How to Repair Steam Radiator and Air Valve

The [air valve](https://www.thespruce.com/steam-radiator-air-vents-1824733), or air vent, on a [steam radiator](https://www.thespruce.com/types-of-home-heating-systems-1824772), allows air in the cooled radiator to be pushed out by incoming steam at the start of each heating cycle. The hissing sound of the air venting from the valve is a sign of normal operation but should stop once the radiator comes up to temperature and the valve closes, thereby retaining steam in the radiator. If your air valve doesn't sound right or your radiator isn't heating properly, it can be caused by a number of problems, many of which are easy to fix.

## Air Valve Makes a Gurgling Noise

An air valve making a gurgling noise can indicate a problem with the valve itself or with the radiator. In one-pipe steam systems, the same pipes are shared by both the steam supplying the radiators and the condensate, the cooled water returning from the [radiator](https://www.thespruce.com/radiator-covers-1821933) to the boiler via gravity. That's why each radiator's supply valve must always be fully open and the radiator must be pitched, or sloped, toward the supply valve so the condensate can drain back. A correct pitch is 1-in-10 or approximately 1 inch for every 10 feet of radiator length. If your air valve is making a gurgling sound, check for the following conditions:

* Make sure the supply valve is fully open (turned counterclockwise all the way) and that it operates properly. If the valve is corroded or stuck, repair or replace the valve.
* Check the radiator's slope. It should slope slightly toward the end of the radiator with the supply valve and pipe. Shim under the feet of the radiator as needed to achieve a proper pitch of 1 inch for every 10 feet toward the supply valve.
* Confirm that the air vent is positioned vertically. Make sure it is not pointing upside down, diagonally, or sideways. Usually, you can simply rotate the valve clockwise to the vertical position (it's threaded into the radiator).
* Inspect the air valve to check for obstructions caused by mineral deposits or other debris. Try to [clean the valve](https://www.thespruce.com/clean-a-steam-radiator-air-valve-4125788) with vinegar. If you can't blow air through the valve after cleaning, replace the valve.

## Air Valve Constantly Hisses

A constant hissing sound throughout the heating cycle usually means the air valve is not closing and is failing to trap the steam inside the radiator. Try to clean the valve with [vinegar](https://www.thespruce.com/vinegar-definition-green-cleaning-uses-1707034). If that doesn't solve the problem, replace the valve.

## Radiator Does Not Get Hot

If the radiator doesn't heat up, it could indicate that the air valve is stuck shut, retaining cold air in the radiator and preventing steam from entering. Try to clean the valve with vinegar, or simply replace the valve. Also, check for a few other conditions:

* Make sure the supply valve is fully open (turned counterclockwise all the way).
* Check to see if the thermostat in the room (as applicable) is set too low. Confirm that the thermostat is set above the current room temperature.
* Check to see if the radiator is sloped too little. It should slope slightly toward the end of the radiator with the supply valve and pipe. Shim under the feet of the radiator as needed to achieve a proper pitch of 1 inch for every 10 feet toward the supply valve.

## Air Valve Spitting or Leaking Water

An air valve that's spitting or leaking water may be partially obstructed with mineral deposits or other debris. Try to clean the valve with vinegar. If that doesn't solve the problem, replace the valve.

From：https://www.thespruce.com/steam-radiator-and-air-valve-repair-1824753