Optima Building Environmental Solutions

Unit 8, Kingley Park
Station Road, Kings Langley
Herts, WD4 8GW
Tel: 01923 267107
E-mail: operations@optimabes.com

SPECIFICATION FOR TENANTS FIT OUT WORK REQUIREMENTS FOR NEW GIN HOUSE FOOD UNITS

Project: Gin House Food Units, Camden Stables Market, London NW1 8AH

Client: Stanley Sidings

Ref: AP331/Tenants_Fit_Out _Works_Requirements/RevC/Nov2016

Date: 21 November 2016 – **Rev C in Bold Regular Text**

Status: For Tenants Direction – Updated incorporating specifics of some tenants.

TENANTS FIT OUT WORKS REQUIREMENTS FOR NEW GIN HOUSE FOOD UNITS

CONTENTS

SECTION ONE

INTRODUCTION

TENANTS FIT OUT WORKS REQUIREMENTS FOR NEW GIN HOUSE FOOD UNITS

1. INTRODUCTION

The project is the provision of 8 new micro food unit stalls to replace the existing outlets. These stalls are located adjacent the Gin Store Building with indicative layouts provided by Piercy & Company. The end units have a side opening with a top hung sliding shutter.

The aim and objective of this specification is set out what internal servicing work is carried out by the Landlord and what is carried out by the Tenant along the standards of installation work for the tenants to install, comply with and maintain for the mechanical, electrical and drainage services that is acceptable to the client and governing bodies.

The mechanical services shall comply with all current codes and design guidelines provided by Cibse, Building regulations and HVCA guides.

The complete electrical system shall be installed and tested in accordance with the current 17th Edition IET current regulations, BS7671 and current amendments. The system shall be carried out and certified by a NICIEC or ECA registered contractor.

The drainage shall comply with building control requirements and must include a grease converter unit within each stall.

The tenant's mechanical and electrical services contractor(s) shall produce an outline design and specification of the proposed installation. This can be in the form of hand sketches or CAD drawings. This shall be issued to the client for approval prior to the commencement of the works.

The fit out servicing described within this document covers the mechanical ventilation, gas services, domestic water services, electrical and drainage services.

The services drawings that should be read in conjunction with this specification and the Piercy & Co architect's drawings are:

AP331-SKM1-**C** New Stall Kitchen Vent **Indicative** Proposal – Plan
AP331-SKM2-**C** New Stall Kitchen Vent **Indicative** Proposal End Stalls – Plan
AP331-SKM3-**C** New Stall Kitchen Vent **Indicative** Proposal Mid and End Stalls – Section
AP331-M&E100-***T1*** Stalls M&E Services - Indicative Infrastructure and Below Ground Drainage Proposal
AP331-M&E200-***T1*** Proposed Below Ground Drainage & vent to New Stalls. New Gin stalls M&E Services Rear Wall and Floor Plan
CSM Gin House Stalls Tenant Fitout Plan - Stall No.1 Extract Layout
CSM Gin House Stalls Tenant Fitout Plan - Stall No.4 Extract Layout
CSM Gin House Stalls Tenant Fitout Plan - Stall No.7 Extract Layout
CSM Gin House Stalls Tenant Fitout Plan - Stall No.8 Extract Layout

The tenant shall be responsible for the proper maintenance of the systems and where requested provide maintenance reports to the client to verify maintenance has been carried out to a satisfactory standard.

SECTION 2

INCOMING ELECTRICITY, GAS AND WATER SUPPLIES

2. INCOMING ELECTRICTY, GAS AND WATER SUPPLIES

2.1 Water

A new mains cold water supply to each unit as a 22mm pipe.

2.2 Electricity

A single phase power supply shall be provided with consumer unit and check meter. The charges for electrical usage to be agreed between Stanley Sidings and the tenant.

2.3 Gas

A gas supply shall be provided to each unit with a check meter and solenoid valve on the outlet pipe as part of the gas safety installation. The check meter remains the property of the client and charges for gas and to be agreed between Stanley Sidings and the tenant.

SECTION 3

MECHANICAL SERVICES

3. MECHANICAL SERVICES

3.1 MECHANICAL VENTILATION - KITCHEN EXTRACT VENTILATION

It is anticipated that all tenants will be providing hot foods or cooking such that it is mandatory that a mechanical extract system shall be provided above a gas hob or hot cooking area as indicated on drawing AP331-SKM1-C. **Where specific details have been provided by the tenant these se layouts with extract layouts have been provided**. Each extract installation includes for an odour neutraliser, gas safety control and speed control and shall be carried out by the landlords contractor with the position of the hood determined by the indicative stall layouts provided by the Landlords **(4no. attached)** architect. The make-up air shall be from the open front of the unit. The extract system shall be designed in accordance with HVCA DW/172 with a minimum face velocity across the face hood being a **minimum** 0.25m/s per m2 and must be provided by with an Odour Neutraliser unit. The Odour Neutraliser shall be installed by the landlord contractor. Refer to Appendix A for Tenant maintenance requirements for a typical Odour Neutraliser.

The extract system for the 4no. Tenants information already provided have a 1600x1100mm hood in various locations and the fan selection indicated on the attached hand drawings for each unit. All ductwork and associated equipment provision shall be provided and installed as per the indicative proposed layouts.

The extract fan system provided by the landlord's contractor will be fitted with ant vibration mounts and flexible duct connects to prevent vibration transfer. There fan shall be boxed acoustic unit run at a speed to keep noise levels to an acceptable level. The recommended fan shall be a System Air Gigabox centrifugal fan units with double walled side panelled enclosure.

The Odour Neutraliser shall be installed in accordance with the typical manufacturers literature by the Landlords contractor.

The fan speed for the extract ventilation fans motors ***provided by the landlord's contractor*** shall be variable from a minimum level to full fan speed depending on the kitchen requirements. The minimum volume flowrate shall be determined as the flowrate that allows the gas service to be livened via a gas solenoid valve where gas cooking is being used.

It is intended that the kitchen extract ductwork passes through the roof of each unit as indicated on the drawing AP331-SKM2**-C**.

A maintenance regime shall be provided by the tenant as described in Appendix 'B' and the tenant shall provide maintenance reports supplied to Stanley Sidings annually to verify that maintenance has been carried out for both the extract system and the odour neutraliser.

Where there is no hot cooking equipment any general extract ventilation system shall be provided by the tenant.

3.2 CONTROL SYSTEM

The control system shall be provided by the landlord's contractor so the ventilation fan speed can be adjusted to suit the level of cooking activity as described in 3.1.

3.3 GAS SERVICE

Where a gas hob is being installed the individual gas Service for each stall shall be ***provided*** with a gas solenoid valve by the landlord's contractor to the gas hob that will remain shut until the extract ventilation system is proved to be operational as described in 3.1. A safety gas control panel shall be provided for this control that includes emergency knock off button, motor current interlock and heat detector for the inputs to the gas safety control unit. The tenant shall provide the gas installation form just outside the service riser.

3.4 HOT AND COLD WATER SERVICES

A 22mm mains cold water service is provided for the tenant to install their hot and cold water services system with direct hot water heater using copper pipework with all installations complying with the water byelaws.

3.5 DRAINAGE

The drainage to each unit shall be carried out by the tenant to a stub stack. The tenant must install a grease interceptor to the drainage that shall be a WADE Floor Standing model 5022LR. (2" outlet) with automatic dosing system or equal and approved in accordance with the manufacturers literature as provided in Appendix C. The tenant shall provide a maintenance regime for the grease interceptor in accordance with the manufacturers information and the tenant shall provide, six monthly, a report to Stanley Siding to verify that maintenance is being carried out to a satisfactory standard.

SECTION 4

ELECTRICAL SERVICES

4. ELECTRICAL SERVICES

4.1 DISTRIBUTION BOARD & METER

The existing MCB distribution board shall remain and new MCBs added to accommodate the tenants fit out. The existing distribution board shall remain the property of the client.

The electrical load allowance for each unit is 40amp SPN.

Circuit protective devices shall be installed within distribution boards and shall consist of MCB's, RCBO's or RCD's as required by the current 17th Edition I.E.T. wiring regulations and current amendments.

