

live.better

Heating & ventilation
Healthy indoor climate



Avoiding damp and mould

What is the cause of mould?

The spores of mould fungi, which always and quite naturally float in the air, find the **ideal breeding ground** on **damp patches** in the home.

Eliminating excessive humidity through **regular ventilation and also heating is the only way to permanently prevent the development of mould.**

Leaving this humidity in the flat gives mould spores a foundation for growth.

Mould appears on walls, furniture, tile joints, rubber seals and silicone joints as a greyish black coating. In addition, there is a musty smell in the flat.

How does humidity develop in living spaces?

We cause most of the humidity ourselves: e.g. when **showering, bathing, cooking, drying laundry** and mopping the floor, as well as through **sweating and breathing**. One person releases approx. 1 litre of water into the ambient air each night by breathing during sleep!



Indoor plants are another source of humidity. A large amount of the water from watering ends up in the ambient air. Also, if many pets live in the flat, this increases the level of humidity. **Aquariums, indoor fountains** and **humidifiers** also increase humidity levels.

In a 3-person household, all the sources of humidity come up to about 6 – 8 litres per day! This becomes visible on wet window panes, mirrors and wall tiles. This humidity must be transported outside through ventilation.

Your **Customer Centre** is always there for you:



How do I avoid **mould**?

Tips against mould growth

Always place furniture at a distance of about 10 cm from the outside wall and 5 cm from the inside wall. This allows the air to circulate sufficiently and prevents mould from forming on walls and furniture.

! Place furniture
5-10 cm
away from
the wall

! Optimum
humidity:
40 - 50%

If you still notice mould infestation in your home, we will check whether there is a defect in the structure of the building.

In this case, please contact your **Customer Centre**. The smallest attack of mould should be removed immediately!

Use the wbg Meteo card! With this card, you can monitor both the humidity and the room temperature. **The Meteo card is available in our Customer Centres.** We will also be happy to send it to you by post on request.

Heat and ventilate
all the rooms in your flat
sufficiently and regularly!

Guideline values for a healthy room climate are: 40 - 50% humidity at 18 - 22 degrees Celsius room temperature. You can measure the level of humidity and the room temperature with a hygrometer and a thermometer.

Proper ventilation and heating = **cost savings**

Tips for heating

Proper heating and ventilation **saves energy costs** and gives mould no chance. Your living climate is determined by the temperature in your flat, as well as by the humidity. Heating and ventilation influence each other. If you observe the following tips for heating, you can achieve an excellent air quality – and save heating costs at the same time.

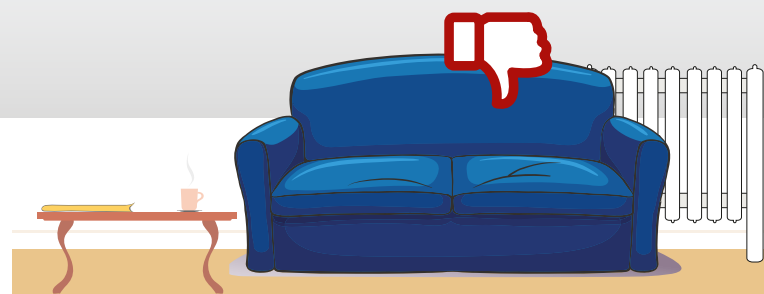
- Do **not try to skimp on heating!** Ensure that your rooms are sufficiently heated. If you heat too little, you risk damp walls that promote the growth of mould. You should not leave any room unheated – also out of solidarity with your fellow tenants. You also need more heat energy to heat up cold rooms and walls again.
- Keep the doors to less heated rooms **closed**. Do not try to heat cool rooms with the air from warmer rooms. Not only heat, but also humidity, gets into the cool room as a result of this. The relative humidity rises and facilitates the growth of mould.
- Therefore, regulate the temperature in cooler rooms separately with the radiator as well.
- **Thermostatic valves require direct contact with the air in the room.** Only then can they respond instantly and correctly. Curtains or furniture (including parts of built-in kitchens) that are situated in front of the radiator lead to a build-up of heat. The valve responds to this by shutting down the hot water supply, as it receives the signal that the room temperature has been reached. Then the room is not heated.

