



A free "TOP TIPS" guide

## Ducting – cleaning, the law and you

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**When was the last time your ducting had a "proper", professional deep clean?**

**How to ensure a clean and safe ventilation system in your kitchen:**

Cooking in commercial kitchens generates airborne grease, carbon and steam, which can condense on the inner walls of kitchen ventilation duct work. If regular cleaning of the ventilation system is not carried out, these deposits build up, reducing airflow, creating foul odours and creating a significant fire hazard.

Cleanliness, fire safety and control of unwanted odours are essential for every well managed kitchen.

*The Regulatory Reform (Fire Safety) Order 2005* <http://www.legislation.gov.uk/uksi/2005/1541/contents/> stipulates that by law the person responsible for the business premises must carry out a fire risk assessment and implement and maintain a fire management plan.

Also, *The Management of Health and Safety at Work Regulations* <http://www.legislation.gov.uk/uksi/1999/3242/contents/> place a very strict 'duty of care' on the manager of the premises. Part of the regulations stipulates that grease and fume extract systems must be assessed for hazards and action must be taken to eliminate or minimise potential risks.

Regular kitchen duct and ventilation cleaning will help to satisfy these laws and at the same time remove the most common cause of fires within the kitchen.

**Extract systems** are usually in the form of a discharge stack - the ducting that removes fumes and smell from over the cooking area and ejects it to the outside.

Ductwork sometimes can become both the source and the pathway for dirt, dust, and biological contaminants to spread through the building.

Duct cleaning usually involves the removal of dirt, slime, mould, debris, and other materials found in ductwork and other heating, ventilation and air conditioning components.

### **How often and when should ducting be cleaned?**

HVAC equipment suppliers and manufacturers sometimes provide instructions on when and how cleaning should be performed. Cleaning schedules typically depend on installation date, size of kitchen and cooking areas, operating periods and schedules, the physical nature of the venue and its immediate surroundings, if other forms of filtration are used, costs, and local building regulations.

During duct cleaning, be sure it's done in a way that protects building occupants (i.e. almost always during non-occupied hours).

### **New ductwork**

When new or replacement ductwork is installed there needs to be sufficient access within the ducting for cleaning. Components need to be cleanable or replaceable when they become contaminated.

New equipment should be kept sealed until installed to avoid the possibility of dirt, oil, construction debris or contamination.

New ductwork may contain oils, tools, construction debris, and dirt. These must be cleaned from the ductwork before connection to the air handling system.

**Older ductwork** can become contaminated with dust, dirt, debris, mould, slimes, and other contaminants over time.

Most ducts will also collect small amounts of dry dust on their surfaces – a common occurrence that occasionally requires duct cleaning.

You definitely would want to provide cleaning or duct replacement if:

- there is permanent water damage
- there is slime growth
- there is debris that restricts airflow
- dust is actually seen emitting from air supply
- offensive odours originate in the ductwork or HVAC system. (\*for more about offensive odours, please read the accompanying free Top Tips guide, *Tackling unwanted odours in a commercial kitchen* downloadable at <http://www.ckdirect.co.uk/Tacklingunwantedodoursinacommercialkitchen.pdf>)

Ductwork is often insulated for thermal efficiency and noise control. Insulation generally consists of fibrous material mounted on the interior or exterior of the ductwork. Current thinking suggests the following approaches:

- wet or contaminated insulation needs to be removed.
- only dry vacuuming on dry insulation should be used during cleaning
- Don't disturb the insulation during cleaning.

### **Before you actually contract for duct cleaning**

According to *Occupational Health Magazine*, before you actually contract for duct cleaning, you should be able to answer Yes to these questions:

- Are there observable or known contaminants in the ductwork?
- Has testing or observation confirmed their type and quantity?
- Can or do they (or their odours or by-products) leave the duct and enter the occupied space?
- Do you have a good idea of the source of these contaminants? Can the source be controlled? If not, cleaning is only a temporary measure.
- Will the proposed duct cleaning effectively remove (neutralize, de-activate) the contaminants?
- Is duct cleaning the only (or, the most cost-effective) solution?
- Have you identified a qualified and reputable duct cleaning firm?
- Have you checked the firm's references?
- Has the firm a sensible, sound approach? Do they have the right kind of equipment? Will the cleaning process protect your HVAC equipment and the occupants of the space during cleaning?
- Will they give you a guarantee the duct will be clean after completion?

Any "No" answer should delay duct cleaning until adequate answers are obtained.

## What actually happens during "duct cleaning"?

Duct "cleaning" typically consists of contaminant removal through brushing/vibration plus vacuum cleaning.

When CK Direct undertake duct cleaning, we:

KEEP the ducts being cleaned under negative pressure during the cleaning operation in order to minimize the discharge of dirt and dust into the rest of the space.

PROTECT the duct system by avoiding cutting unnecessary holes in the duct or duct liner, for example.

SCHEDULE the cleaning when the building is not occupied

PROVIDE at least 10 air changes in the building after duct cleaning and before staff and customers are allowed back into the building

KEEP vacuum cleaning and collection equipment located outside the building (Where vacuum collection equipment is inside, protection and filtration is provided for vacuum discharge)

VACUUM CLEAN coupled with gentle brushing to lift settled materials (Vacuum cleaning alone is usually not very effective.)

USE ONLY authorised cleaning products and follow label instructions completely

RINSE and completely remove chemicals before occupants return to the building

REMOVE (rather than clean off) water-damaged or bio-contaminated porous materials

HELP you develop a contamination prevention program so ducts remain clean

## In future, what can you do to avoid the need for duct and system cleaning?

Dirt, debris, and microbiological growths can be minimized by:

- well-maintained filter systems
- regular HVAC maintenance
- providing good housekeeping in the occupied space
- locating air intakes in non-contaminated locations
- keeping all HVAC system components clean and dry (or water drained at the coils).
- Talk to CK Direct about ventilation and extraction equipment installation and maintenance.

## Other free guides available from CK Direct:

- *Ventilation in catering kitchens: How to keep on the right side of the health & safety laws*
- *Installing or renewing your commercial kitchen the DIY way: How to save time, mess and money*
- *Tackling unwanted odours in a commercial kitchen*

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