Typical arrangement of outgoing circuits'

1 Ring Main - Sockets RCBO 30mA/20amp Type C

2 Radial – Water Heater -16amp Type B

3 Radial – Electric Halogen Heater – 16amp Type B

4 Radial – Socket-Fridge Freezer RCBO 16mA/32amp Type C

5 Radial - LED Lighting & Emergency Lighting – 6amp Type B **(*External lighting under front canopy* and Emergency light fitting installed by Landlord Contactor)**

6 Radial – ***Kitchen Extract installation including Odour Neutraliser and gas safety interlock by Landlords Contractor.***

7 Radial – Grease Interceptor

8 Radial Spare

The ***electrical*** meter shall remain the property of the client. The tenant will agree the payment method with the client for use of electricity.

4.2 CABLE SIZING

The tenant shall install cabling compliant and designed within the current 17th Edition I.E.T wiring regulations and amendments. Radial or ring circuits are acceptable.

4.3 SMALL POWER

The small power shall be 6491B single cables run in hi impact white PVC conduit and if required for additional containment metal trunking.

The accessories shall be MK metal clad or similar. The conduit installation as far as reasonable practical is run vertical and horizontal. Where the unit is used for serving or preparing food, the conduit shall be installed using spacer saddles to allow cleaning behind the conduit.

As indicated above the electrical load allowance for each unit is 40amp SPN.

4.4 ELECTRICAL HEATING

Electric heating if required shall be provided from a infra red or quartz halogen heaters, designed and rated for permanent external installations. This shall provide instant heat, avoiding the need for expensive pre-heating.

A good example is the Dimplex external heater 1.3KW Quartz Infra-red model. OPH13 or similar

4.5 ELECTRICAL HOT WATER SERVICES

An electrical supply to the hot water heater shall be carried out as specified in small power

4.6 LIGHTING INSTALLATION

The lighting installation shall be 6491B single cables run in hi impact white PVC conduit and if required for additional containment metal trunking.

The accessories shall be MK metal clad or similar. The conduit installation as far as reasonable practical is run vertical and horizontal. Where the unit is used for serving or preparing food, the conduit shall be installed using spacer saddles to allow cleaning behind the conduit.

Luminaires:

The luminaires must be of a reasonable quality and low energy or LED.

GLACIER II S 1X18W TC-TEL HFA OP REFL — English - Thorn Lighting or equal and approved.

Each unit shall have at least one number emergency luminaire installed by the Landlord Contractor.

VOYAGER E LED BULKHEAD E3NM — English - Thorn Lighting

4.7 COMMISIONING

The systems shall be fully tested and commissioned by the system supplier and certified for compliance with all relevant standards. The commissioning certification shall also include detailed test verification in writing of the system programmed operational functions, together with a demonstration to the client's representative.

4.8 SCHEDULE OF PARTICULARS FOR UNITS

Section	Description	Reference
Distribution	MCBs & RCBOs	MK Sentry Range or equal and approved SENTRY - MK Electric
Containment	Metal Trunking	Salamandre distribution trunking - Legrand UK & Ireland Or Equal and Approved
Containment	Hi Impact PVC Conduit	Marshall-Tufflex Cable Management Systems Or Equal and Approved
Small Power	Sockets and Fused Connection Units	METALCLAD PLUS™ - MK Electric Or Equal and Approved
Heating	Halogen or Infra Red Heaters	Electric fires, Quantum heaters, renewable heating and hot water Or Equal and Approved
Hot Water	See Mechanical Section	
Lighting	Light Switches	METALCLAD PLUS™ - MK Electric Or Equal and Approved
Lighting	Luminaires	GLACIER II S 1X18W TC-TEL HFA OP REFL — English - Thorn Lighting Or Equal and Approved
Emergency **(By Landlord Contractor)**	**Luminaires**	**VOYAGER E LED BULKHEAD E3NM — English - Thorn Lighting** **Or Equal and Approved**

APPENDIX A

TYPICAL ODOUR NEUTRALISER – TECHNICAL AND OPERATIONAL MANUAL (FOR MAINTENANCE BY TENANT)

ON 100 Odour Neutraliser

TECHNICAL & OPERATION MANUAL

CK Direct

2010

The information given in this document has been collected for the general convenience of our clients. It has been based on general data pertaining to construction material properties and working methods known to us at the time of issue of the document and is therefore subject at any time to change or amendment and the right to change or amend is hereby expressly reserved. The instructions in this publication only serve as a guideline for installation, use, maintenance and repair of the product mentioned on the cover page of this document.

This publication is to be used for the standard model of the product of the type given on the cover page. Thus the manufacturer cannot be held responsible for any damage resulting from the application of this publication to the version actually delivered to you.

This publication has been written with great care. However, the manufacturer cannot be held responsible, either for any errors occurring in this publication for their consequences.

TAKE YOUR TIME TO CAREFULLY READ AND UNDERSTAND THE MANUAL BEFORE USING THE PRODUCT.
ALWAYS KEEP THE MANUAL WITH THE PRODUCT.

1 PREFACE

Using this manual

This manual is intended to be used as a work of reference for professional, well trained and authorised users to be able to safely install, use, maintain and repair the product mentioned on the cover of this document. **Please note that it is strongly recommended that training is given by CK Direct Ltd prior to operatives attempting to carry out maintenance or repair work on this product.**

Service and technical support

For information about specific adjustments, maintenance or repair jobs which are not dealt with in this manual, please contact the supplier of the product.

2 SAFETY INSTRUCTIONS AND WARNINGS

General

The manufacturer does not accept any liability for damage to the product or personal injury caused by non-observance of the safety instructions in this manual, or by negligence during installation, use, maintenance and repair of the product mentioned on the cover of this document or corresponding accessories.

Specific working conditions or used accessories may require additional safety instructions. Immediately contact your supplier if you detect a potential danger when using the product.

The user of the product is always fully responsible for observing the local safety instructions and regulations. Observe all applicable safety instructions and regulations.

User manual

- Everyone working on or with the product must be familiar with the contents of this manual and must strictly observe the instructions therein. The management should instruct the personnel in accordance with the manual and observe all instructions and directions given.
- Never change the order of the steps to perform
- Always keep the manual with the product.

Users

- The use of this product is exclusively reserved to authorised, trained and qualified users. Temporary personnel and trainees can only use the product under supervision and responsibility of skilled engineers.

Intended use

The product has been designed exclusively for use in commercial kitchens. The product has been built in accordance with state-of the-art standards and recognised safety regulations. Only use the product in technically perfect condition with its intended use and the instructions laid down in the user manual.

Safety features

- All safety features must be correctly mounted and can only be removed for maintenance and repair jobs by skilled and authorised service engineers
- The product must not be used if the safety features are only partly present or defective.
- The safety features should be regularly checked for their proper functioning, and if required, be immediately repaired.

Modifications

A modification of the product is not allowed.

Technical specifications

The specifications given in this manual must not be altered.

Modifications

Modification of (parts of) the product is not allowed.

Use general

- Inspect the product and check it for damage. Verify the functioning of the safety features.
- Check the working environment. Do not allow unauthorised persons to enter the working environment.
- Use common sense. Stay alert and pay attention to your work. Do not use the product when you are tired or under the influence of drugs, alcohol or medicine.
- Make sure the room is always sufficiently ventilated, particularly in smaller confined areas.
- Never install the product in front of entrances and exits which must be used by emergency services.
- Keep the operating controls free from dirt and grease.
- The product is not explosion-proof rated. It can cause sparks and should therefore not be used in areas with an explosion risk.

Use of O.N. 100 for commercial kitchen extraction

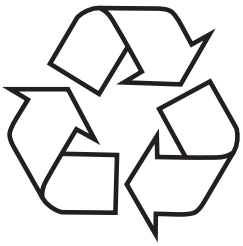
- The product is suitable for the filtration of extracted fumes from commercial kitchens.
- The product shall always be used in combination with the pre- and post-filters that are suitable for the particular kitchen involved.

Service, maintenance and repairs

This manual clearly makes a distinction between service maintenance and repair jobs which have to be carried out by the user and those which have to be exclusively carried out by well trained and authorised service engineers.

