

Vent radiators in autumn

The heating is switched on. The thermostat valves have been checked. Nevertheless, only some areas of the radiators are becoming warm, bubbling noises can be heard and it is too cold in the room. In this case, there is probably air in the system and it has to be vented.

Action

Vent radiators in autumn if they are making noises (bubbling, gurgling or whistling, etc.) or they only heat up partially. In any case, radiators should be vented once every three years.

Requirement

The rooms are heated by radiators. You need a square socket wrench and a container (plastic cup) to collect the water.

Regular venting of the heating system eliminates comfort problems, and energy consumption can be reduced by as much as 15 per cent.

What to do

1. Preparation

- Switch the heating on and turn the heating system up until it is quite warm.
- Switch the circulating pump off (air rises).
- Wait one hour.

2. Vent

- Switch the circulating pump back on.
- Set the thermostat valves to position 5.
- Start with the radiator in the lowest position (usually on the ground floor) and work your way up to the top floor.
- Using a square socket wrench, carefully open the venting valve. At the same time, hold a container under the valve to catch the water.
- Close the valve as soon as all the air has escaped and only water is coming out.



3. Check the pressure – top up the water as necessary

- Check the water pressure with the manometer (pressure gauge) in the central heating unit.
- If the pressure in the heating system is too low, top up the water (see overleaf).

Costs – effort

Your own labour depends on the size of the building. Calculate about 45 minutes' labour to vent 10 radiators.

Please note!

Water coming out of the radiator can be very hot – especially in old systems. It is best to wear gloves when you work.

Don't allow large amounts of water to escape from the venting valve, because you will then have to top up the water again. The water you remove is often black and smelly but – unlike fresh water – is already "degassed" (does not contain oxygen), so it protects the pipes against corrosion.

Additional explanations

Top up the water

The manometer (pressure gauge) in the heating room shows the pressure in the heating system. Check whether the (black) indicator on the manometer is within the setpoint range (green area). If the pressure is below the green area, it is too low, and the water has to be topped up.



Rule of thumb for pressure

For every 10 metres of a building's height, 1 bar of pressure is required. The inlet pressure for the expansion tank must be added to this figure. Pressure of about 2 bar is therefore required for a building with three or four floors.

Water hardness requirement

Please note that heating systems must not be filled with any quality of water you care to use. Boiler manufacturers have defined maximum water hardness requirements for this purpose. According to the Swiss Society of Engineers and Architects (SIA), these values are defined as follows:

| Heat output | Max. hardness of filling water |
|-----------------|--------------------------------|
| less than 50 kW | max. 30 °fH |
| 50 to 200 kW | max. 20 °fH |
| 200 to 600 kW | max. 15 °fH |
| over 600 kW | max. 0,2 °fH |

fH = French hardness
(degrees of water hardness in France, Switzerland, Italy)

Your local water utility will give you information on the water hardness at your building's location.

Additional information

- [Fact sheet on the quality of water used to fill and top up heating and cooling systems, suisstec](#)