

IS EVERYTHING IN GOOD SHAPE?



Your detached house needs regular maintenance and upkeep to stay in good condition. An inspection and adjustment of the HVAC systems help maintain living comfort and healthy conditions. At the same time, you can positively affect the energy costs of heating, ventilation and water usage.

Is the place all right? checklist works as a quick guide when you go through your home devices and systems.

CONSUMPTION MONITORING

Regular monitoring of electricity, heat and water consumption is important from the point of view of cost management and energy saving. In addition, sudden unexplained changes in consumption may indicate that a device or technical system is malfunctioning or incorrectly adjusted. In terms of energy use, pay attention to reducing the consumption of domestic hot water.

Compare consumption data from different years and months. Utilise the electronic consumption monitoring services of energy suppliers or Datahub (www.fingrid.fi/en/electricity-market/datahub/). You can also take note of your consumption and prices from your invoices.

ELECTRICITY CONSUMPTION MONITORING

Review and compare electricity contracts every 1 to 2 years, and compare also different types of contracts. An exchange electricity-based or consumption effect-based contract can bring savings if you can effortlessly guides electricity consumption to times of low electricity prices.

- Monitor electricity consumption on a monthly basis.
- Compare the consumption data with the corresponding time period of previous years. Determine the reasons for any changes in consumption.
- Find out what measures you can take to reduce electricity consumption.
- Make use of automation that guides electricity consumption to hours of low electricity prices.

Take note of annual consumption data

Compare consumption data from different years and months. You can find the data from energy suppliers' consumption monitoring services, Datahub (link) or your invoices.

ANNUAL TOTAL CONSUMPTION	202_	202_	202_	202_
Electricity, kWh/year				
Heating (not electricity)				
district heating, kWh/year				
oil, litres/year				
pellet, kg/year				
wood, m ³ /year				
Water, m³/year				
the share of domestic hot water is approx. 40%, m ³ /year				

ENERGY-SAVING EVERYDAY LIFE

Make it a habit to take care of these as part of energy-saving and good housing.

- Monitor and set room temperatures with thermostats once a month or as needed on a room-by-room basis.
- Recommended temperatures: living areas +20...22 °C, bedrooms +18 °C, entrance halls and infrequently used rooms +12...18 °C, storage areas and garage +5...12 °C.
- Make sure that the thermostats of radiators are not covered by curtains or furniture.
- Adjust the bathroom's underfloor heating so that the floor feels only slightly warm underfoot.
- Purchase and use a time-controlled thermostat. Heat the floor when the bathroom is usually used, and drop the temperature at other times.
- Adjust the ventilation according to the situation, but do not under any circumstances close or block the ventilation completely.

For example:

- parties or long-term cooking may require increased ventilation
 - ventilation can be reduced for long periods of absence
 - the ventilation of an electric sauna can be reduced during the heating of the sauna stove and increased after sauna bathing
- Clean the cooker hood filter 3 to 4 times per year.
 - Check the condition of door and window seals once a year. Replace seals if necessary.
 - Chimney sweeping once a year in a permanent residence. Ash removal and firebox cleaning as needed.
 - Chimney sweeping every 3rd year in recreational buildings in little use. Ash removal and firebox cleaning as needed.
 - Clean the indoor unit filter of an air source heat pump once a month.
 - In winter, clear snow and ice by brushing from the outdoor unit of an air heat pump.
 - Make or order firewood in time for winter. Bring firewood inside to dry in good time before use.

HEATING AND HEAT DISTRIBUTION

Get to know your home's heating system with the help of manuals or a professional. The better you know the devices and adjustments, the smoother and safer their correct and energy-efficient use will be.

- Check the operation of the heating system at the beginning of the heating season.
- Do the necessary annual maintenance work yourself or book a maintenance professional. It is recommended to have basic maintenance and repairs of defects detected in winter carried out outside the heating season.
- Switch off the heating for the summer.
- Carry out seasonal measures for each heating system separately.
 - React promptly to suspected faults in devices by booking an assessment of the need for repairs and its urgency from a professional, for example in the case of heat pumps.

Electric heating (electric radiators)

- Test the operation of the thermostats and check the set values once a month.
- Check the set value of the domestic water heater twice a year.
- Determine whether an exchange electricity-based contract and guiding electric heating to cheaper hours using timers or home automation are viable options.

Air source heat pump

- Clean the indoor unit (once a month).
- Check and clean the outdoor unit, monitor melting and condensed water once a month.
- Switch on the heating function in the autumn.
 - Adjust the air heat pump's set value to the desired, energy-efficient level, and lower the set values of parallel heating devices (e.g. electric radiators) by a few degrees.
- If necessary, use the cooling function in hot weather.
- Keep the device in either the heating or cooling setting, not the automatic setting.
- Ensure basic maintenance every few years, especially the heat transfer core and fan.

District heating

- Visual leak inspection four times a year.
- Winter and spring: monitor the cooling of district heating.
- Autumn: checking the heating control and test the shut-off valves.

Air-water heat pump

- Monitor the operation/operating hours of the electrical resistance and the operating noise of the device four times a year.
- Clean the outdoor unit four times a year.
- Clean the dirt trap once a year.
- Winter: Monitor the removal of melting water.
- When starting to use, adjust the set values for the heating season. Professional help is available for adjustment.

Geothermal heat

- Monitor the operation/operating hours of the electrical resistance and the operating noise of the device four times a year.
- Monitor the outgoing and return temperature of the heat collection circuit four times a year.
- Monitor the pressure level of the expansion tank of the collection circuit four times a year.
- Clean the dirt filters of the collection circuits and the heating network once a year.
- When starting to use, adjust the set values for the heating season. Professional help is available for adjustment.
- During the first year of operation, clean the dirt filters several times.
- Have professional maintenance done every few years.