- Observe the maintenance intervals given in this manual. Overdue maintenance can lead to high costs for repairs and revisions and can render the guarantee null and void.
- Always use tools, parts, materials, lubricants and service techniques that have been approved by the manufacturer. Never use worn tools and ensure that tools are not left behind in or on the product.
- Do not carry out any service, maintenance or repairs on the product before it has been protected against unintended starting.
- Safety features removed for servicing, maintenance or repair shall be re-installed immediately and checked for proper functioning.
- Regularly clean the inside of the housing.
- Clean or replace the filters in time.

USED PRODUCTS AND THE ENVIRONMENT



Packaging Material

The purpose of the packaging is to protect the product during transport. It consists of the following substances that can be reused:

- (corrugated) cardboard

Do not dispose of the packaging material in the industrial waste

Product

Products which you would like to dispose of may still contain valuable substances and materials. Do not dispose of the product in the industrial waste.

1 TECHNICAL SPECIFICATIONS

1.1 Technical specifications O.N. 100

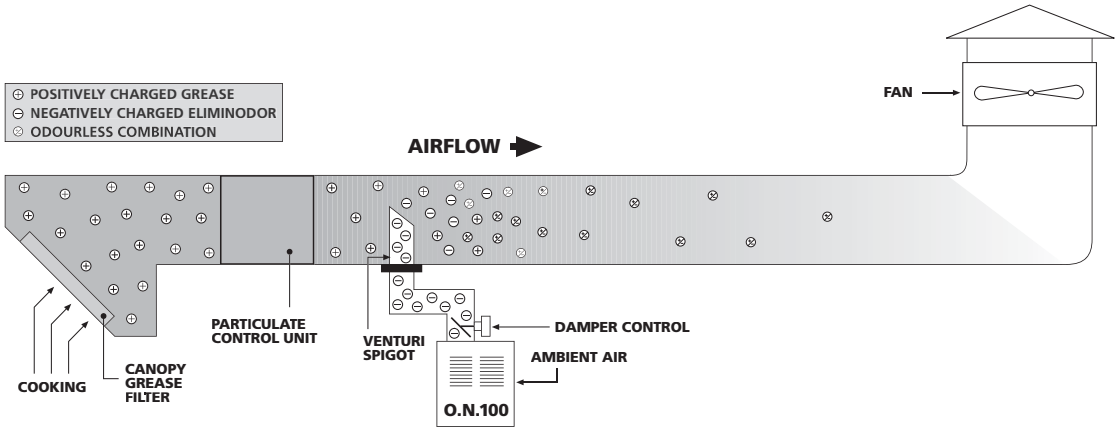
	O.N. 100
Power consumption	40W
Max capacity	4.2m³/s
Weight	12.25 kg
Power Supply	220/240 V 50 Hz 1ph

2 GENERAL DESCRIPTION

2.1 O.N.100 in kitchen extraction applications

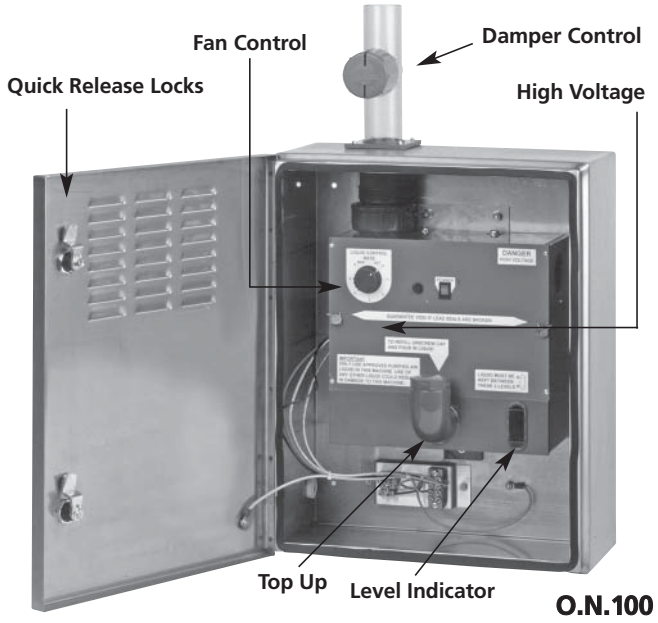
The O.N.100 can remove odours from kitchen extract systems. The O.N. 100 is designed to be installed in the extraction ducting of a commercial kitchen downstream of the extraction hood and upstream of the extract fan.

2.2 Operation



The airstream must first be cleaned of the majority of particular contaminants leaving the gaseous phase of the contamination to be treated by the ON 100. Ambient air is drawn into the unit and mixed with the specially blended neatralising chemical (Eliminodor). A vapour is formed which is then ionised to a negative potential of 15,000 V. The ionised vapor passes along a nonconductive tube and is discharged into the centre of the duct via a venturi spigot, the metal ducting is earthed through the same high tension circuit which makes the contaminant at an opposite potential to the negatively charged vapor. The electrostatic difference between the contaminants and the neatralising vapour causes the two to combine electrically after which a chemical reaction takes place to treat the malodour..

3 INSTALLATION



3.1 Installation O.N. 100

The unit can be free standing on a flat surface or fixed to a wall or ducting (wherever the unit is positioned you should bare in mind that frequent access is required to replenish the neutralising fluid). Make sure that the unit is mounted level and upright. Once the unit is in place it can be electrically connected to a single-phase supply. The unit should be connected so as it only runs with the extract fan. It is also important to connect a earth lead to the ducting the unit will be serving (if the ducting is painted scrape this away to ensure continuity). The unit will not function properly if the ducting is not earthed as this conveys the electrostatic difference between the pollutant and the neutralizing fluid. Before proceeding further the control damper needs to be connected to the unit. This passes through the hole in the top of the outside casing and screws into the internal box. It is secured in place by screwing the flange attached to the damper to the case of the unit.

Once the unit is in position and connected electrically test the operation prior to completion of the installation. On the inside of the unit you will see a small knob which is the speed controller for the fan used to agitate the neutralising fluid in the chamber. Turn the fan speed to full and fully open the damper and you should be able to detect the air coming out of the PVC pipe that the damper is connected to. Check that the controller alters the air volume as required. Now that the physical operation of the unit has been checked switch off the fan and unscrew the filler cap, pour the contents of the provided bottle of Eliminodor into the unit and replace the fillercap. Now switch the fan on and turn it to full, you should be able to detect a strong odour of Eliminodor. The system can now be switched off and the installation completed.

The spigot must be installed at least one metre prior to the fan unit and if possible in a straight piece of ducting away from bends and other obstructions which will interrupt uniform airflow. The spigot has an outside diameter of 50 mm therefore you must drill a hole in the ducting to accommodate the spigot, this is normally done with a tank cutting drill bit. The spigot tip should be as close to the centre of the ducting as possible, if necessary the spigot can be cut if it is too long. The angled face of the spigot must face away from the airflow in order to establish a venturi effect, under no circumstances should the spigot be positioned otherwise as this can cause blow back and prevent the system from working at all. Once the spigot is in place it should be secured using self tapping screws through the flange. You will note that the flange is a tight push fit, when the final position is settled you may wish to fix the spigot to the flange to prevent any movement, this can be done using good quality PVC glue. The spigot can now be connected to the unit via the hose provided. Before pushing the hose onto the two connections place the jubilee clips over the hose. Once the hose is in place tighten two clips over the bottom connection and one over the spigot connection. Be sure not to over tighten the clips, as this will crack the pipe.