Handling the heating correctly

Operation of the thermostatic valves

Most of the radiators in our flats have thermostatic valves. **The numbers 1 to 5 are on the handwheel** for setting the correct room temperature. They relate to the following reference values:

- **Number 1** approx. 10°C
- **Number 2** approx. 16°C
- **Number 3** approx. 18°C
- **Number 4** approx. 20°C
- **Number 5** maximum



A modern heating system is designed to reach the following room temperatures:

20°C

- Living room
- Kitchen
- Bedroom
- Children's room

24°C

- Bathroom



Tips for ventilating

- Ventilate **several times a day for between 5 and 10 minutes**. Even when it gets colder outside, you should not neglect ventilating. The colder the outside temperature, the shorter the duration of the ventilation should be. However, this should not be less than 5 minutes.
- Keep interior doors open when **ventilating with the windows fully open**: if you open other windows in the flat at the same time, cross-ventilation will result in a much greater air exchange.
- **Open the window completely for ventilation** – window sills should therefore be kept as free as possible from flowers and other objects.
- **Tilting alone is not enough**, as this does not allow a sufficient exchange of air!

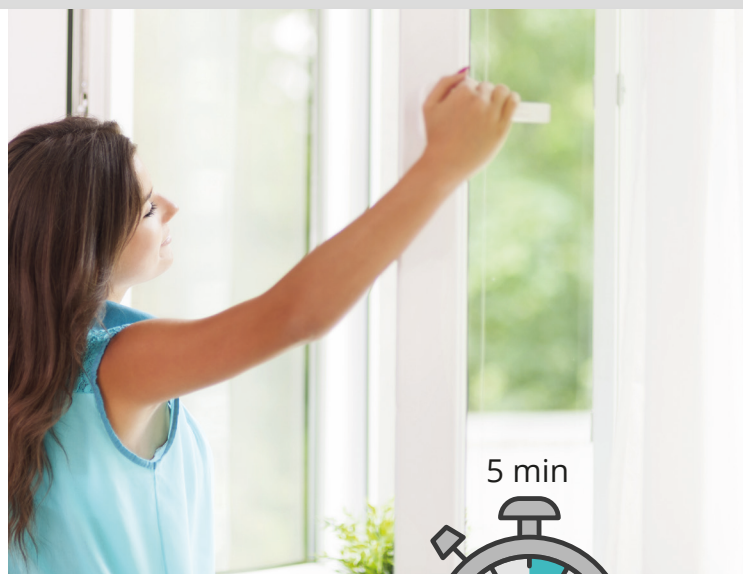
Your **Customer Centre** is always there for you:



- Keep the doors closed whilst **cooking or taking a shower or bath**, in order to prevent the water vapour from spreading into other rooms. **Then ventilate the room sufficiently immediately.**
- Make use of available **laundry areas** or **drying rooms**. An alternative is a tumble dryer (condensate dryer). If you do dry laundry in your flat, however, you should also ventilate it. During this time, keep the room door closed. The heating should be on.
- Control the humidity with a **hygrometer**.

Ventilating individual rooms

- **Living rooms:** if the air quality is poor ("it smells"), ventilation with the windows fully open is recommended. In addition, you should regularly check the humidity with a hygrometer. If you wear glasses and your lenses steam up when you enter the flat, it is definitely time to ventilate the flat.
- **Bedrooms:** if the window remains closed at night, you should ventilate the room with a wide open window right after you get up.
- **Kitchens/bathrooms:** a lot of humidity can develop in these rooms in a short period of time, e.g. when you take a shower or bath, when you cook food and even when you mop floors. Ventilate these "humidity peaks" away directly. Keep the room doors closed whilst you are taking a shower/bath or cooking food. Open a window during or immediately after showering or cooking. When the wall tiles, window panes, mirror or floor are dry, you can stop ventilating.



! When ventilating, keep windows
• **fully open**
Tilting is not enough!

Proper **handling** of your heating

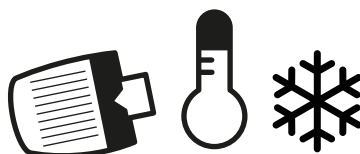
Lowering the heating at night to save energy

It is a legal requirement that heating systems be equipped with a night temperature lowering function. The temperature of the hot water adjusts to the outside temperature.

The higher the outside temperature, the colder the hot water gets. The correct room temperature is nevertheless reached. When the outside temperature rises, **the radiator may therefore only feel lukewarm. This is not a malfunction!**

In addition, most of our systems reduce the hot water supply temperature between 11 pm and 5 am. **As a result, the room temperature may drop. This is completely normal and is not a defect.**

Please do not immediately infer the temperature in the room from the surface temperature of the radiator and do not immediately question whether your radiator is functioning properly. **Modern radiators are designed to make optimal use of the hot water.** Thus – depending on the weather – they may only be really hot in the immediate proximity of the thermostatic valve and only be lukewarm at the outlet pipe. This is an indication that the radiator is making optimal use of the energy.



