purified air®
since 1984

UV-C Odour Control Range Technical and Operations Manual

Models Covered: UV-C 1500
UV-C 3000
UV-C 4500

Using this Manual

This manual is intended to be used as a work of reference by professional, well trained and authorised users to assist them in safely installing, using, maintaining and repairing the Unit mentioned on the cover of this document.

Please note that it is strongly recommended that training is given by Purified Air Limited prior to operatives attempting to carry out maintenance or repair work on this Unit.

Copyright Statement

The information given in this manual 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 models mentioned on the cover page of this document.

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

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

Contents

1. Safety

1.1 Introduction

Everyone working on or with the Unit must be familiar with the contents of this manual and must strictly observe the instructions herein.

The Management should instruct personnel in accordance with this manual and observe all instructions and directions given herein.

Note: Always follow the steps for any instructions in this manual in the order given.

Always keep this manual with the Unit.

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

Specific working conditions or selected accessories may require additional safety instructions. Contact your supplier immediately if you detect a potential danger when using the Unit.

1.2 Safety Warnings and Instructions

The following symbols and notifications are used in this manual:

WARNING!
Used to indicate where there is a risk of injury or death.

WARNING! - DANGER OF ELECTRIC SHOCK!
Used to indicate where there is a risk of injury or death from electric shock.

CAUTION
Used to indicate where there is a risk of damage to equipment.

WARNING!
Used to indicate that the Unit contains lamps that produce UV light.

WARNING!
Used to indicate that Ozone (O_3) is produced by this Unit.

INFORMATION
Important information or useful hints about usage.

RECYCLING
Recycling information.

WEEE REGULATIONS
Used to ensure that waste electrical equipment is disposed of correctly.

1.3 Pictograms, Warnings and Instructions Displayed on the Unit

The pictograms, warning and instructions attached to the Unit are part of the safety features.

They must not be covered or removed and must be present and legible during the entire life of the Unit.

- Immediately replace or repair damaged or illegible pictograms, warnings and instructions.

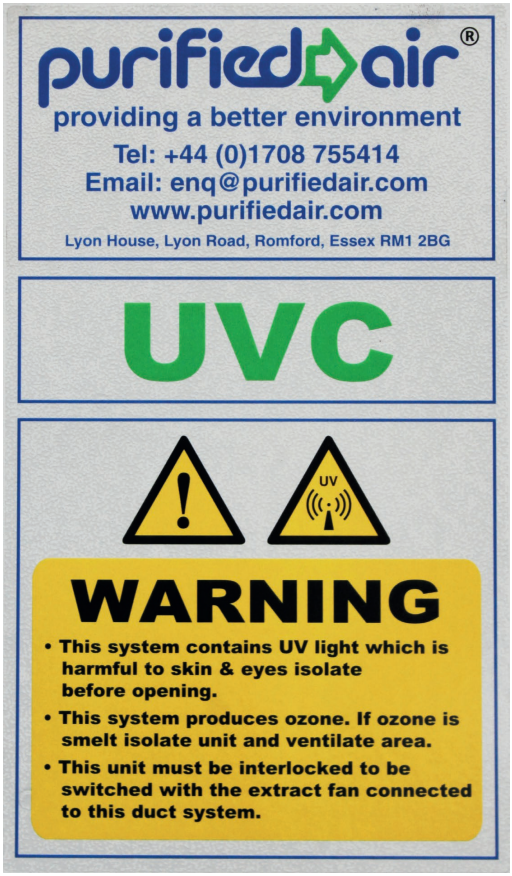


Figure 1 - Unit Label

1.4 Safety Features

CAUTION

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

1.5 Safety Warnings and Cautions

To guard against injury, basic safety precautions should be observed, including the following before attempting to use the Unit:

WARNING!

Ozone (O_3) is produced by the Unit. Ozone can be poisonous at certain levels of concentration.

Inhalation of ozone causes dryness of the mouth, coughing, and irritates the nose, throat, and chest.

It may cause difficulty in breathing, headaches and fatigue, and could aggravate existing bronchial conditions including asthma. The characteristic sharp, irritating odour is readily detectable at low concentrations (0.01 to 0.05 ppm).