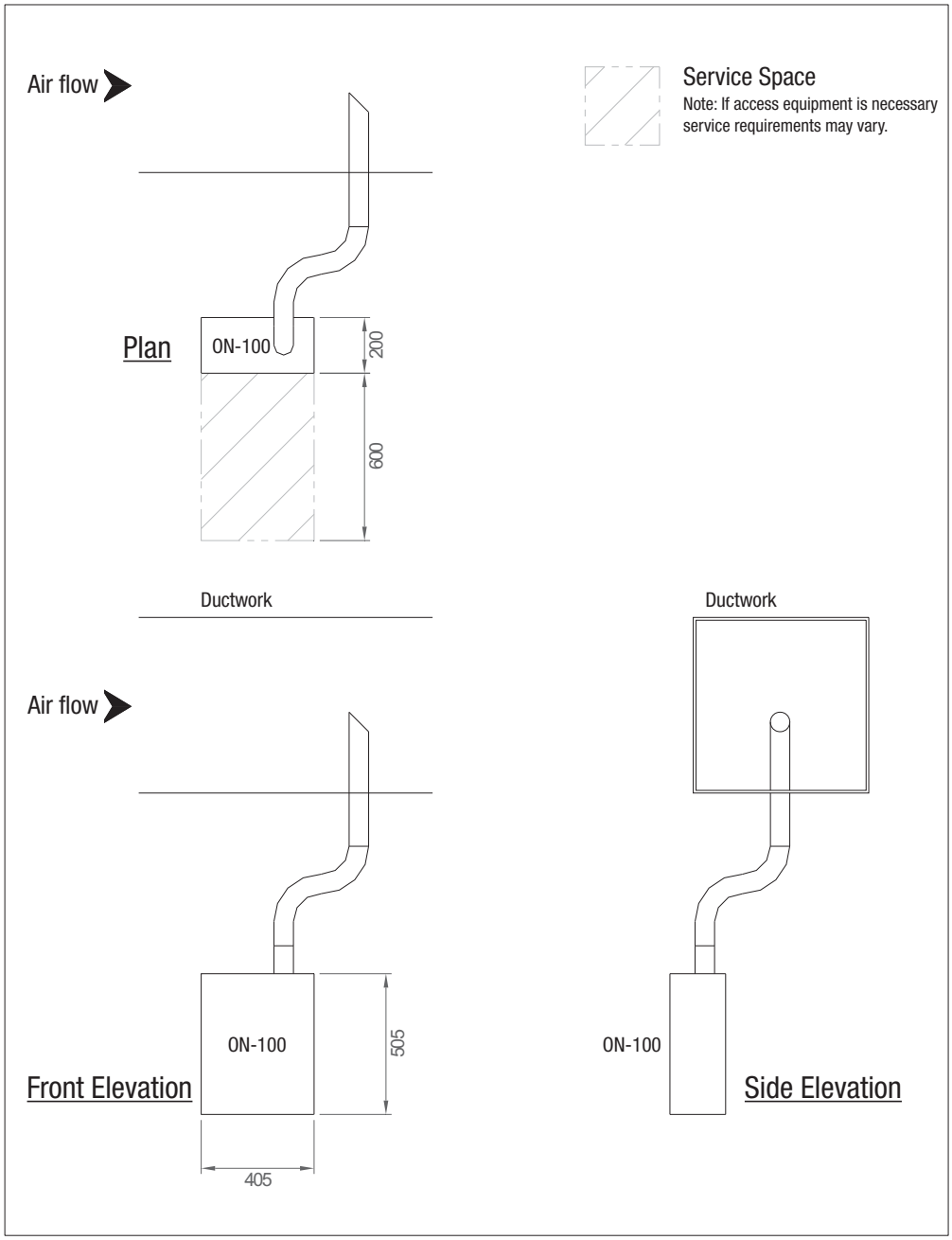
3.2 Commissioning O.N. 100

Now that the system is fully installed turn the fan to maximum and open the damper fully. Neutralising fluid should now be strongly detected at the exhaust point. To balance the system correctly wait until the kitchen is busy, neutralising fluid can still be detected then gradually decrease the output of the unit by tuning the knob anti-clockwise. When both odour and the neutralising fluid can be faintly detected, the unit is set correctly. Cooking odour may be detected at the discharge point but if you stand back a meter or so from the end of the duct you will note that the majority of the cooking odour has been neutralised.

If after twenty minutes operation more than a trace of chemical can be seen in the spigot or the tube leaving the unit then the velocity is too high. Unless dealing with an extraordinarily odorous system the chemical is designed to evaporate into the system in very small quantities. To reduce the evaporation of the chemical close the damper gradually until the optimum setting is found. It may take some time to find this setting and it is recommended that this exercise be carried out over a period of a few hours to ensure that the settings are correct.

4 DIMENSIONS

4.1 Dimensions O.N.100

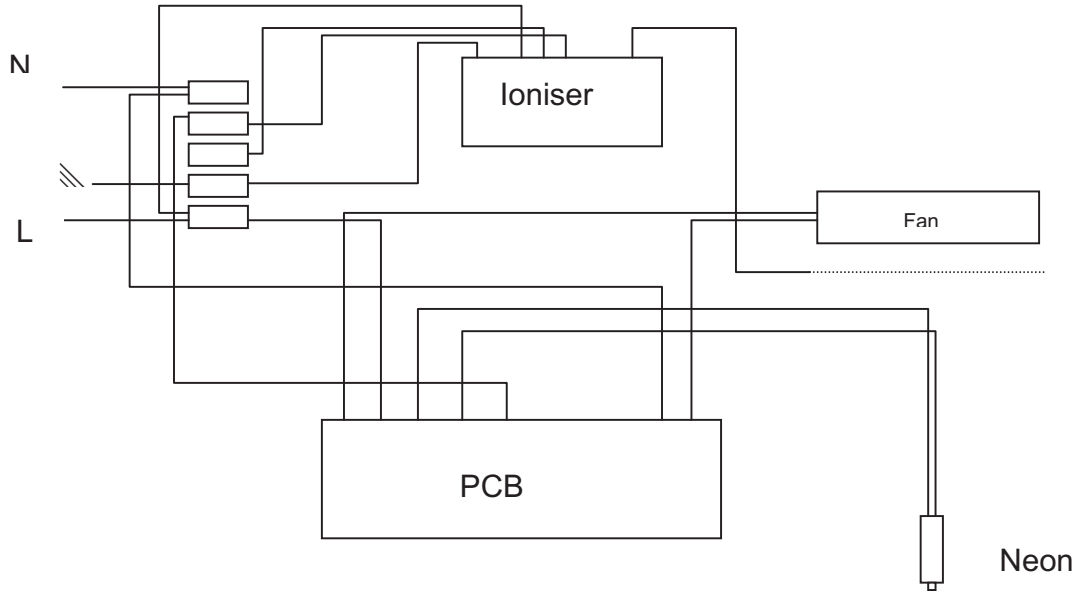


5 MAINTENANCE

5.1 Periodic maintenance

The amount of neutralising fluid consumed will depend on the type of cooking odour present and the volume of extract air, an average situation should use approximately one litre of fluid every three to four weeks. To refill the unit turn the unit off with the fan speed control knob on the front of the unit, remove the filler cap and pour in the liquid. The level of liquid required to ensure optimum performance is between the minimum and maximum lines on the site glass. Caution - Over filling the unit may lead to damage. Once the unit has been filled replace the filler cap and return the fan speed control to its previous position. ONLY USE PURIFIED AIR "ELIMINODOR" AND NEVER ALLOW THE SYSTEM TO RUN DRY FOR MORE THAN TWENTY FOUR HOURS.

6 WIRING DIAGRAM



CK Direct

CK Direct (Peterborough) Ltd
Unit 9, Botolph Bridge Trading Estate,
Oundle Road, Peterborough PE2 9QP
Tel: 0808 1780001 Fax: 01733 569433
e-mail: info@ckdirect.co.uk web: www.ckdirect.co.uk

APPENDIX B

MAINTENANCE REQUIRED FOR KITCHEN EXTRACT SYSTEM

APPENDIX B - MAINTENANCE REQUIREMENTS FOR KITCHEN EXTRACT SYSTEM

MAINTENANCE REQUIREMENTS

1. INTRODUCTION

Proprietors of commercial kitchens are under a duty to ensure that the ventilation system serving the respective premises are maintained and operated effectively.
Good maintenance is a prerequisite for ensuring that a system complies with Best Practicable Means under statutory nuisance provision and will form a key element of any scheme designed to minimize harm to the amenity under planning regulation.

Good maintenance is also required by the Food Hygiene Regulations and will minimize the risk of fire.

