Home Energy Guide – Building Regulation Part L,F and O – issued by Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government

Ventilation in your home is provided for three reasons: The first is to supply fresh air for the occupants. The second is to help to ensure good indoor air quality, which needs removal of enough moisture, odours, and other indoor pollutants. The third purpose is to help to maintain good thermal comfort; ventilation air flows help heat to mix from different sources, so it circulates throughout your home, especially from the central heating system during cold periods. The different parts of the ventilation system work together to allow fresh air to through throughout your home. During hot weather periods, ventilation can remove excess heat from your home - See the 'Staying Cool in Hot Weather' section below for guidance about this.

Poor levels of ventilation along with excess moisture in the indoor air can contribute to mould growth, so it is important to use the ventilation provided to keep your home 'fresh' and to remove moisture at source, particularly from shower rooms, bathrooms and kitchens. To limit excess moisture in the indoor air and condensation in your home, the following tips may be helpful:

- avoid drying clothes indoors, especially on radiators;
- if you have one, make sure your tumble dryer's venting duct leads outside (unless it is a self-condensing dryer);
- reduce moist air spreading around your home by using local extract fans keeping internal doors closed when cooking, bathing, or showering.
- reduce moist air spreading around your home by using boosted mechanical extract ventilation keeping internal doors closed when cooking, bathing, or showering.
- reduce moist air spreading around your home by using boosted MVHR keeping internal doors closed when cooking, bathing, or showering.

***Important note**: Separate, permanently open ventilation grilles (called combustion vents) may be installed in your home to supply air for certain gas appliances, solid fuel stoves, or other combustion appliances. **These combustion vents must always be left open by law to allow sufficient air in for complete combustion and these should never be blocked. Without such combustion vents, or if blocked, carbon monoxide gas may be released which can be deadly.** Modern gas boilers, stoves and gas appliances may have sealed air inlets, so they draw air directly from the outside. If in doubt, check with a professional registered engineer; Gas Safe-registered for gas, HETAS for solid fuel, or OFTEC for oil, and never block such combustion vents. Further information on detecting and preventing carbon monoxide can be found on the following web link: https://www.gov.uk/government/collections/carbon-monoxide-co.*

Ventilation will typically be provided in one of three ways

Natural ventilation: Ventilation in your home has been provided using **boost only extract fans in shower rooms, bathrooms and kitchens, with trickle vents in all window frames, and openable windows**.

Trickle vents are small openings fitted within all window frames in your home, which allow background ventilation air flows to help to maintain good indoor air quality. Local extract fans in shower rooms, bathrooms and kitchens (in a non-recirculating cooker hood) provide ventilation air flows to remove high amounts of moisture, odours and other indoor pollutants using fans powered by electricity. These will often come on with the light switch and stay on for a timed period after the light has been turned off, and

are also humidity controlled. Opening windows allow for additional ventilation when needed. To allow air to circulate around your home you may have noticed that all the doors have gaps underneath them - Do not block these gaps as it will stop air flowing between rooms to those with extract fans and between rooms when trickle vents are open.

Mechanical extract ventilation: Ventilation in your home has been provided using **continuous mechanical extract ventilation from shower rooms, bathrooms and kitchens, with trickle vents in most window frames, and openable windows**. Trickle vents are small openings fitted within all window frames except for in shower rooms, bathrooms and kitchens. When open, these allow background ventilation air flows to help to maintain good indoor air quality. Continuous mechanical extract ventilation from shower rooms, bathrooms and kitchens (sometimes via a non-recirculating cooker hood) provides background ventilation air flows to remove moisture, odours, and other indoor pollutants from your home, with fresh air supplied through trickle vents. This type of system is intended to run continuously using fans powered by electricity and should only be switched off if they are being worked on by a professional installer. Each fan can also be switched to boost mode to temporarily increase the ventilation air flows when needed. Opening windows allow for additional ventilation when needed. To allow air to circulate around your home you may have noticed that all the doors have gaps underneath them - Do not block these gaps as it will stop air flowing between rooms to those with extract fans and between trickle vents.

MVHR: Ventilation in your home has been provided using **mechanical ventilation with heat recovery and openable windows**. Mechanical ventilation with heat recovery (MVHR) systems extract air from shower rooms, bathrooms and kitchens (sometimes via a non-recirculating cooker hood), supply air to the living room and bedrooms, and so provide continuous background ventilation air flows to remove moisture, odours, and other indoor pollutants from your home. This type of system is intended to run continuously at all times using fans powered by electricity and should only be switched off if it is being worked on by a professional installer; it can also be boosted to increase the ventilation air flows when needed. Heat recovery means that the warm air exhausted from rooms in your home is sent through a heat exchanger (in the MVHR unit) which transfers most of its warmth into the fresh air coming into your home. This means you can have plentiful fresh air ventilation while losing little heat. Your heating system will therefore not have to work to replace the heat normally lost to ventilation which should make your home less costly to run. (With certain models, it may be possible to switch the MVHR unit to a 'summer bypass mode', so that incoming fresh air does not pass through the heat exchanger and so is not pre-warmed. This may happen automatically, via a manual switch, or sometimes via an app on a smart phone. Please refer to the manufacturer's instruction manual. - See below for guidance about keeping your home cool during hot weather periods.) Opening windows allows for additional ventilation when needed. To allow air to circulate around your home you may have noticed that all the doors have gaps underneath them - Do not block these gaps as it will stop air flowing between rooms to those with extract fans.

Some practical tips on using ventilation provisions in your home are listed below:

When fitted in your home, trickle vents should be open to provide background ventilation. Trickle vents can be closed to limit cold draughts at certain times, or within rooms you are not using and heating, but remember to open them again at other times. Permanently closing trickle vents could over time contribute to your home to becoming unhealthy and damp. Openings in trickle vents should be cleaned at least once per year to ensure air can flow freely through them, including internal grilles if these are present. local mechanical extract fans (fitted in shower rooms, bathrooms and kitchens), all the ventilation inlet and outlets should be checked regularly to ensure they are not blocked with dust or other debris. They should be maintained by a professional installer according to the manufacturer's instructions.

Do not permanently turn off mechanical ventilation systems. If you feel draughts when these types of system are running, first of all check if boost mode has been left turned on, and if needed change this back to normal mode. If you permanently turn off mechanical ventilation systems, your home will be poorly ventilated, high moisture levels may cause mould growth or timber rot, and you will potentially expose the occupants of your home to harmful levels of indoor air pollutants.

Use boost mode for mechanical extract ventilation / MVHR *systems* to rapidly remove excess moisture or odours. If your system does not have an automatic boost period (auto off), remember to turn off boost mode when this is no longer needed. Prolonged use of boost mode is likely to be noisy, could cause draughts, and will use more electricity than is necessary.

Mechanical ventilation with heat recovery (MVHR) systems include an air filter that must be changed regularly (usually at least once per year, but check the manufacturer's instructions). If the air filter is not changed regularly, it will become blocked, which will result in poor ventilation, increased electricity use and noise, and may shorten the life of the fans installed in the MVHR system

If fitted in your home, continuously running mechanical ventilation systems are intended to be quiet when running. To limit increases in noise from the system over time, ensure the system is regularly maintained by a professional installer according to the manufacturer's instructions.

The filter within a cooker extract hood must be changed regularly according to the manufacturer's instructions. After long-term use, grease and other deposits from cooking can block such filters causing poor performance and increased energy use. Routine cleaning of the initial wire grease filter will help keep the hood extractor operating efficiently. Check the manufacturer's instructions, but this is normally done by just including the filter with your washing up.