

SMOKE DETECTORS

Why bother?

Over 500 people die and 14,000 injuries occur each year as a result of domestic fires in this country. A large percentage of these deaths and injuries could be avoided. Over half of the people killed did not have a smoke detector in their home.

In most cases it is not the fire itself that kills, it is the smoke and poisonous gases given off in the fire, the products of combustion, usually from furniture and/or bedding smouldering in the early stages of a fire.

If the fire starts in an unoccupied room, such as a living room or a bedroom (say from a discarded cigarette) then the fire may smoulder for a long time before it is detected. If the fire starts at night, then there is a good chance that the house occupants will perish before they have the chance to get out of bed. Half of all domestic fire deaths occur between 10.00pm and 08.00am, and one quarter of the total were asleep at the time.

A smoke detector is a simple and cheap device that, if properly installed, will act as an early warning device and give you the chance to: -

- Evacuate your family.
- Save your life.
- Call the Fire Service.
- Possibly extinguish an undeveloped fire and prevent it spreading.

What is a Smoke Detector?

A smoke detector is a small self-contained device, usually no bigger than a saucer, and about 25mm (1") deep. It may be operated by a battery or from the mains electric supply. It must be marked with British Standard (BS) 5446 Part 1 and carry the Kitemark. Modern homes must, by law be provided with a mains smoke detector on each level. But this does not mean that further battery operated ones cannot be installed, say in a child's bedroom!

Both types work in the same way, in that they have an audible alarm sounder when they detect smoke.

Smoke and Heat Detectors:

Essentially, there are two types of smoke detectors: Optical and Ionisation. Because of the different methods by which they detect smoke it is preferable to have one of each.

Ionisation Detectors are the cheapest and most commonly available, best placed where the likelihood of rapid and clean burning fire are greater, say in the hallway, outside a kitchen. Also, this detector is best if it is likely to be exposed to excessive tobacco smoke or placed in a dusty location such as an attic.

Optical Detectors are more expensive but especially useful at detecting smoke from a smouldering fire, typically from furniture, bedding and overheating electrical wiring.

Where should they be installed?

In those areas where, if smoke is not detected quickly, then you could be prevented from escaping safely. In a typical house or flat, it is the hallway, staircase and landing that form part of the escape route to the front door. So it is imperative that any smoke penetrating these areas from adjacent rooms is detected as soon as possible.

In a typical single storey flat or bungalow, the minimum requirement is for a smoke detector to be fixed to the ceiling, placed centrally in the hallway.

In a typical two-storey house, the minimum requirement is for one detector on each level, again fixed to the ceiling, close to the stairwell.

These requirements offer the minimum level of protection. There is nothing wrong in fitting more detectors, say in the living room or in a child's bedroom. In addition, why not give your son or daughter a detector when they move out of your home, to college, university, or a place of their own. Or, better still; why not install it yourself for them. One less thing to worry about!

How should they be installed?

You may wish to purchase a mains electric supply detector. These are more expensive than battery operated ones, but save you the bother of changing batteries every year. We recommend that you employ the services of a NICIEC Approved (National Inspection Council for Electrical Installation Contracting) electrician to install these. An electrician can also link two or more alarms together so that, for instance, an alarm sounding in the living room will set off the alarms in the bedrooms.

Battery operated ones can be fitted by you. If you have difficulties, then a family member or voluntary organisation may be able to help. Always follow the manufacturers instructions on how to fit and position the alarm. Usually the best place is to screw it to the ceiling, as near as possible to the centre of the room or hallway, and at least 300mm (12") from any light or wall.

Where should they not be installed?

In places or positions where they will not prove to be effective, or could be accidentally triggered, such as: -

- In the kitchen or bathroom, where they could be triggered by steam or cooking fumes.
- In the garage, where they could be triggered by exhaust fumes.
- On a shelf, where smoke rising vertically could miss them.
- In a drawer, where they may not be heard.

What about the hard of hearing?

Most people can hear a conventional smoke alarm when it sounds. Usually, only those people with severely impaired hearing need a special alarm that incorporates a strobe light and vibrating pad. Further information may be obtained from the Royal National Institute for Deaf People.

Once fitted, can I forget about it?

No. Once fitted the smoke alarm needs minimum, but vital, attention:

- Once per month, say the first of every month, check the alarm by depressing the test button and holding until the alarm sounds.
- Twice per year, gently vacuum and wipe the smoke detector casing to ensure that dust is not blocking the sensor chamber. If the alarm is mains wired, switch off first.
- Once per year, change the battery, unless it is a 10-year alarm.
- Every ten years, replace the alarms completely with new units.

Are Detectors available for other parts of the house?