2. CONSEQUENCE OF POOR MAINTENANCE

Poor maintenance is widely found with maintenance control systems. The consequence of poor maintenance are:

a) Flow restrictions due to increased pressure drop.
b) Face velocity decreases across the canopy.
c) New installed or maintained ESP odour neutralizer equipment will reduce particulate removal efficiency.
d) Increased the risk of fire.

Poor maintenance is commonly found in commercial kitchens and tenant is responsible for ensuring appropriate maintenance and record keeping of maintenance of the kitchen extract system including odour neutralizer is carried out depending on the heaviness of use.

The optimum maintenance period will depend on the capacity of the equipment installed. A key consideration in the performance of the kitchen ventilation system is the build-up of debris within the ductwork itself. Good hygiene practice should ensure that the face of the canopy, filters and any other parts requiring cleaning are cleaned regularly to comply with the Food Safety (General Food Hygiene) Regulations 1995.

3. RECOMMENDATIONS FOR MAINTENANCE

Maintenance of the kitchen equipment should be carried out in order to ensure the system remains as efficient as possible and also to ensure that the ventilation plant remains in good condition.

3.1 Minimum performance requirements of general maintenance of a kitchen ventilation system

a) The ideal criteria for the debris accumulation within a ventilation system are as follows:
Extract

Test Method	Surface Contaminant Limits
Dust Vacuum Test (VT)	6g/m2
Deposit thickness test (DTT)	180 μm

APPENDIX B - MAINTENANCE REQUIREMENTS FOR KITCHEN EXTRACT SYSTEM

3. RECOMMENDATIONS FOR MAINTENANCE Cont'd ….

3.1 Minimum performance requirements of general maintenance of a kitchen ventilation system Cont'd ….

b) The maximum allowable debris accumulation within a ventilation system are as follows:
Wet Film Thickness Test (WFTT)

Measurement	Recommended Action
200µm as a mean across the system	Complete cleaning required
Any single measurement above 500µm	Urgent local cleaning required

3.2 To achieve these limits it is recommended that:

- a visual inspection of the ventilation system be carried out at least once a week. All metal surfaces should be checked to ensure that there is no accumulation of grease or dirt and that there is no surface damage;
- Cooker hoods and grease filters should be cleaned on a daily basis;
- Baffle type self draining filters and collection drawers should be cleaned weekly as a minimum. The cleaning period for mesh filters should be at least twice a week;
- Cleaning period for extract ductwork are used as follows:

Heavy Use	12-16 Hours Per Day	3 Monthly
Moderate Use	6-12 Hours Per Day	6 Monthly
Light Use	2-6 Hours Per Day	Annually

- Periodic 'deep hygiene cleaning' be undertaken by a specialist contractor. All accessible main ductwork runs and branches, including fitted equipment should be inspected and cleaned. Access panels shall be provided in accordance with TR/19 HVCA Guide to Good Practice Internal Cleanness of Ventilation Systems. [Note: periodic will be defined by the use of equipment in table above];
- all fans are maintained on a regular basis as recommended by the fan manufacturer; and
- ventilation grilles, where fitted have easily removable cores to facilitate cleaning.

3.3 Recommendations for maintenance of odour control system

For a system employing ESP and other inline odour abatement systems:
• Clean every 2-6 months in accordance with the ON100 Odour Netraliser Technical and Operational Mechanical in Appendix A.

APPENDIX B - MAINTENANCE REQUIREMENTS FOR KITCHEN EXTRACT SYSTEM

4. MAINTENANCE ACTIVITIES

A range of cleaning techniques are available and these are summarized in Tables 5.1 and 5.2.

Table 5.1: Examples of wet cleaning techniques:

Generic Name	Method of Removing Deposit
Wet Vacuum	Suction
Chemical Clean	Softens or dissolves deposits
Hand Wash	Washing of internal surface using appropriate medium
Steam/High pressure	High pressure system water wash used to dislodge/ dissolve deposits

Table 5.2: Examples of dry cleaning techniques

Generic Name	Energy Source	Method of Removing Deposit
Air Whip/Skipper Ball	Compressed Air (Low Volume)	A rubber hose or plastic ball that under pressure agitates the wall of the ductwork.
Air Lance	Compressed Air (Low Volume)	Usually an air gun with a trigger that is able to direct compressed air locally.
Air Nozzle	Compressed Air (High Volume)	Usually a plastic or metal ball placed on the end of a flexible hose. Compressed air leaving small openings in the ball propels the hose forward inducing the nozzle to closely traverse the internal surface of the duct.
Hand Wipe	Manual	Wiping of the surface using a medium appropriate to the purpose.
Hand Scrape	Manual	Removing heavy deposits by hand scraping.
Hand Brushing	Manual	Brushing the surface using a brush appropriate to the purpose.
Hand Vacuum	Electricity	Manual Suction
Mechanical Brushing	Compressed Air and/or Electricity	Brushing the surface of the ductwork using a mechanical action.
Mechanical Brush and Air Technology	Combined Compressed Air/Electricity	Brushing the surface of the ductwork using a mechanical action and compressed air.

APPENDIX B - MAINTENANCE REQUIREMENTS FOR KITCHEN EXTRACT SYSTEM

4. MAINTENANCE ACTIVITIES Cont'd ….

Monitoring Methods:
Monitoring methods that may be used for assessing the level of debris accumulation are summarized in Table 5.3.

Table 5.3: Examples of dry cleaning techniques

Test Method Reference	Description Of Method
Deposit thickness test (DTT)	US National Air Duct Cleaners Association NADCA ACR 2002
Dust Vacuum Test (VT)	Indicative test
Wet Film Thickness Test (WFTT)	Measurement of grease deposit thickness on hard surfaces using a HVCA "Guide to Good Practice: Cleanliness of Ventilation System

5. POST-CLEAN VERIFICATION OF CLEANLINESS

5.1 On completion a report should be provided containing the following:

- The system(s) cleaned
- Pre-clean measurements on testing system
- Post clean measurements
- Photographic resources
- Additional works carried out (if any)
- COSHN data on any chemicals used
- Recommendation on future cleaning requirements
- Observations on the condition of the ductwork system

5.2 The Post-Clean Verification of Cleanliness report shall assist to serve as evidence of system status to insurance assessors, Environmental Health Officers, landlords, etc.

APPENDIX C

WADE GREASE INTERCEPTOR WITH AUTOMATIC DOSING SYSTEM – TECHNICAL INFORMATION

Uniclass	EPIC
CI/SfB (52.4)	

