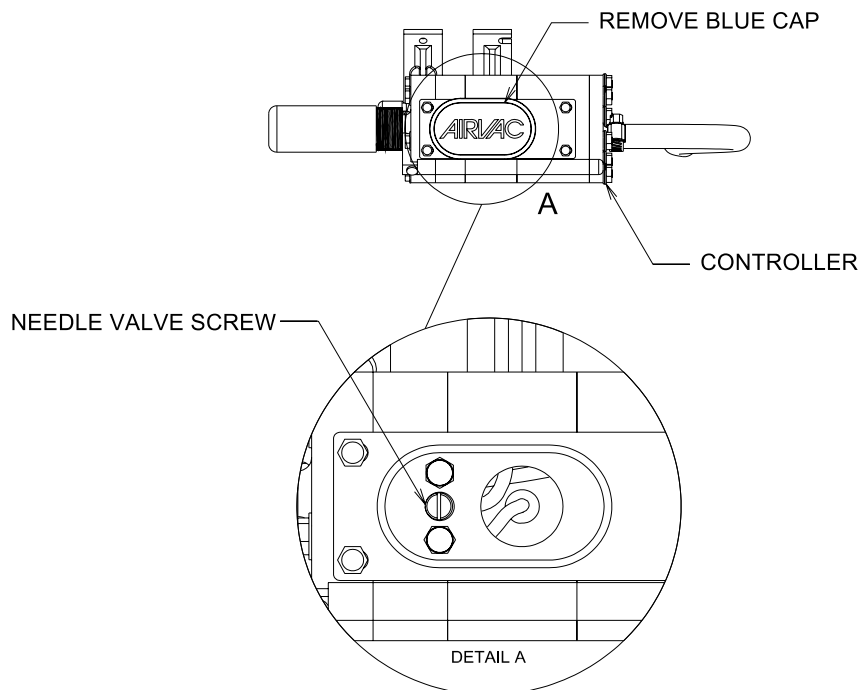
Remove the blue cap from the top of the controller. Locate the needle valve. Turn the screw on the needle valve in ½ turn increments.

CLOCKWISE – Increases amount of time the valve remains open

COUNTER CLOCKWISE – Decreases the amount of time the valve remains open

Cycle the valve after every adjustment until you reach a cycle that empties the sump of liquid and then gives 2 to 4 seconds of air admittance time.

(See Figure 3-1)



**FIGURE 3-1: NEEDLE VALVE ADJUSTMENT DETAIL**

#### 4) Maintenance Procedures

The valve and sump assembly should be inspected once yearly as part of the systems preventative maintenance procedure.

During this inspection do the following:

1. Check all tubing and pipe connections for vacuum or water leaks.
2. Check for dirt or water in the controller, valve, and tubing.
3. Check valve timing. Cycle the valve by adding water and monitor its operation. Adjust if necessary per section 3.

The valve and sump assembly should be rebuilt every 10 years or 500,000 cycles. During this rebuild look for wear and/or damage to the plastic parts and replace as needed. The valve and controller must be rebuilt to standards as specified in the AIRVAC O&M manual. Copies of this manual are available through customer service (section 5). The valve or controller may also be sent to AIRVAC or an AIRVAC authorized service center for repair.

#### **CAUTION**

**Do not use petroleum lubricants on the valve, controller or grommets.**

#### 5) Customer Service

For additional information on troubleshooting, repair/replacement parts and complete Operation and Maintenance Manuals for this and other AIRVAC products, contact our Customer Service Department as follows:

AIRVAC, INC.	Telephone:	574-223-3980 ext. 236
4079 N. Old U.S. 31		800-247-8229
P.O. Box 528	Fax:	574-224-5566
Rochester, IN 46975	e-mail:	<a href="mailto:partsandservice@airvac.com">partsandservice@airvac.com</a>