OPERATING & MAINTENANCE INSTRUCTIONS FOR EXTRACTION SYSTEMS

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EXTRACTION SYSTEMS OPERATION AND MAINTENANCE

See table 1 (below) for cleaning frequencies.

1) EXTRACTION CANOPY CLEANING

Generally the extraction canopy will be manufactured from 430-Grade Dull Buff Stainless Steel or 304-Grade if specified.

To clean the stainless steel, we recommend a mild detergent with vinegar, which will remove light grease marks etc. ***Do not use any caustic materials as this may damage the stainless steel.***

The grease collection trays at the bottom of the extraction plenum will collect any excess grease/oil. These cups will collect any waste material over a long period and should be checked at regular intervals (see table 1).

2) BAFFLE TYPE GREASE FILTERS.

All grease filters should be cleaned at regular intervals according to use (see table 1).

The filters will fit into a Commercial Dishwash Machine or alternatively can be placed in very hot water with a detergent overnight and washed out under a tap to clear grease. ***Do not use any caustic materials as this may damage the filters.***

3) FANS AND CONTROLS

Each extract / fresh air system fan is selected at design stage depending on the size of the canopy, the length and size of ductwork, the type of filtration system, and the type of cooking equipment being used.

Regardless of which fan and speed controller combination is specified, the same principles of operation apply.

Any speed controllers fitted MUST be set at full speed on every occasion before the extract and air supply fans are switched on (see figure 1). Failure to do this may result in the fan motor burning out and the invalidation of any warranty on the fans.

Fig 1 – Fan control set at full speed (Typical speed controllers shown)

There is very little maintenance to fans and controllers required but fans should be checked periodically for cleanliness and heavy grease deposits which could, in time, increase system resistance and cause fans to fail. It is not possible to service a fan as they are sealed units but cleaning by a professional company if grease deposits build up will prolong fan life.

4) FRESH AIR INLET FILTERS

Dust filters (either in panel cartridge or bag form) are usually installed between the fresh air inlet and the supply fan. These should be inspected and cleaned or removed and replaced as necessary (See system drawing for filter location).

5) GAS INTERLOCK

Fig 2 – Typical Gas Interlock Control Panel

Before this system can be operated, any fans connected should be turned on and operational. Once power is running to the interlock control panel, the Red 'Power' LED will be illuminated.

Normal Operation

Insert the key into the key switch on the interlock control panel and turn to the 'ON' position. It can take up to Ten seconds for the Green 'Supply Fan' and 'Extract Fan' LEDs to illuminate. The Green 'Gas On' LED will then illuminate to signal that the Gas solenoid valve has opened, supplying gas to appliances. If any fans installed on the system are not functioning, the 'Fan Fault' LED will illuminate and the LED of the failed fan will flash.

Emergency Stop

If the Emergency Stop button is depressed the Amber 'EM Stop' button will illuminate, the gas solenoid valve will close and an audible alarm will be present. To silence the alarm tone, press the 'Mute' button on the front of the interlock control panel. To reset the stop button, turn the key switch to the off position and repeat the normal operation procedure as detailed above.

Fan fault

Should any fan connected to the gas interlock system fail (or be turned off), the fan fault LED will illuminate, the relevant fan LED will flash and the gas solenoid valve will close and prevent gas cooking.

If a fault persists please contact BW Fabrications on the details below for Assistance.

6) EXTRACT DUCTWORK

It is not possible to provide a general rule for the frequency of ductwork cleaning required because of the variation in hours of usage and level of contamination in the system. We recommend that a regular inspection is made and a risk assessment is made to determine the ongoing cleaning frequency (See Table 1 below). Further guidance is available in TR/19: Guide to Good Practice – Internal Cleanliness of Ventilation Systems published by the HVCA (www.hvca.org.uk).

7) SERVICE DISTRIBUTION UNITS, CONDENSE CANOPIES AND WALL CLADDING.

These are normally made from 304-Grade stainless steel to customer's specific requirements. No maintenance is required apart from the need to keep clean by wiping over using a solution of hot water with a little mild detergent. ***Do not use any caustic solutions.***

8) GAS AND ELECTRICAL INSTALLATIONS

The inspection and testing of these should be included in the planned maintenance programme for the full catering facility to comply with the appropriate regulations.

HEATER BATTERY (Optional Extra)

Fig 3 – Typical Heater Battery and Control Panel

Heater batteries are used to temper supply air into a kitchen, and will turn on and off as required automatically when the supply air fan is running. The temperature of the incoming air can be adjusted using the temperature set point of the front of the control panel. The supply air fan is interlinked to the heater battery allowing the fan to run on for a set period of time to dissipate residual heat in the element. If the element over heats the safety cut out under the black screw cap in the base of the housing (Illustrated above) will need to be pressed to reset the unit. If any problems persist beyond the temperature control and reset button, a suitably qualified electrical engineer should be instructed due to live components within the panel. Technical Information regarding this panel can be gained by contacting B W fabrications Ltd. on 01179 634 492.

9) FREQUENCY OF CLEANING.

The need for specialist cleaning of extraction systems will depend on the level of usage of the cooking equipment, types and quantity of cooking and other risk factors such as vulnerability of the system to ignition and of the building and its occupant / users to system fire, hygiene, vermin and mechanical hazards. Typical cleaning intervals are shown below. A suitable filter changing record document is also included. This should be used to maintain an accurate record of all filter changes in line with the frequencies required.

Table 1: Typical Cleaning Frequencies for Extraction System Components at Different Usage Levels

SYSTEM COMPONENT	LIGHT USAGE 2-6 Hours/day	MEDIUM USAGE 6-12 Hours / day	HEAVY USAGE 12-16 Hours / day
CANOPY (clean accessible internal and external surfaces, check collection trays)	Every 2-3 weeks	Weekly	Twice weekly
GREASE FILTERS (clean)	Weekly	Twice Weekly	Daily
ODOUR CONTROL SYSTEMS* (check and replace as necessary) Carbon filters Pre-Filters ESP / UV units (specialist cleaning as per manufacturer's instructions attached where relevant)	12 monthly 4 monthly Minimum 12 monthly specialist clean	6 monthly 2 monthly 2 monthly recommended check and adjust frequency as necessary	3 monthly 2 monthly 2 monthly recommended check and adjust frequency as necessary
FANS (check and clean as necessary)	12 monthly	6 monthly	3 Monthly
FRESH AIR FILTERS (check and clean as necessary)	6 monthly	4 monthly	3 Monthly
EXTRACT DUCTWORK (check and clean as necessary)	12 monthly	8 monthly	6 Monthly

* Refer to manufacturers' guidance for UV/ESP/Ozone Systems

*B W Fabrications can procure replacement filters, offering a supply and installation, as well as a supply only service. Please contact B W fabrications on the details below.

Systems with heavy usage of chargrills, salamander grills and chinese cookers may need to be cleaned even more frequently. Please refer to TR/19: Guide to Good Practice – Internal Cleanliness of Ventilation Systems (HVCA www.hvca.org.uk) for more information.

Filter Replacement Record

Filter (Carbon/Bag/ESP)	Date Changed / Cleaned	Name	Signed

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