March 2014

HOW TO DEAL WITH

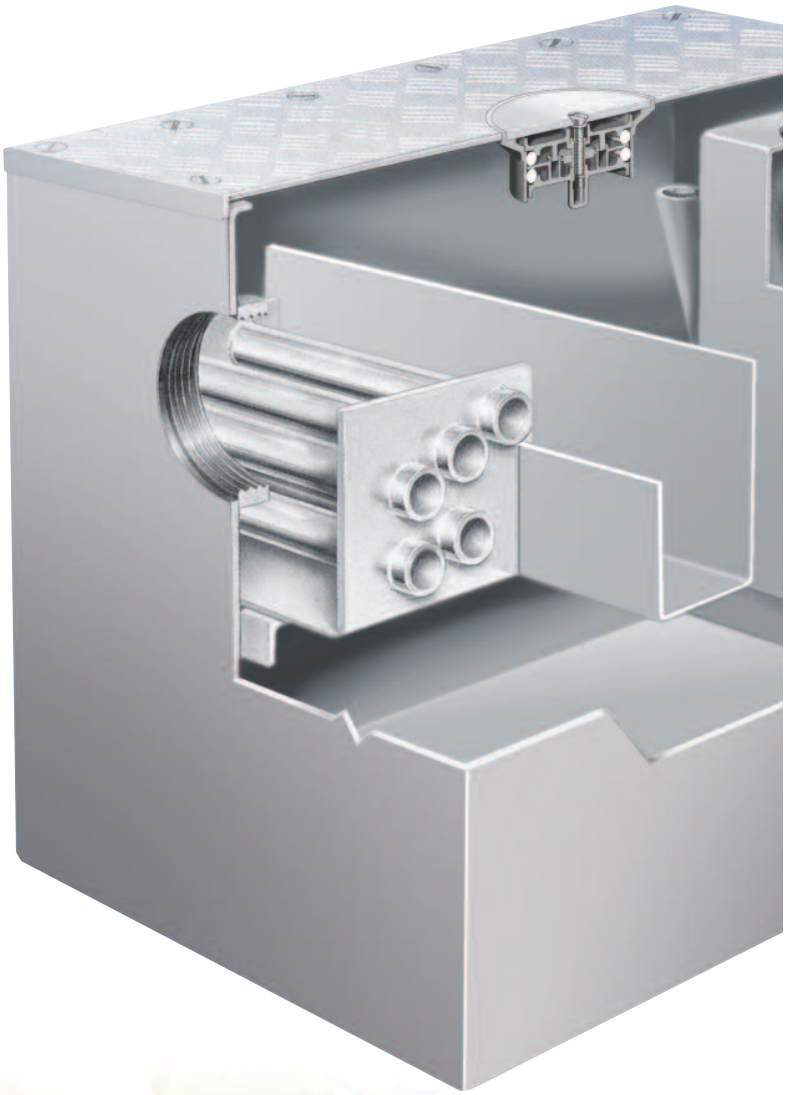
grease, sediment and oil

WADE

A privately owned UK company with more than fifty years' experience in the industry, Wade is established as a leading manufacturer of quality drainage products.

Much of the success of the Company is attributable to an ongoing commitment to put technology to practical use, to generate fresh ideas, and to guarantee quality assured production.

Meeting demands of water and municipal authorities, environmentalists, employers and employees, Wade provides effective and easy to use means of dealing with grease, oil and sediment.



Actimatic Grease Converter

Why use a Wade Actimatic Grease Converter?
Grease flushed down the drain can cause blockages and unpleasant smells in work areas. Blockages can lead to overflows and health hazards, whilst drain clearing is an inconvenient and costly operation.

A Wade Actimatic Grease Converter eliminates such problems and is a **Natural** means of **Permanently** converting grease to bio-degradable products.

'Use of an Actimatic Grease Converter is far more acceptable than chemicals or detergents which merely move grease downstream to become a problem for someone else.'

'Degradation is a natural, slow process. Wade Actimatic uses only natural organisms to accelerate this process.'

How does it work?

The Actimatic Grease Converter works in two stages:

1. **Separation**
   – effluent entering the converter passes over a hydrafilter baffle* which causes grease to form in globules which float to the surface.

2. **Digestion**
   – achieved by Wade Actimatic which produces a colony of micro-organisms to degrade wastes and convert to water soluble, environmentally friendly products.

Patent No. 13287055

Some typical locations where Wade Grease Converters are installed.

Oil Rig, North Sea

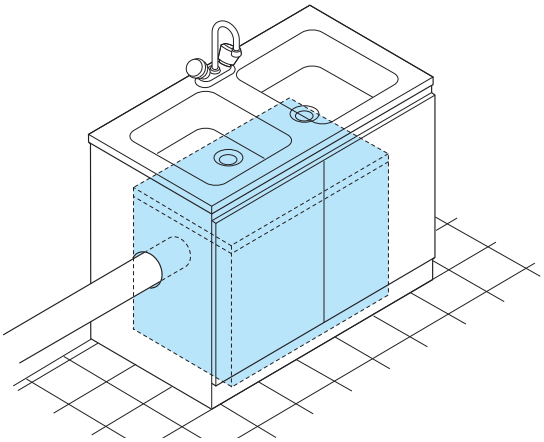
Asda Store, Runcorn

A McDonalds Restaurant

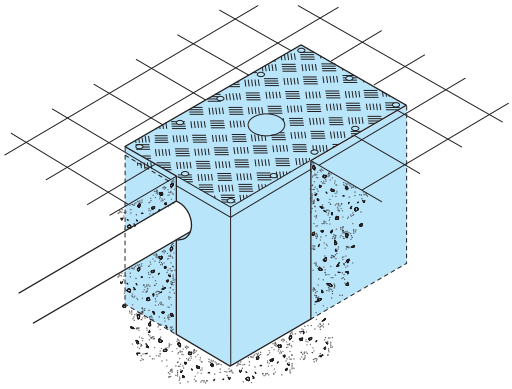
Stock Exchange, London

Quality assurance
Certification of compliance with BS EN ISO 9001 underlines our commitment to quality and service.

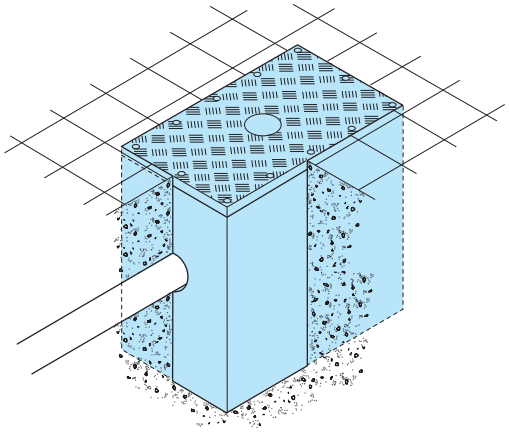
Types of installation



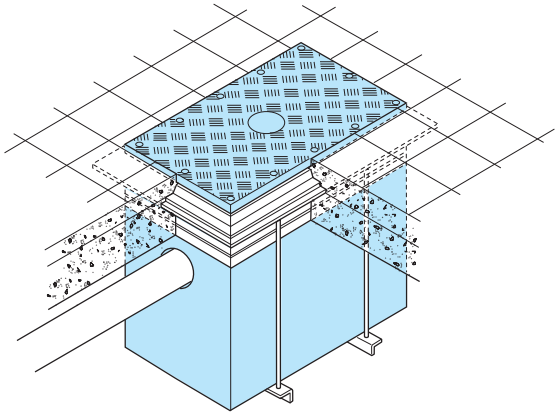
Floor standing
(Standard and low profile models)



Fully recessed in ground floor
(Standard invert models)



Fully recessed in ground floor
(Deep invert model)



Fully recessed in intermediate floor
(Hanger type)

Installation guidelines

Wade Actimatic Grease Converters are designed to be installed in existing or new kitchens, at restaurants, canteens, hotels, hospitals, etc., and also at commercial or industrial premises where food is cooked, prepared or processed. They are not suitable for use with dedicated chicken rotisserie ovens unless special housekeeping measures are taken, including the introduction of water.

There is no optimum distance between the last fixture and the converter; it is generally accepted that pipework longer than 8 metres may allow grease to solidify before it reaches the converter.

It is not recommended that waste disposal units discharge into a Grease Converter, because frequent cleaning out will be necessary.

Waste from vegetable peelers must be filtered before discharging.

Certain cleaning agents (Chlorine, strong caustics, bleach etc.) in concentrated form, have a detrimental effect, and should not be discharged into a Grease Converter.

Installations may require prior approval from the Local Authority Environmental Health Department.

Wade Actimatic Grease Converters satisfy current Building Regulations / Standards in the U.K., and meet requirements of drainage systems designed in accordance with BS EN 12056-1:2000.

Spigot adaptors for connecting to different types and sizes of pipework are shown on page 8.

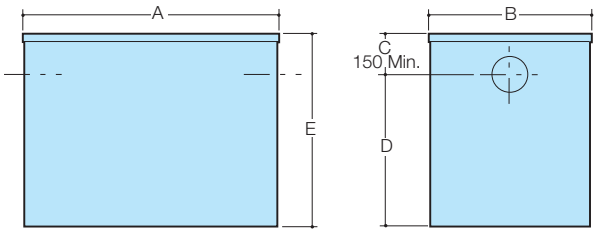
Note: Do not reduce the stated inlet or outlet size otherwise blockages could occur.

