

## THE BUILDING REGULATIONS

Building Regulation Part F was issued to lay down requirements for the ventilation of domestic dwellings. The need for legislation had been proven by the increase in health problems and structural damage to buildings, caused by condensation resulting from the build up of moist air in poorly ventilated dwellings.

The Regulations lay down requirements for both rapid and background ventilation to suit the requirements of each room of the dwelling.

### Building Regulation Ventilation Requirements

Room	Extract/Rapid Ventilation	Background Ventilation
Kitchens	Mechanical ventilation rated as capable of extracting at a rate of not less than 60 l/sec (or incorporated within a cooker hood and capable of extracting at a rate of 30 l/sec) or PSV. Rapid ventilation by opening window.	Controllable and secure ventilation opening having a total area not less than 4000mm <sup>2</sup> or by mechanical ventilation being in addition capable of operating continuously at nominally one air change per hour.
Common Spaces in Buildings Containing Two or More Dwellings	No requirement	A ventilation opening with a total area of at least 1/20th of the floor area of the common space.
Bathrooms	Mechanical extract ventilation capable of extracting at a rate not less than 15 l/sec which may be operated intermittently or PSV. Rapid ventilation by opening window.	Controllable and secure ventilation opening having a total area not less than 4000mm <sup>2</sup> .
Toilets	Rapid ventilation by one or more openings with a total area of at least 1/20th of the floor area of the room, with at least some part of the opening at least 1.75m above the floor level; or mechanical extract ventilation capable of extracting air at a rate not less than 6 l/sec, which may be operated intermittently with 15 minutes overrun.	Controllable and secure ventilation opening having a total area not less than 4000mm <sup>2</sup>
Internal Toilets	Mechanical extract ventilation capable of extracting air at a rate not less than 6 l/sec, which may be operated intermittently with 15 minutes overrun.	Controllable and secure ventilation opening having a total area not less than 4000mm <sup>2</sup>
Utility Rooms	Mechanical extract ventilation capable of extracting at a rate of not less than 30 l/sec or PSV. Rapid ventilation by opening window.	Controllable and secure ventilation opening having a total area not less than 4000mm <sup>2</sup>
Habitable Rooms	Rapid ventilation by one or more openings with a total area of at least 1/20th of the floor area of the room, with at least some part of the opening at least 1.75m above the floor level.	Controllable and secure ventilation opening having a total area not less than 8000mm <sup>2</sup>

Under Building Regulation clause 7.1 an accepted alternative to the above is the provision of mechanical ventilation designed to be capable of continuous operation throughout the dwelling. This allows the use of whole house ventilation systems to provide an energy efficient solution to the ventilation problem.



## SCOTTISH BUILDING REGULATIONS PART K

Whilst identical in most respects there are a number of differences from the English and Welsh regulations.

*Kitchens* - a cooker hood of 30 l/sec is not accepted as an alternative to the extractor fan.

*Habitable Rooms* require rapid ventilation openings having an area of 1/30th of the floor area of the room.

*Bathrooms with or without Toilet* require mechanical ventilation capable of an intermittent extraction rate of not less than 15 l/sec and there is no requirement for a timed overrun.

*Toilets* require either a ventilator with air opening of 1/30th of the floor area or mechanical extraction capable of 3 air changes per hour.

## COMBUSTION AIR

In addition to the Building Regulations the Gas regulations require ventilation of all rooms housing open flued gas fires or boilers of rated input over 7 kW or decorative fuel effect fires covered by BS5871 Part 3.

Installation	Requirement
Open flued appliance in a room or internal space.	A permanent opening with a minimum air flow of 10,000mm <sup>2</sup> for input in excess of 7 kW.
Decorative fuel effect gas fires to BS 5871	A permanent opening with a minimum free air flow of 10,000mm <sup>2</sup> .

All vents should be permanent without fly screen.  
Extraction fans should not be located in rooms containing open flued appliances.