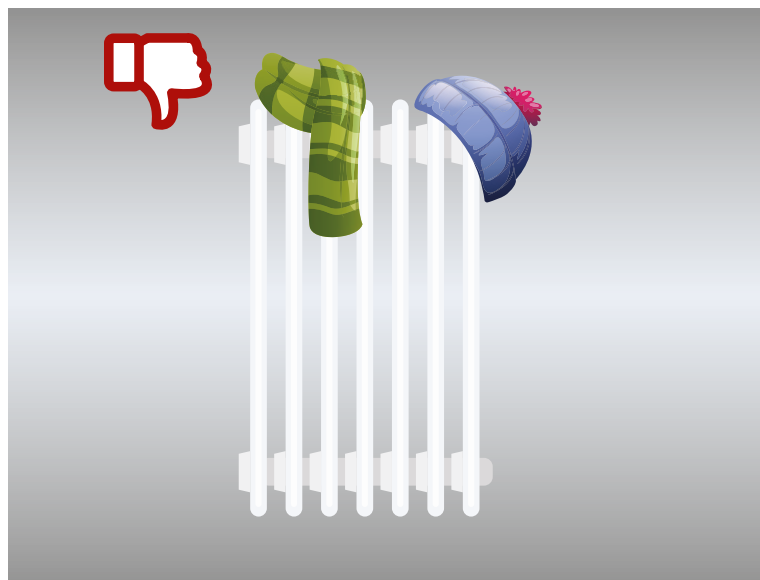
Minimum
thermostat setting



Thermostatic valves

Thermostatic valves require direct contact with the air in the room. Only then can they respond instantly and correctly. Therefore, make sure that curtains or furniture are not in front of the radiator, as this leads to a build-up of heat. The valve responds to this by shutting down the hot water supply, as it receives the signal that the room temperature has been reached. This can drive up your heating costs! If you are going to be away for a longer period of time, make sure that the handwheel of your heating system is at least set to the ice crystal symbol. This setting serves as a frost monitor and prevents the radiator from freezing.

Modern radiators mean that you no longer have to turn down the handwheel when ventilating the room. However, the fresh air should only be let in for a period of five to ten minutes. Otherwise there is a risk of severe heat loss!



You can find more information on the topic of "House rules" here:



Single-pipe heating

In a single-pipe heating system, hot water flows through the radiators one after the other in a ring pipe.

In each flat there is usually one radiator through which the heating is "switched on" in the entire flat. **Only when this "main radiator" is turned up does heating power reach the adjoining rooms.**

The radiators do not have a thermostatic valve. Instead, the radiators can be operated by means of a black handwheel. Since this handwheel does not have a numerical scale for simplified adjustment, a delicate touch is required.

When you go to work in the morning, do not turn the heaters off. This will prevent walls from cooling down and condensation and mould from forming. So, **leave the heating on at a constant level – this will also save you heating costs!**



You need a
! delicate touch for
single-pipe
heating systems

Underfloor heating

Modern underfloor heating systems are particularly efficient. Thanks to well-insulated building shells, very little thermal heat is needed and the underfloor heating can be operated at a very low temperature level.

The temperature of the floor is higher than the room temperature. However, depending on the floor covering and footwear, you do not feel the heat directly, as is the case with old, overheated underfloor heating systems. The reason for this is that one's own body heat, especially of the surface of the feet, is higher than the temperature of the heating system. Yet even if you don't feel the heat directly, it heats the room to comfortable temperatures.

Once set, the underfloor heating regulates itself to a large extent. However, it reacts very slowly. This means that it takes at least 1 hour to raise the room temperature by 1 °C. Windows that are left open for a long time quickly cool down the flat. Consequently, the underfloor heating needs a longer time to heat up the flat again afterwards. Therefore, observe the most important principles:

- Only ventilate with the windows fully open **briefly** and as **crosswise** as possible
- Due to the inertia of the system, frequent adjustment of the room controller (e.g. several times a day) is **not advisable**
- Do not lay **large carpets** on the floors (or only carpets specially suited for underfloor heating)
- **Drilling holes in floors** is prohibited

More beautiful # **together**...