Yes. Heat Detectors may be used as an additional measure of protection. These are particularly suitable for fitting in a kitchen, boiler room or garage. Also, combined smoke and carbon monoxide detectors are now available. These being particularly suitable for placing in rooms and hallways where there is a gas appliance.

Anything else?

Yes. A smoke detector is merely a second line of defence. It must never be used as a substitute for not having appliances regularly serviced and maintained. A competent person must service all fossil fuel burning appliances every 12 months. In the case of coal or wood burning appliances, this means having the chimneys swept also.

Why not buy a fire blanket for the kitchen. Fit it on the wall or on a unit between the cooker and the exit door. When promptly used, say on a chip pan fire, a fire blanket can stop an undeveloped fire from spreading.

Fire extinguishers, especially dry powder types, may be purchased for use in the kitchen but are not recommended. Fighting fire is a job for professionals. So if a fire develops which a fire blanket, cannot easily cover, get out of the house quickly and telephone for the fire service.

Also, you might consider installing a carbon monoxide detector; these can now be purchased separately (British Standard (BS) 7860, or combined with a smoke detector.

Will my landlord provide a smoke detector?

If you are a tenant, there is no legal obligation on the landlord of your property to provide a smoke detector. However, as a detector can cost less than £5.00, this is no reason why you cannot buy and fit one yourself.

Problems!

If an alarm repeatedly goes off it is usually because it is positioned in an unsuitable place. For instance, too near to the kitchen, bathroom, or an open fire. Sometimes they can be triggered by excessive amounts of tobacco smoke or candles.

Simply place the detector in a more suitable location.

Never be tempted to remove the battery, either because it repeatedly goes off, or for other purposes. It could cost you your life! On average, 70 people who die each year in domestic fires have a smoke detector that did not work, usually because the battery was flat or missing.

Remember:

Any house can have a fire, even the Queen's! However, you face an even greater risk if you: -

- Smoke.
- Cook food in oil, such as chips.
- Use candles.
- Have many electrical appliances.

A smoke detector can save your life and property.
So be prepared, get a smoke detector, now!

For further information, help & advice:

Gas: Health & Safety Executive: Gas Safety Advice Line: - 0800 300 363

Solid Fuel (coal & wood): Solid Fuel Association: - 0800 600 000

Oil: Oil Firing Technical Association for the Petroleum Industry: -
01737 373311

Royal National Institute for Deaf People
19 – 23 Featherstone Street, London. EC1Y 8SL
Tel: - 0207 296 8000. Fax: - 0207 296 8199. Minicom: - 0207 296 8001

CARBON MONOXIDE DETECTORS

What is Carbon Monoxide?

Carbon Monoxide (CO) is a colourless, odourless, tasteless gas that is highly poisonous. About 30 people and an unknown number of pets die each year due to CO poisoning, hundreds more suffer its effects. Burning any fossil fuel such as coal or wood (but more usually gas) without a sufficient air supply, or with a faulty appliance or flue, can produce CO gas.

What are the symptoms?

CO poisoning is very difficult to recognise, even for a doctor or hospital. Sometimes the symptoms are mistaken for a cold or 'flu, or even food poisoning, heart failure or depression. In some cases the only way a doctor can be sure is to test a person's blood to see if CO is present. Common symptoms of CO poisoning are: -

- Persistent headaches
- Chest pains.
- Dizziness.
- Sickness.
- Diarrhoea.
- Confusion.
- Lethargy

What are the causes?

All heating appliances using, coal, gas (including bottled gas), oil, paraffin or wood, etc need plenty of air to allow them to burn properly, and a flue or chimney to allow the waste gases and fumes to escape. They also need to be serviced and maintained regularly and safely by competent personnel. Any appliance that is starved of sufficient air, or a partially blocked flue, or is not working properly can produce CO gas.

What are the danger signs?

There may be none at all! Whilst there is no substitute for regular and safe servicing, some danger signs can be spotted: -

- Stains, soot or discolouring around an appliance or on top of a water heater.
- The fuel burns with an orange flame.
- A strange smell when the appliance turns on.

If you spot any of the above then turn off the appliance immediately and ventilate your home by opening doors and windows. Call in the services of an approved engineer. If it is gas, you may call the TRANSCO emergency 24 hour line on: - 0800 111 999.

Safety Precautions:

Follow these simple precautions for your own safety and peace of mind:

- Only buy appliances that have been tested for safety. This is especially so if buying a second hand appliance.
- Ensure each appliance has adequate ventilation.
- Never block the ventilation or flue.
- Never use an inappropriate fuel for your particular appliance.
- Have all heating appliances serviced every 12 months by competent engineers. This service must include the chimney or flue.
- Never attempt to repair or maintain an appliance yourself. This can be dangerous, and if the fuel is gas, illegal.