How to select and size Grease Converters

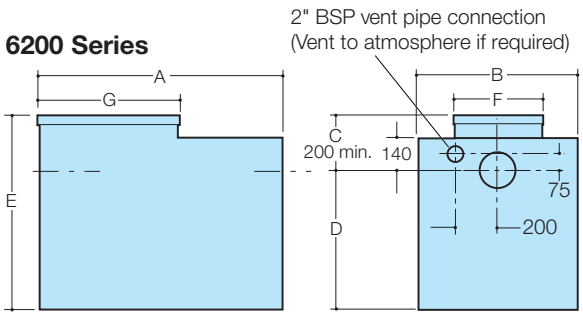
To determine the optimum size of converter to be used, account must be taken of the volume of fixtures discharging into the converter. Use the table below to calculate total volume by entering the quantity of each fixture, multiply by the volume shown and enter as Total Vol.; finally, add up your answers.

Type of fixture	Approx. size (mm)	Approx. vol. (litres)	Quantity	Total vol. (litres)
Handwash sink	300 dia. x 180 deep	12		
Domestic single sink	450 x 350 x 200	32		
Domestic double sink	(450 x 350 x 200) x 2	64		
Commercial sink	600 x 450 x 300	81		
Double commercial sink	(600 x 450 x 300) x 2	162		
Commercial potwash sink	760 x 500 x 380	144		
Tilting kettle		150		
Small dishwasher	Outlet pipe 32 dia.	185		
Medium dishwasher	Outlet pipe 40 dia.	235		
Large dishwasher	Outlet pipe 50 dia.	350		
Other fixtures				
			Total volume of fixtures (litres)	

6000 Series



6200 Series



After selecting the appropriate TYPE of INSTALLATION, and calculating the TOTAL VOLUME of FIXTURES, select the 'Spec.Code' from the table below and add the required 'C' dimension to nearest 10mm.
e.g. for Converter to serve fixtures with a total volume of 325 litres and having a 'C' dimension of 400mm, Specify: 6060XT 'C' = 400mm. For details of materials, accessories and alternative covers, refer to page 8.

Type of installation	Max. total vol. of fixtures in litres	Spec. code	In/Outlet BSP inches	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Req. slab opening	Load class
Floor standing Low profile	160	6020LR	4	775	482	150	180	330		●	●	A15
	160	6022LR	2	775	482	150	180	330	●	●	●	A15
	290	6032LR	2	988	669	150	180	330	●	●	●	A15
	290	6035LR	4	988	669	150	180	330	●	●	●	A15
Floor standing Standard invert	210	6030	4	594	382	150	368	518	●	●	●	A15
	410	6060	4	775	482	150	432	582	●	●	●	A15
	625	6080	4	988	669	150	419	569	●	●	●	A15
Fully recessed ground floor Deep invert	210	6030XT	4	594	382	To be specified on order	368	●	●	●	●	A15
	410	6060XT	4	775	482		432	●	●	●	●	A15
	625	6080XT	4	988	669		419	●	●	●	●	A15
Fully recessed ground floor	1250	6215	6	1516	953		737	●	482	775	●	D400
	2100	6225	6	1869	1142		940	●	482	775	●	D400
Fully recessed intermediate floor Hanger type	210	6030H	4	594	382		368	●	●	●	625 x 445	A15
	410	6060H	4	775	482		432	●	●	●	805 x 545	A15
	625	6080H	4	988	669		419	●	●	●	1020 x 730	A15

For the hanger types listed, the dimension from finished floor level to the underside of the hanger frame (normally slab level) is adjustable on site from 35mm minimum to 75mm maximum.

N.B. In practice fixtures do not all discharge at the full rate simultaneously. This has been allowed for and the table enables the correct grease converter to be selected. In abnormally high or 'dump' situations contact our Technical Services Department.

Wade Actimatic Powder and Liquid

Wade Actimatic is a bacterial product specifically formulated to deal with kitchen effluent. It is available in powder or liquid form.

Actimatic Powder is a free flowing, buff coloured, granular powder; Actimatic Liquid is a green coloured, water-soluble liquid which is suitable for manual and automatic dosing. For technical information refer to back cover.

To function efficiently grease converters must be dosed regularly with Wade Actimatic. Daily dosing is recommended, but where this is impracticable, dosing twice weekly is an acceptable minimum.

When a converter is first put into service, and whenever it is cleaned out, a culture must be established or re-established within the converter per the Initial Dosing Procedure.

The best time for dosing is just before closing down for the night; this is because the micro-biological activity is more effective when there is least flow through the converter.

Details of automatic dosing are given on page 7.

Initial dosing procedure
(1–3 days after kitchen commences operation)

Actimatic Powder

Day 1
(a) Mix 8 level scoops (280 gm) with 2.25 litres (4 pints) of lukewarm water (30ºC); stir to form a slurry.
(b) Remove the dosing plug from the converter and pour in the slurry.
(c) Wipe up any spillage and replace the dosing plug.
(d) Wait at least 4 hours before allowing any discharge into the converter – this waiting time enables the micro-organisms to grow and reproduce in an ideal environment.

Day 2 Repeat as for Day 1.

Day 3 Commence daily dosing.

Actimatic Liquid

Day 1 Remove the dosing plug from the converter and pour in TWICE the amount shown in the Dosage Rate Guide.

Day 2-7 Repeat as for Day 1

Day 8 Commence daily dosing.

Daily dosing procedure

Actimatic Powder

(a) Mix the amount of powder shown in the Dosage Rate Guide with a little lukewarm water (30ºC).
(b) Remove the dosing plug from the converter and pour in the solution.
(c) Wipe up any spillage and replace the dosing plug.

Actimatic Liquid

Remove the dosing plug and pour in the amount shown in the Dosage Rate Guide.

Remote dosing
As an alternative to using the dosing plug facility, Actimatic may be poured into a sink which empties into the converter, and flushed with lukewarm (not hot) water.

Dosage rate
The amount of Actimatic needed depends on the converter model and the type and number of meals prepared. If there is a build-up of grease, increase the dosage, if there is little indication of grease, reduce the dosage. Actimatic is highly concentrated; overdosing is wasteful but not harmful.

Daily dosage rate guide (with monthly equivalents)

Converter Model No.	POWDER		LIQUID	
	Daily level scoop	Monthly Kg	Daily capfuls	Monthly litres
6020LR	1	1	3	1
6022LR	1	1	3	1
6030	1	1	3	1
6032LR	1.5	1.5	4	1
6035LR	1.5	1.5	4	1
6060	1.5	1.5	4	1
6080	2	2	5	2
6215	2	2	6	2
6225	2	2	6	2

Note: If dosing twice weekly instead of daily, use three times the rate shown.

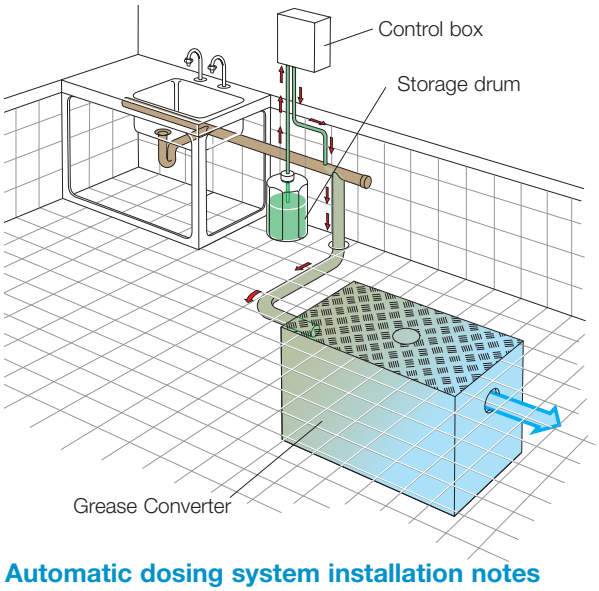
To Specify / Order:
Spec. Code: AL1 Actimatic Liquid (1 ltr.)
Spec. Code: AP1 Actimatic Powder (1 kg)

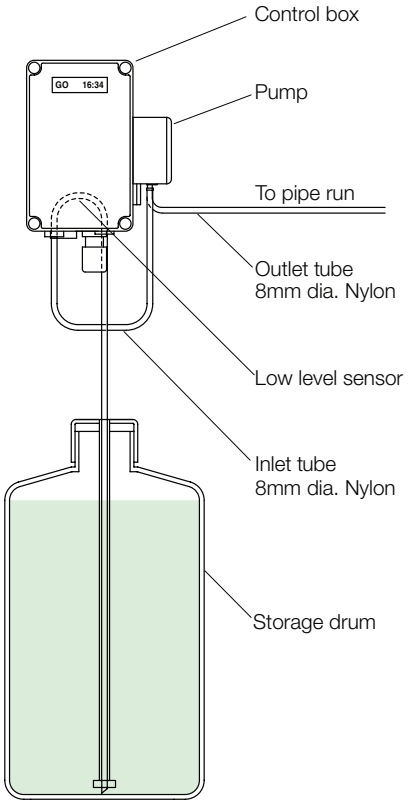
Discount applies to standing orders.

