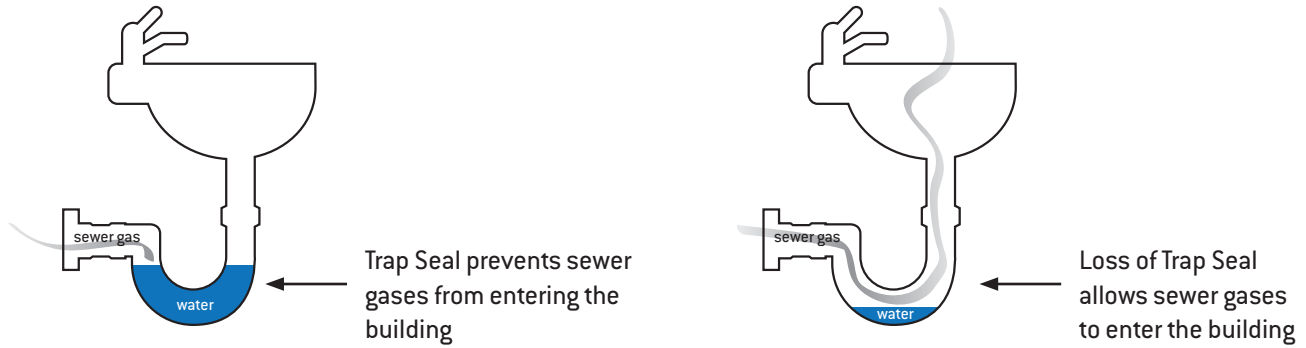


Sewer Gas Issues

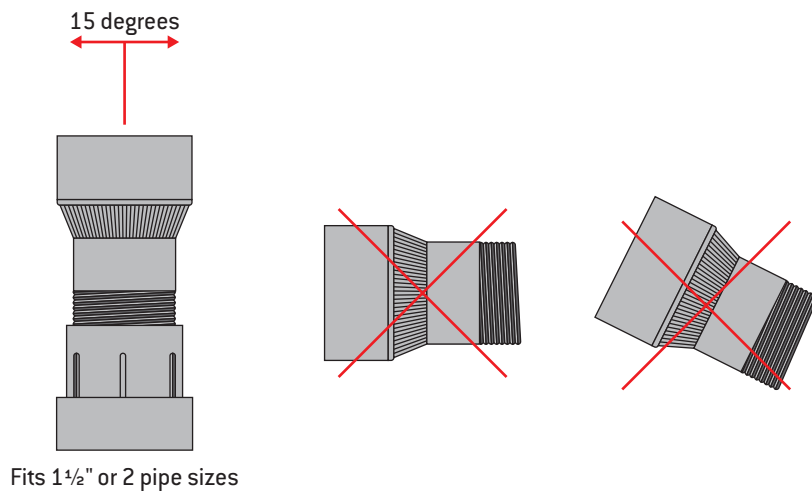
P-Traps in a drain waste and vent system must maintain a trap seal which prevents sewer gases/odors from entering into the building.



When sewer gas is detected where Air Admittance Valves have been installed.

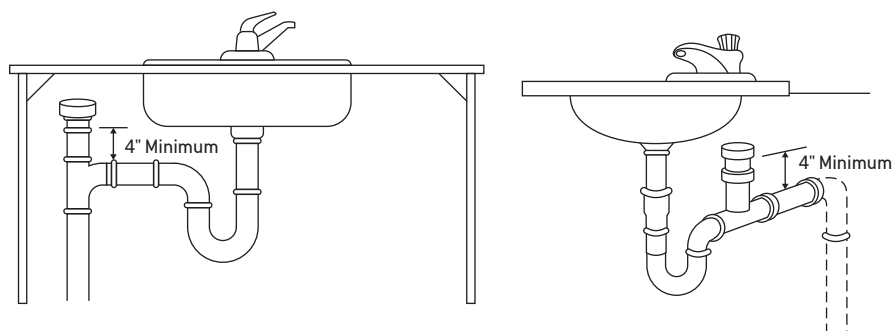
1. Is the air admittance valve installed in the vertical position?

It must be installed in the vertical position, a minimum of 15 degrees from vertical.



2. Is the air admittance valve installed properly?

The air admittance valve must be a minimum of 4" above arm of the trap.



When sewer gas is detected where Air Admittance Valves have been installed.

1. Is the air admittance valve installed in the vertical position?

It must be installed in the vertical position, a minimum of 15 degrees from vertical.

3. Is there glue or primer inside the air admittance valve?

Glue or primer can run down into the valve and prevent the membrane or ball from sealing, if so, replace the valve

4. Is there pipe dope on the threads of the air admittance valve?

The juices from the pipe dope can run down into the valve preventing the membrane from sealing, if so, replace it and use Teflon® tape on the threads and hand tighten.