Remember, all gas appliances must, by law, only be serviced and repaired by a CORGI (Council for Registered Gas Installers) registered engineer. This law also applies to liquid petroleum gas or 'bottled gas' heaters.

If you rent your home from a landlord, it is his legal duty to ensure that all gas appliances he has supplied to the property are given a safety service every 12 months. If you have provided other gas appliances, their servicing is your responsibility. If your landlord refuses to have them serviced, contact the Health & Safety Executive on 01256 404000.

Other Safety Precautions:

Even after following the tips listed above, it is always wise to install a CO detector approved to British Standard (BS) 7860. These operate in a similar fashion to smoke detectors in that they emit an audible warning signal if they detect a dangerous level of CO in your home. Combined smoke and CO detectors are now available.

Why not buy a fire blanket for the kitchen. Fit it on the wall or on a unit between the cooker and the exit door. When promptly used, say on a chip pan fire, a fire blanket can stop an undeveloped fire from spreading.

Fire extinguishers, especially dry powder types, may be purchased for use in the kitchen but are not recommended. Fighting fire is a job for professionals. So if a fire develops which a fire blanket, cannot easily cover, get out of the house quickly and telephone for the fire service.

Also, you might consider installing a carbon monoxide detector; these can now be purchased separately (British Standard (BS) 7860, or combined with a smoke detector.

Will my landlord provide a CO detector?

If you are a tenant, there is no legal obligation on the landlord of your property to provide a CO detector. However, as a detector costs considerably less than your life, this is no reason why you cannot buy and fit one yourself.

Remember:

A CO detector is merely a second line of defence. It must never be used as a substitute for not having appliances regularly serviced and maintained.

For further information, help & advice:

Gas: Health & Safety Executive: Gas Safety Advice Line: - 0800 300 363

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FIRE DOORS

Why bother?

Over 500 people die and 14,000 injuries occur each year as a result of domestic fires in this country. A large percentage of these deaths and injuries could be avoided.

Obviously the first step is to take care with open and gas fires, when cooking with hot fat, and with smoking materials. The second step is to fit a smoke detector. However, you can take a further step in order to provide yourself with added security, and this involves replacing certain doors with fire doors.

What is a fire door?

A fire door, together with a suitable frame and if used properly, can slow down the progress of a fire and also hinder the spread of smoke and fumes around the house; and so give occupants vital time in which to escape. The door itself is denser and heavier than a normal internal composite door. It is possible to adapt some existing doors, but this is costly and requires a great amount of skill.

Are they expensive?

Fire doors are more expensive than basic internal composite doors. However, their cost has dropped substantially over the past few years due to increased demand. On the plus side, they are far more durable than composite doors, so once fitted should last a considerable length of time. Also, different styles and designs are now available; to match your're other, existing doors.

Many fire doors now come pre-fitted with intumescent strips down each side and across the head. These expand when exposed to heat and help to 'stick' the door in the frame, so holding back the fire, and smoke and dangerous fumes.

The doorframe that holds a fire door should be substantial and be fitted with 25 mm (1") stops. These are essential in limiting the amount of smoke and gases that escape around the doorframe when a room is on fire.

So, the fire door slows down the actual progress of the fire. The stops limit the amount of smoke that escapes from that room.

Why should they be installed?

In a typical house layout, rooms to the kitchen, living room, bedrooms etc are usually entered from a central hall or landing. It is the hallway, stairway and landing that forms the escape route, in case of fire, in the majority of homes. A fire door is typically placed on doors to rooms where the risk of fire starting are greater, such as kitchens and living rooms. If a fire starts in these rooms, a fire door will slow down the spread of the fire into other areas, and so give you more time in which to escape and call for the Fire Service.

Are they installed in new properties?

In the majority of new homes the only requirement is for a fire door to be placed between the house and the garage. In three storey homes however, fire doors must be provided to protect the internal staircase.

Where should they be placed?

The main objective of a fire door is to protect the exit route in case of a fire.

The exit route is usually the hallway, staircase and landing.

By far the most important rooms where fire doors should be installed are the kitchen and living room. These are the rooms in which fires are most likely to start and, as they are normally on the ground floor and bedrooms are on the second floor, and fire spreads upwards; the danger is obvious.

How can they be fitted?

Unless you are competent at DIY it is better to ask a carpenter to fit them for you. The door should fit snugly in the frame with a maximum gap between the door and the frame of 3mm. The door should also be fitted with a self-closing device so that the door automatically closes into the frame. Several devices are available to achieve this, either the hydraulic overhead type, or 'perko' type, fitted into the door on the hinge side. Rising butt hinges are not recommended.

Finally:

No matter how well a fire door is fitted, or to how many door frames they are fitted, a fire door which is wedged open might be useless. Never wedge open a fire door, your life could depend on it!