UNIT MUST NOT BE OPERATED WITHOUT KITCHEN EXTRACT FAN RUNNING.

WARNING! - DANGER OF ELECTRIC SHOCK!

To avoid electric shock:

- **Do not operate Unit without a proper electrical ground/earth.**
- **Always disconnect power to the Unit and isolate the Unit, before performing any service or maintenance.**
- **Do not operate the Unit if the power cables are damaged, or if any other damage to the Unit is visible or suspected.**
- **The supplied utility/mains power must match the power requirements listed on the Unit's rating label.**

WARNING!

- **This Unit contains lamps that produce UV light.**
- **Avoid exposure to direct or reflected Ultra-Violet rays.**
- **Immediate or prolonged exposure to UV light can result in painful eye injury, skin burn, premature skin aging, or skin cancer.**

CAUTION

- **Make sure the room is always sufficiently ventilated, particularly in smaller confined areas.**
- **Do not use the Unit at a relative humidity exceeding 75%.**
- **Do not use the Unit at temperatures below 5°C or above 56°C.**
- **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 Unit when you are tired or under the influence of drugs, alcohol or medicine.**
- **Regularly inspect the Unit and check it for damage.**
- **Verify the correct functioning of all of the safety features.**
- **Read and save all notices, warnings and safety instructions received with this Unit.**
- **Do not alter the construction or design of this Unit.**
- **Do not remove safety labels or devices.**
- **Do not use this equipment for other than its intended purpose, as described in this manual.**
- **Only use original spare parts.**
- **Keep the operating controls free from dirt and grease.**

1.6 Modifications

Modification of the Unit is not permitted.

1.7 Users

Installation or maintenance of the Unit is exclusively reserved for authorised, trained and qualified users.

Temporary personnel and trainees should only access the Unit under the supervision and responsibility of authorised, trained and qualified users.

1.8 Technical Specifications

The technical specifications of each moodel of UV-C are shown below.

1.8.1 UV-C 1500

	8 Lamp		
Power consumption	560 Watts		
Max capacity	up to 0.7m³/sec		
Weight	43Kg		
Power supply	230V/1 50 Hz		
Housing	Epoxy-coated steel		

The number of lamps required depends on the level of pollution. To deal with medium to high levels of pollution, air movement of between 0.3m³/sec and 0.7m³/sec per Module will produce optimum results for the UV-C 1500 Unit.

1.8.2 UV-C 3000

	8 Lamp	16 Lamp	
Power consumption	560 Watts	1120 Watts	
Max capacity	Up to 1.4 m³/sec	Up to 1.4 m³/sec	
Weight	66Kg		
Power supply	230V/1 50 Hz		
Housing	Epoxy-coated steel		

The number of lamps required depends on the level of pollution. To deal with medium to high levels of pollution, air movement of between 0.3m³/sec and 0.7m³/sec per Module will produce optimum results for the UV-C 3000 Unit.

1.8.3 UV-C 4500

	6 Lamp	12 Lamp	18 Lamp
Power consumption	560 Watts	1120 Watts	1680 Watts
Max capacity	Up to 2.1 m^3/sec	Up to 2.1 m^3/sec	Up to 2.1 m^3/sec
Weight	151 kg <<89 kg approx in brochure>>	167kg <<89 kg approx in brochure>>	183 kg <<89 kg approx in brochure>>
Power supply	230V/1 50 Hz		
Housing	Epoxy-coated steel		

The number of lamps required depends on the level of pollution. To deal with medium to high levels of pollution, air movement of between 0.3m^3/sec and 0.7m^3/sec per Module will produce optimum results for the UV-C 4500 Unit.