Exhaust air heat pump

- Clean and replace the filter twice a year.
- Monitor the operation of the steam generator's condensed water drain pipe.
- When starting to use, adjust the set values for the heating season. Professional help is available for adjustment.
- Have professional maintenance done every few years.

Radiator or underfloor heating network

- Sensitise and test the operation of the thermostatic radiator valves once a month.
- Open the summer lock-down at the beginning of the heating season.
- Test the adequacy of heat to the furthest radiator in the network and/or different heating circuits at the beginning of the heating season. Check the operation of the heating circuit controllers.
- Bleed the radiators as needed at the beginning of the heating season. Book a professional if necessary.
- Monitor the pressure level of the radiator network and the pre-pressure of the expansion tank once a month during the heating season.
- Test the operation of the safety valve.
- Close the summer lock-down at the end of the heating season.
- Use the heating circulating pump a few times outside the heating season.
- If you need to add water to the radiator network often, there is probably a leak in the network, which needs to be located to prevent water damage.
- Have a professional pressurise/repair the expansion tank if necessary.
- Basic adjustment of the heating network if necessary.

ELECTRICAL EQUIPMENT

- Measure the temperatures of the refrigerating appliances and adjust if necessary.
Recommendations:
 - refrigerator +5 °C
 - freezer -18 °C
- Thoroughly defrost and clean the refrigerating appliances. Vacuum the backs and clean the seals 1 to 2 times a year.
- Clean the appliances' seals once a month.
- Vacuum and clean the backs of the cooker, refrigerating appliances and washing machines at least once a year.
- Check the functioning of outdoor lighting in the autumn.
- Use LED lamps and make use of outdoor lighting timing or motion control.
- Do you suspect a device failure? Buy or borrow a consumption meter to check the consumption of a single device. Have broken devices repaired or recycled. www.serkierratys.fi/en/frontpage.

WATER

- Monitor total consumption on a monthly basis. React promptly to deviations, investigate them and rectify the cause.
- Check the temperature of the domestic hot water entering the water supply network.
 - The water temperature from the tap should be +55...60 °C.
- Adjust the water heater temperature:
 - continuous operation +60...70 °C
 - operation with night-time electricity +75...85 °C
- Check the taps and toilets during the weekly cleaning. Have leaking plumbing fixtures repaired immediately.
- Assess the need to replace the taps and toilets. The water usage of new models can be half of that of decades-old ones.
- Check the washing machine hoses 1 to 2 times a year. Replace worn hoses with new ones in good time.

VENTILATION

Mechanical extract ventilation

- Clean the valves twice a year. Be careful not to change the valve adjustments!
- Use and increase ventilation as needed.
- If necessary, let fresh air into your home by opening windows on opposite sides of your home.
- Ensure sufficient fresh air intake.
- Book a cleaning of the ventilation ducts approximately every 10 years.
- If necessary, book a professional to perform the adjustment and inspection tasks on the extract ventilation unit.

Mechanical supply and extract ventilation

- Do not ventilate by opening windows, but increase ventilation if necessary.
- Clean the valves twice a year. Be careful not to change the valve adjustments!
- Learn how to use the controls of the ventilation unit and control ventilation as needed with the at home, boost and absence controls. Also take advantage of the device's control options, e.g. time-based or week-based control.
- Vacuum the heat recovery unit's core once a year and wash it every 2 to 3 years.
- Replace the filters twice a year.
- Make sure the extract air heat recovery is on and working in autumn. Check that the post-heating set value for the supply air is energy-efficiently 17...18 °C.
- For the summer, set the heat recovery bypass for the extract air and the supply air temperature as low as possible.
- Book a cleaning of the ventilation ducts every 10 years.
- If necessary, book a professional to perform the adjustment and inspection tasks on the extract ventilation unit.

Natural ventilation

- Ensure the adequacy of make-up air supply throughout the year.
- If necessary, let fresh air into your home by opening windows on opposite sides of your home.
- Adjust the settings of the valves according to the seasons.
- Clean the supply and extract air valves and replace the filters twice a year if necessary.

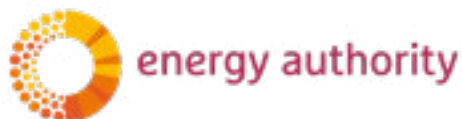
STRUCTURES AND SAFETY

Be vigilant and repair defects in time. Anticipate problems.

- Clean the water traps to prevent drain blockages.
- Test the functioning of the fire alarms and carbon monoxide alarm.
- Test the residual-current device.
- Monitor the operation of the photovoltaic system.
- Check the roof and lead-throughs.
- Check the functioning of the subsurface drains and storm-water sewers.
- Clean the gutters and gutter drains in spring and autumn.
- Check the roof safety products (ladders, snow guards, access bridges).

- Regularly monitor the snow load on the roof and icicles.
- Monitor the flow of surface water in the spring and when it rains.
- Check the condition of the house's base floor, attic joists, façade and chimney (any cracks and damage caused by animals in the structures, also make sure that there is fire wool at the base of the chimney).

Also start filling in the maintenance book for detached houses **Pientalon huoltokirja**, where you can record the most essential information, goals, instructions and plans for maintenance and upkeep. The maintenance book also includes target lifetimes and annual maintenance instructions for structures and technical systems. Such information will help you anticipate and schedule your home renovations. You can find electronic guides in Motiva's online service at <https://www.motiva.fi/en/publications/publications>



Instructions for sustainable energy use are available from your energy advisor:
<https://energiavirasto.fi/en/energy-authority>



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