Choosing and Installing Carbon Monoxide (CO) Alarms

Increased incidents of poisoning by CO from blocked and leaking flues or faulty appliances has led to the introduction in recent years of CO Alarms.

CO alarms provide an early warning enabling the home owner or tenant to take the necessary steps to avoid a dangerous situation occurring.

The range of CO alarms available has grown and it may seem difficult to choose which one is best for you and your customer. This guidance note should make it clearer.

This is what to think about when choosing a CO alarm:

- Which type of power supply is best?
- Where should the alarm be sited?
- How much does the alarm cost to own?
- Will the alarm work correctly?
- Is the alarm “good value for money”?

Which Type Of Power Supply Is Best?

The choice is between alarms using 240V mains supply or battery power.

Mains operated CO alarms have no batteries to replace and, once installed, are fixed for their operating life. Their running costs thereafter vary as some alarms must be replaced at the end of their life whereas others can be serviced in situ - an important consideration when selecting an alarm. For some customers such as local housing authorities, the fact that the unit cannot be disabled or the batteries “removed” is often a key purchasing factor. However, mains supply alarms need installing by a qualified electrician as they require "wiring up".

Battery operated CO alarms are easier to install, often requiring only one fixing screw. They are more mobile and, in most cases, their batteries can be removed since their batteries need to be replaced. Some CO alarms have "sealed" batteries that cannot be removed and use advanced technology to ensure they last the lifetime of the alarm.

Where should the alarm be sited?

Carbon Monoxide has a similar density to warm air. The British Standards Institute (BSI)* recommends an alarm be fitted at least 1.5m (5 feet) above floor level and at least 1.85m (6 feet) from the room's appliance. Recent research** also suggests the alarm be mounted higher rather than lower in a room as convection currents created by its' heating appliances cause combustion by-products to rise. Certain areas within a property can create conditions which make reliable carbon monoxide detection more difficult; therefore check your alarm has installation guidelines which highlight these areas more specifically.

How much does the alarm cost to own?

Once installed, a CO alarm will need little servicing over its lifetime. At present, most alarms will last between 4 and 6 years without any attention other than a new set of batteries, where appropriate.

Some CO alarms, however, must be serviced at 1 or 2 year intervals and, at these times, their sensor must be replaced if the alarm is to continue working correctly. Please remember most consumers do not comply with manufacturer’s service recommendations unless regularly reminded by the organisation which first installed the alarm.

Will The Alarm Work Correctly?

Most of us don’t have the time, money or resource to test the products we buy. However, here are some simple steps to ensure the CO alarm selected will work correctly.

Safety products such as CO or smoke alarms usually have a mark awarded by a standards organisation. In the UK, the most recognised mark is the Kitemark issued by the British Standards Institute (BSI). This indicates that a CO alarm has been independently tested to meet the British performance standard BS7860 and that the manufacturer operates a fully

101 Bancroft, Hitchin, Herts, SG5 1NB

Tel +(44)1462 434322, Fax +44(0)1462434488

audited ISO9000 quality system. The kite-mark is currently the only British performance mark and is accordingly the most important criteria for products bought and sold in the UK.

Another common performance mark is the UL listing which indicates that a CO alarm has been tested by the Underwriter's Laboratories, USA, to meet the American performance standard UL2034. The performance criteria of UL2034 is different from that of BS7860 - For example, the upper alarm limit is 400ppm CO, compared with 350ppm CO for BS7860.

All alarms with a performance mark must have a built-in test and fault indicator function. These functions vary from those only testing the battery to those testing the health of the CO alarm's sensor and its ability to detect CO. These functions are extremely useful in ensuring the alarm continues to operate safely throughout its lifetime. Where a CO alarm has a "test button" fitted, it is important to remind the consumer to use it regularly. Whilst this provides a high level of confidence, it is not the same as testing a CO alarm with CO gas. You can offer the consumer more confidence and peace of mind and ensure Housing Authorities demonstrate every effort has been made to ensure their tenants safety by providing CO alarm test kits are now available. Some test kits use bottled gas, others slow burning substances so check with the alarm manufacturer – your supplier should be able to recommend a suitable method.

IS THE ALARM GOOD VALUE FOR MONEY?

Each installation will be different - For some, the alarm's technical capability will be key; for others, total cost of ownership.

Choosing and installing the correct CO alarm requires an open mind and remembering that CO alarms must last a long time and ultimately save lives – cheapest is not always best!

Try to use these simple guidelines when selecting a CO alarm:

- Purchase a CO alarm that's been independently approved.
- Make sure the CO alarm has clear instructions on how it is to be installed.
- Read the CO alarm's instructions on what to do if it alarms and keep them accessible.

Finally:

The disastrous consequence of a CO incident has led many to being aware of the obvious benefits of detectors. The risk of a leak and the serious outcome that could follow is a possibility that cannot be ignored and effective protection can only be made by adopting a two step strategy - the first being to choose and install a CO alarm and the second being to ensure appliances are installed and regularly serviced correctly.

CoGDEM has produced a free pamphlet you can give your customers explaining the dangers surrounding CO and some cost effective solutions - especially useful as part of a CO alarm installation programme, providing information to home owners and tenants alike. We also have a free booklet available on CO for local authorities and private landlords.

CoGDEM also has a free technical guidance note on how to use test equipment effectively when installing and service appliances such as boilers, fires, gas cookers, grills and ovens.

For copies, please contact us at the address below. Please note whilst we make every effort to ensure our information is accurate, we cannot be help responsible for any errors or omissions and we reserve the right to update it at any time. However, we always welcome feedback and hope that you will let us know how useful you found this information:

CoGDEM

Unit C, 101 Bancroft, Hitchin, Herts, SG5 1NB, UK

Tel: 01462 434322 Fax: 01462 434488

email: cogdem@aol.com www.cogdem.org.uk

*BSI standard BS7860:1996 **Building Research Institute, GBG30, CO alarm siting