Reduce the water volume used in washbasins and showers

Taking a shower with a conventional shower head flushes up to 18 litres of hot water down the drain every minute. That's far more than a comfortable shower requires! Also: the volume of water that flows into a washbasin is often more than is really needed.

Action

Take a shower instead of a bath. And don't make the shower too long or too hot. Restrict the water volume for the washbasin and shower, or reduce the outflow with a flow restrictor or a water-saving shower head.

Requirement

Suitable adjustment of the tap or fitting must be possible so that the water volume flowing through it can be restricted.

A water saver or a water-saving shower head will pay for itself after less than one year of use

What to do

1. Determine the water volume

Determine the water volume for the washbasin and shower by filling a one-litre measuring vessel with the taps fully open and measuring the time until the litre measuring vessel is full.

2. Evaluate the measured values

Calculate the water volume for the tap or fitting (litres/minute) based on the measured time (60 divided by the number of seconds for 1 litre). Compare the actual situation to the target situation.

Application	Current status			Target status	
	Filling time	Water volume	Efficiency	Water volume	Efficiency
Washbasin	8 seconds	7,5 litres/min.	Class B	3–5 litres/min.	Class A
Showers	6 seconds	10 litres/min.	Class C	6–8 litres/min.	Class B

3. Optimise the water volume

Reduce the water volume:

- A: by restricting the water volume for the tap or installing a water saver (flow restrictor).
- B: by replacing the shower head with a water-saving model.

4. Document and observe

Note the new values in the logbook. Pay attention to complaints and correct the set values as necessary.

Costs – effort

- Your own labour (measuring and setting the water volume): approx. half an hour per tap or fitting
- Costs of water savers: CHF 10 to CHF 20 per tap/fitting
- Costs of a water-saving shower head: CHF 30 to CHF 60 per shower head

Please note!

In janitorial rooms and kitchens (tea kitchens), it does not make much sense to restrict the water volume because this merely extends the time needed to fill a cleaning bucket or electric kettle with water. What are known as "Ecoboosters" provide a good solution in rooms of this sort. They supply 5 litres per minute in normal operating mode; in boost mode, however, they deliver the full rate of 17 litres per minute (Ecoboosters can be purchased from specialised trade outlets, hardware stores and retail outlets).

Additional explanations

Reduce the water volume in the tap

In good-quality water taps and fittings, the water volume and often also the (maximum) water temperature in the tap can be restricted This is the best and cheapest way of cutting hot water consumption so you can save costs and energy. The manufacturer's installation instructions describe whether and how the water volume in the tap/fitting can be restricted. You will find the instructions on the internet (on the manufacturer's site: search for the model).

What to do:

- Close the outflow to prevent small objects from sliding into it.
- Remove the handle. Depending on the type of tap, you will need an Allen key or a screwdriver to do this. The screw is usually concealed beneath a circular cover.
- The "cartridge" is located under the handle. The cartridge can be used to adjust the water volume and (in some cases) also the tap's maximum temperature. Depending on the model, the water volume can be changed with an adjusting ring or a setscrew.
- Re-assemble the tap.

Retrofitting water savers

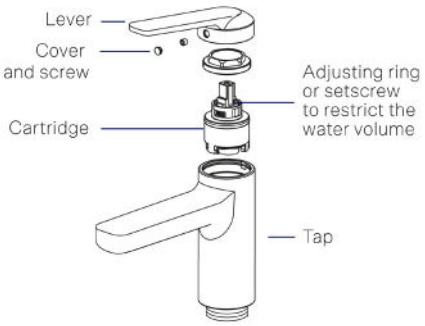

Illustration: KWC (adapted slightly)

Another simple way to reduce the water volume is by replacing the existing spray controller (aerator, mixing nozzle, Perlator) with a water-saving model (water saver, flow restrictor, water-saving inserts).

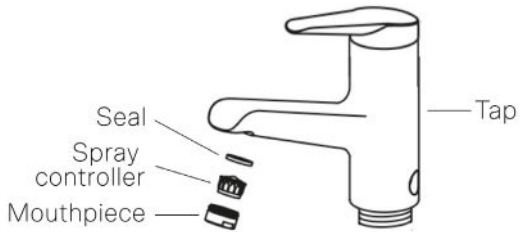

Illustration: KWC (adapted slightly)

Energy label

Good water-saving inserts and shower heads are marked with the energy label. The less water a shower head delivers, the less energy is consumed. So: low flow rates are indicators of high energy efficiency. Hand shower heads in efficiency class A (< 6 litres/minute) have very low flow rates and are mainly suitable for showering in private settings.

Temperature fluctuations

If the installation is inadequate, very severe restriction of the shower head's water volume can cause unpleasant temperature fluctuations. The water is too hot or too cold, and the temperature cannot be adjusted correctly. If this phenomenon occurs, replace the shower head with a model that delivers more water (a higher flow rate reduces pressure losses). Notify your building management when you install water-saving inserts. If the temperature fluctuations persist, you must call in a specialist (possibly for a hydronic balancing procedure).

Additional information

- Enjoy water – save energy with no compromises on comfort
- Efficient hot water supplies for new residential buildings. An overview for building owners
- The energy label for sanitary products
- SVGW (Swiss Gas and Water Industry Association) Fact Sheet: "Pressure and temperature fluctuations"

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11.2021