1.8.4 Rating Plates

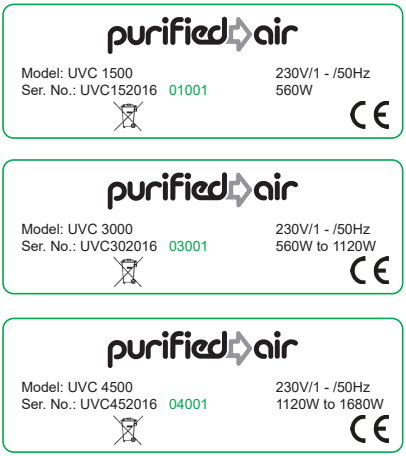


Figure 2 - Typical Model Rating Plates

2. Product Overview

2.1 Intended Use

The UV-C range has been designed to be installed in the extract ducting of a commercial kitchen, downstream of the extraction hood and upstream of the extraction fan. These Units are only intended to treat odours (Gaseous Phase) in air streams where the particulate contaminant has already been filtered. The ideal application of the UV-C range is in conjunction with Purified Air Electrostatic Precipitator (ESP) particulate filtration units.

The UV-C range includes:

- UV-C 1500 which handles airfows of up to 0.7 m^3/sec.
- UV-C 3000 which handles airfows of up to 1.4 m^3/sec.
- UV-C 4500 which handles airflows of up to 2.1 m^3/sec.

INFORMATION

For optimum performance, we would recommend between two and six seconds of dwell time to allow the ozone to work effectively upon the malodorous gasses within the duct.

CAUTION

The UV-C Range should only be used in conjunction with adequate pre-filtration (such as Purified Air's ESP filtration system) to remove the majority of particulate contaminants, made up of hydrocarbons and grease vapour, leaving only the gaseous phase (odour) to be treated by the UV-C Unit.

If pre-filtration is not installed, the UV lamps in the UV-C 1500, UV-C 3000 and UV-C 4500 models will become quickly contaminated with grease and their efficiency will be markedly reduced.

INFORMATION

To efficiently filter the extract air of particulates, we also supply a full range of electrostatic and passive filtration, including Activated Carbon, Baffle, Mesh, HEPA, Bag and Panel filters, all of which are highly effective at removing grease and smoke from kitchen extraction systems.

CAUTION

Using the product for other purposes is considered contrary to its intended use. The manufacturer accepts no liability for any damage or injury resulting from such use.

2.2 Features

When installed correctly, Purified Air's UV-C systems have the following features and benefits:

- Uses highly efficient UV-C technology.
- Designed to complement Purified Air's ESP Units.
- Unit's dimensions allow bolting to Units in the ESP range for a uniform, modular, appearance and easy creation of an integrated filtration arrangement.
- Reduces the need for duct cleaning.
- Can reduce cooking odours by up to 90%*.
- Grease broken down in to more easily managed compounds.
- Robust, compact construction.
- Minimum Twelve month lamp life. UV-C lamps can last for up to 14,000 hours.
- Minimum maintenance requirements.
- Safety - UV-C lamps locked behind panels.
- Optional self-diagnostic system.
- Low uniform air resistance.
- Easy to maintain with only lamps needing periodical cleaning and replacement.
- A modular system that can be configured to deal with all air flow levels.
- Shielded UV-C lamps to reduce the collection of grease and other deposits on their surface and consequent reduced efficiency.
- As an optional extra the Unit can be fully monitored, with each module of eight lamps able to provide either a local alarm or signal to a Building Management System (BMS) if a fault develops.

* In particularly odorous environments, high levels of odour control will only be achieved by also using good quality particulate control systems (particularly ESPs) and supplementary odour control systems in conjunction with this Unit.

2.3 Operating Principles

Commercial kitchen exhaust pollution is composed of two distinct phases:

- The particulate phase; oil, smoke and grease particles.
- The gaseous or odour phase.

The UV-C Range features eight to twenty four high output UV-C (short-wavelength Ultra-Violet (UV) radiation) lamps in modules of eight lamps.

Each individual Unit sits directly in the air stream of the kitchen extraction duct.

The number of modules required depends on the particular cooking processes employed coupled with the extraction fan's airflow volume, both of which will dictate the amount of ozone needed.

2.3.1 Ozone and Free Radical Production

The UV light produced by the UV-C lamps converts oxygen present in the air into ozone. The ozone combined with hydroxyl free radicals,both highly reactive oxidants, act to oxidise odours and grease, permanently destroying and altering the molecular structure of the compounds and rendering them harmless.