Automatic dosing system

A mains powered dispenser unit is available for use with Actimatic Liquid. The unit automatically doses the Converter with diluted Actimatic Liquid once daily at a time selected by the user.

The system, once set, requires only monthly attention to replenish the liquid supply, and is suitable for use in most new and existing drainage systems. A warning light and an audible alarm indicates low level of liquid.





Automatic dosing system installation notes

Control box – should be wall mounted.

Electrical – 220–240V, (Fuse rating 3 amp – internally protected by 1.6 amp fuse). 50–60Hz single phase supply must be continuous and connected to control box via an isolator by a QUALIFIED ELECTRICIAN.

Plumbing – ensure control box and storage drum are in final operating positions.

Inlet – connect nylon tube to pump by pushing tube into INLET fitting. Feed other end of tube through hole in cap of storage drum until it reaches the bottom of drum (tube may be cut to length if desired).

Outlet – connect nylon tube to pump by pushing tube into OUTLET fitting. For connection to pipework up to 50mm dia., use quick fit adjustable pipe connector supplied. If connecting to pipework above 50mm dia., drill and tap a 1/8" BSP hole in a suitable pipe run leading to the grease converter. This hole MUST be located after the last trap in the run and in the top of the pipe if the run is horizontal.

Screw and seal the supplied 1/8" BSP fitting into the tapped hole. Connect free end of tube by pushing into fitting. (Tube may be cut to length if desired).

Audible alarm may be easily disabled if not required.

Timer programming

Dosing time must be set by following the instructions supplied. Optimum start time is 2 hours after kitchen closes.

Start-up operation

1. Read Health and Safety notes printed on the 1 litre jerrycan containing Actimatic Liquid.
2. Fill storage drum with water to level indicated on drum label.
3. Add 1 litre of Actimatic Liquid. Larger grease converters require an additional amount – refer to drum label.
4. Replace cap on drum and ensure that tube reaches the bottom of the drum.

Construction

Control box enclosure – suitable for wall mounting; made of flame retardant polystyrene with removable cover, sealed to IP56. Size 180mm x 110mm x 90mm deep.

Fixings – stainless steel grade 304 minimum.

Pump – peristaltic type delivering 110 ml of liquid per minute.

Storage Drum – 10 ltr. capacity made of high density polythene; with screw cap and carrying handle; octagonal, 229mm across corners x 381mm high.

Switches – push-button, sealed to IP56.

Timer – programmable by user; 'Mains On' and 'Low Liquid Level' indicators; rechargeable back-up battery (maintains the timer programme, it will not run the pump).

Tubing – 8mm dia. clear nylon or equivalent.

Maintenance

1. 30 days after start-up and every 30 days thereafter, re-fill storage drum with water and Actimatic Liquid.
2. Every 30 days check fittings and tubes for leaks.
3. Every 6 months check pump tubing for signs of wear.

To Specify / Order:

Spec. Code: ADU Automatic Dosing Unit

Spec. Code: AL1 Actimatic Liquid (1 ltr.)

Options: Wall mounting bracket for storage drum – made of grade 304 stainless steel with large radiussed corners to facilitate cleaning – add suffix 'MB' to Spec. Code.

Accessories

Covers are treadplate (anti-slip) stainless steel grade 304

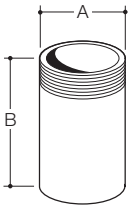
Covers – For alternative covers, add suffix to Spec.Code as follows:

Heavy Duty (class D400) – '**HD**'

Recessed (min.'C' dimension = 170) – '**REC**'

For use with sheet floor covering (min.'C' dimension = 180) – '**SVF**'

Threaded pipework adaptors – to connect converter to pipework



Spec. code	Pipework	A	B
T103	BS 416 / DIN 19522	100	90
T104	BS 416 / DIN 19522	150	90
T105	BS 437	100	90
T106	BS 437	150	90
T1702	Plastic	54	60
T1704	Plastic	110	126
T303	Plastic	160	166
T401	Clay (Densleve)	100	170
T402	Clay (Densleve)	150	105
T501	Clay (Supersleve)	100	130
T502	Clay (Supersleve)	150	130

Maintenance

Commissioning period maintenance

During the first few weeks of dosing operation, regular inspection of the internal condition of the Converter should be made to gauge the performance of the dosage amount. If a thickening of the contents is noted, with a distinct caking effect across the surface, or an offensive, pungent odour is emitted, then gradually increase the suggested dosage rate to compensate. If the contents appear to remain in a minimal semi-liquid state with little or no odour, this indicates successful degradation of the grease.

Grease Converter performance

The Converter is working if there is:

(a) Consistency similar to thick soup.

(b) Little or no odour.

(c) No dry deposit building up on its sides.

(d) No caked deposit floating on surface.

(e) No grease build-up in downstream drain line.

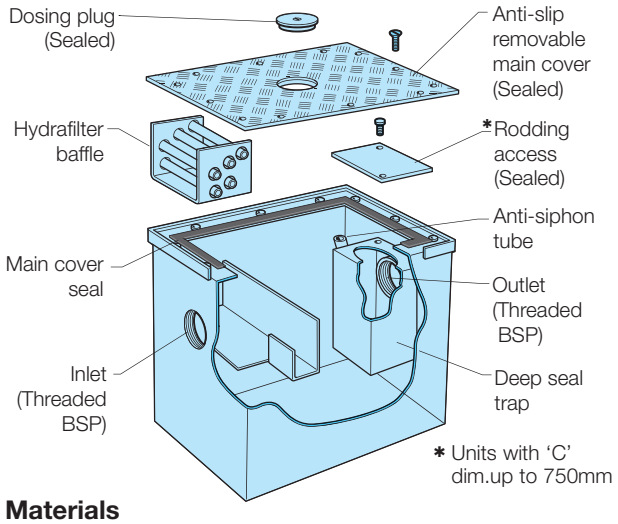
Routine maintenance

Operation	Frequency
Remove main cover Remove and clean Hydrafilter baffle Check contents for caking Check for sediment build-up. If build-up has occurred tank should be cleaned	Quarterly
Remove main cover Remove and clean Hydrafilter baffle Clean out tank completely Check joints and seal	Annually

Whenever tank is cleaned out the Initial Dosing procedure must be repeated. Sediment build-up can be reduced if strainers are fitted to sinks to prevent solids entering the Converter.

For best performance

1. Follow the Initial and Daily Dosing Procedures.
2. Do not discharge very hot water into the Converter immediately before or immediately after dosing.
3. Do not discharge chlorine, strong caustics, concentrated disinfectants, bleach or sanitisers into the Converter.
4. Do not deliberately discharge cooking oil or grease into the Converter.
5. Remember that food scraps and solid particles will settle on the bottom of the Converter and will need to be removed periodically. Do not discharge waste disposal units into the Converter.
6. Follow maintenance procedures.
7. Contact Wade Technical Services Department if you need advice; a free call out service is provided in mainland UK for regular users of Actimatic.



Materials

Seal – *expanded closed cell neoprene.*

Other parts – *stainless steel grade 304.*

For grade 316 stainless steel, add suffix 'M' to Spec. Code; a plain cover is supplied with grade 316 versions, if anti-slip cover is required add suffix 'MAS' (anti-slip cover is grade 304).

Note: 6200 series models have covers with no dosing plug or rodding access.