5. Is the bathroom or area being used frequently?

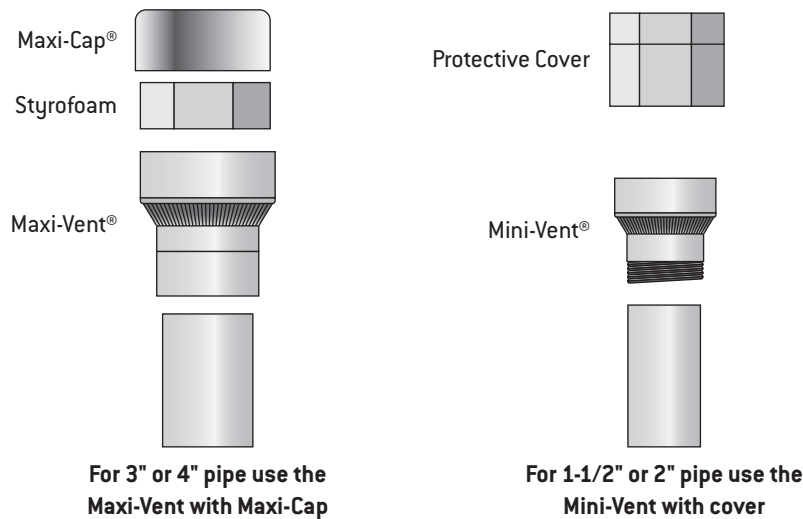
A frequent cause for sewer gas odors inside the building, bathrooms, etc. is a dry P-trap cause by the water evaporating from the P-trap over time (3 weeks to a month) depending on the size of the P-trap, climate conditions and usage of the fixtures.

6. Are there floor drains in the building?

If so, do they have water in them? If not, re-fill with water, if they do not get use periodically the water will evaporate allowing sewer gases to enter the building.

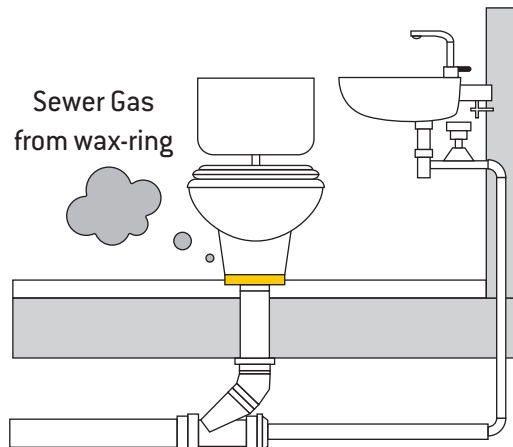
7. Are sewer gases being sucked into the roof top air handler from an open pipe vent allowing sewer gases to enter the building?

Installing an air admittance valves on roof tops eliminates the sewer gases from entering the air handler. You must maintain a minimum of one open vent pipe to open atmosphere.



8. Are the sewer gases coming from the wax ring?

Toilet bowl wax rings get old and cause sewer gases to enter into the building



9. Do you smell sewer gas on windy days?

The wind can blow sewer gases from an adjacent building into open windows.

10. Is the trap waste arm blocking air flow?

There should be no restriction of air flow which allows air to enter the system.



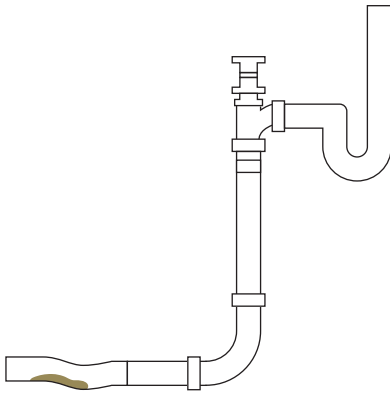
Other causes that could relate to the sewer gas issues

- Nail holes in the pipe or fitting
- If you have older cast iron piping you may be getting smells through cracks in your pipes. This type of piping has a habit of forming a crack along the topside of the pipe over time, and this could be where your smell is coming from.
- Clean-out cover could be missing
- Open pipe in wall not connected

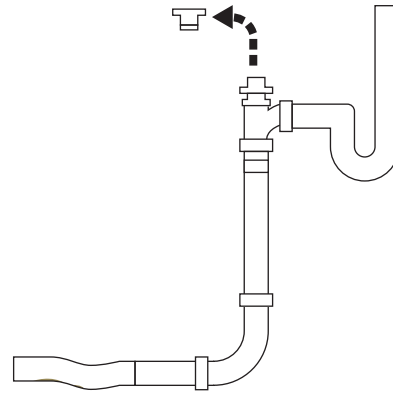
One of several methods is a smoke test this should help determine where the leak is causing sewer gases to enter the building.

Slow draining

1. When you remove the air admittance valve does the waste drain properly and when you put the AAV back on does the drainage problem re-occur?



With the AAV installed
Sink drains slow



With the AAV removed
Sink drains properly

Note: The air admittance valve is actually doing its job, it opens with negative pressure and closes with positive pressure, when you remove the AAV it relieves the positive pressure.

Correction: Most likely there is either a small blockage in the drainage pipe causing positive pressure or there is a belly in the drainage pipe, which would also cause positive pressure when the waste hit the belly in the pipe. First suggest taking a sewer machine and clean the drainage pipe, if this does not work run a camera down the sewer line to look for standing water if so, correct the belly in the pipe.

Testing an air admittance valve

- The most accurate way to test an AAV is by using a manometer however this is not readily available.
- Another way is field testing in a cup of water, Place the air admittance valve (AAV) in a cup as shown below. This creates a positive pressure which seals the membrane and allows the valve to float. If the AAV sinks then most likely the membrane has been compromised which allows air to pass through the AAV and sink.

