

# G406

## COSHH essentials: General guidance



This information will help employers (including the self-employed) comply with the Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended, to control exposure and protect workers' health.

It is also useful for trade union safety representatives.

The sheet describes good practice on designing, installing, commissioning, maintaining and testing engineering controls such as extraction equipment to control airborne contaminants. It covers the points you need to have clear in any contract concerning new or existing engineering controls.

It is important to follow all the points, or use equally effective measures.

# New and existing engineering control systems

## Control approach 4 Special

### Introduction

- ✓ Engineering controls range from small, on-gun solder fume collectors, through dust hoods, fume cupboards, glove boxes and spray booths, to large-scale industrial installations. All have the same **hygiene requirements**:
  - to collect or contain the contaminant;
  - to conduct it away from the worker reliably; and
  - to keep exposures below relevant exposure limits.
- ✓ When possible, use a reputable supplier of control systems. Ventilation engineers you invite to bid for a contract should be able to show their experience of this type of work.

**Note:** Respiratory protective equipment (RPE) is not engineering control.  
**Caution:** Poorly designed engineering controls that interfere with the worker doing the job must not be used.

### New engineering controls

- ✓ The designer will need to know what the contaminant is (what kind of dust, fume, smoke, mist, vapour or gas), how and where it is produced and what exposure limits apply.
- ✓ The design must be well made, resilient, fit-for-purpose and easy to maintain. Normally, it will have the following elements:
  - a hood, enclosure or other inlet to collect and contain the contaminant as close as possible to its source;
  - a simple indicator, such as a manometer or pressure gauge fitted near the inlet, to show the system is performing adequately;
  - ducts, to remove the contaminant away from the source;
  - a filter or other air-cleaning device normally located between the hood and the fan;
  - a fan or other air mover, to provide air-flow; and
  - more ducting to discharge cleaned air to a safe place outside, although sometimes, cleaned air can be returned to the workroom.

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### Installation and Commissioning

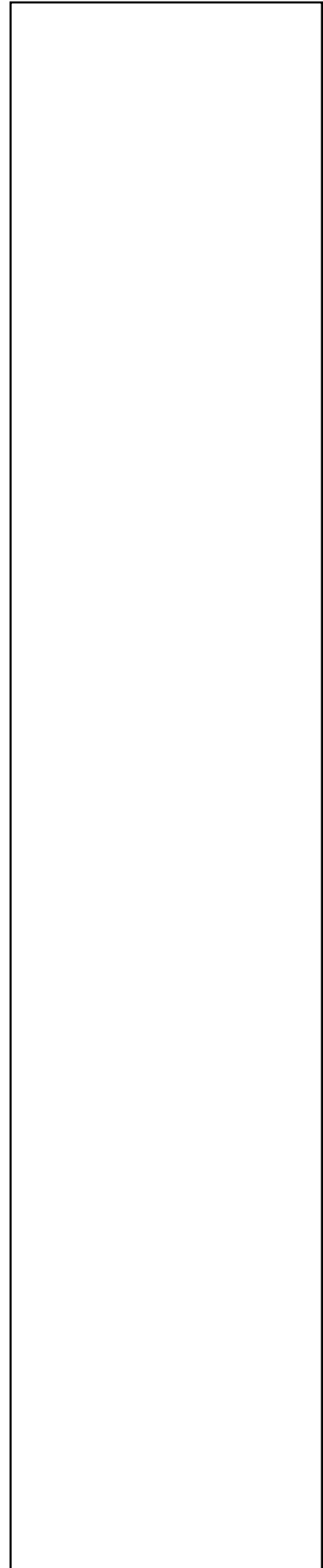
- ✓ The installer needs to show that the system can perform to its design specification and should carry out air sampling to prove that the controls work.
- ✓ You must receive a user's manual, showing:
  - the layout and air flows at all inlets;
  - acceptable gauge or manometer readings;
  - air speeds in the ducts;
  - pressure drop across air cleaners or filters;
  - a maintenance guide; and
  - test worksheets and repair record sheets.
- ✓ Make sure you can get consumable parts (eg replacement filter bags) easily.

### Using engineering controls

- ✓ Follow the instructions in the manual. Every day, look for signs of damage to the ducting, fan and air filter. Noisy or vibrating fans can indicate a problem. Repair damage straight away.
- ✓ At least once a week, check that gauges or manometers give the right readings.
- ✓ Simple, practical tests include:
  - dust lamp (the dust source should be between a powerful lamp with a parallel light beam and the observer); or
  - visual observation of smoke patterns (inexpensive smoke generators are readily available).
- ✓ Check that workers are properly trained. Check regularly that they use the controls correctly.
- ✓ Keep records. Are there failure patterns that make planning maintenance easier?  
**Caution: Never change any part of the system, or what you use it for, or you will need to recommission the whole system.**

### Statutory maintenance, examination and test

- ✓ At least once every 14 months (or more frequently for some types of contaminant), get a competent ventilation engineer to conduct thorough maintenance, examination and testing. The tests may include air sampling.
- ✓ Keep all records for at least five years.



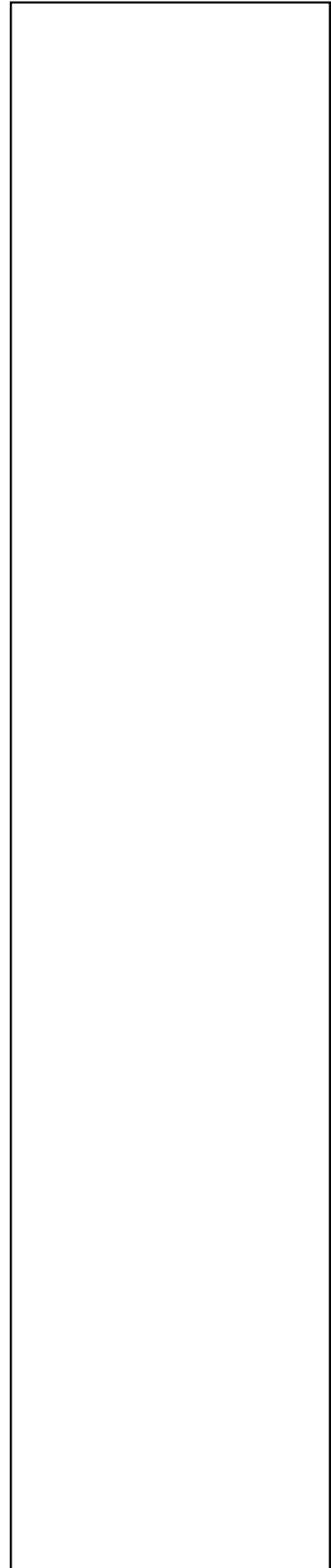
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### Further information

- *Maintenance, examination and testing of local exhaust ventilation* HSG54 (Second edition) HSE Books 1998 ISBN 0 7176 1485 9

### Useful links

- For information about health and safety ring HSE's Infoline Tel: 0845 345 0055 Textphone: 0845 408 9577 e-mail: [hse.infoline@natbrit.com](mailto:hse.infoline@natbrit.com).
- The Heating and Ventilation Contractors' Association (HVCA) can be found on [www.hvca.org.uk](http://www.hvca.org.uk)
- For the Chartered Institute of Building Service Engineers (CIBSE), go to [www.cibse.org](http://www.cibse.org)



This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.