The UV light produced by the lamps can also further convert the ozone to hydroxyl free radicals.
Free radicals are highly reactive oxidants which makes them effective natural air cleansing agents.

The mixture of ozone and hydroxyl free radicals produced in this way creates a much more powerful oxidising action (Ozonolysis) than the use of ozone alone.

2.4 UV-C Odour Control Unit - Components

Each UV-C Odour Control Unit comprises:

- A main Unit case with a door secured by two Star Knobs and two Safety Locks, which contains:
- A high voltage power supply.
- Slide in light modules 1, 2 or 3 No. depending on UV-C model containing:
  - ► Eight UVC lamps for each module.
  - ► 4 No. Ballast modules.
  - ► Power and or interconnecting cables.
  - ► Two light baffles.

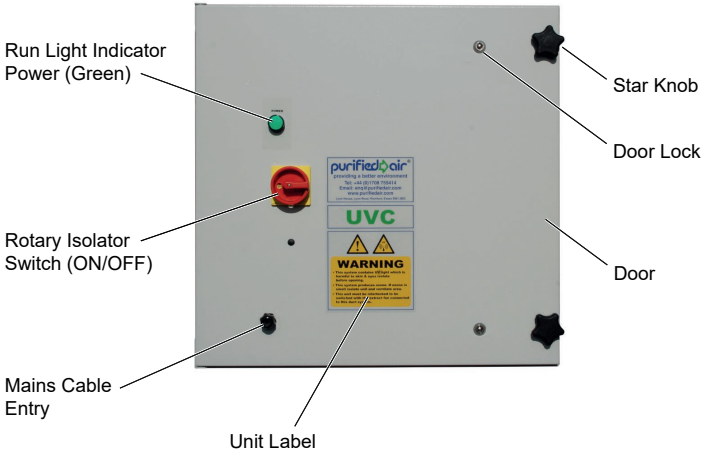
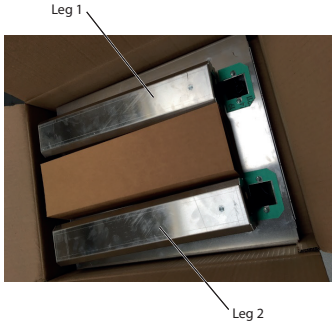


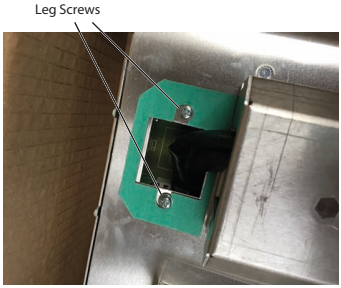
Figure 3 - UV-C 1500, UV-C 3000 and UV-C 4500 - Front Panel

2.4.1 Assembly of UV-C Components

Open Module Box.

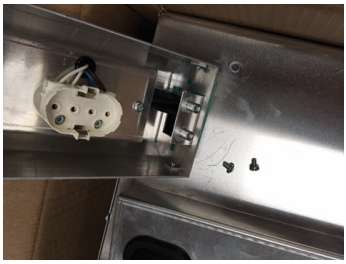


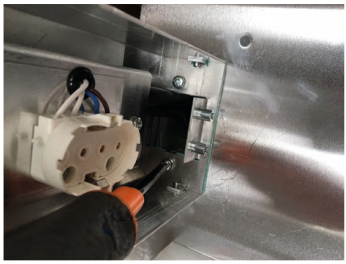
Locate and remove the two Leg Screws surrounded by the gasket.



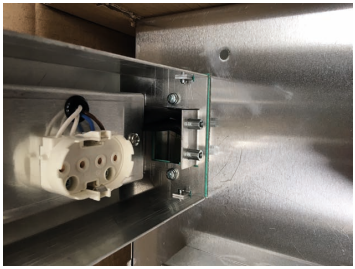
Stand the first leg up and remove the two Cover Screws holding the front cover on.

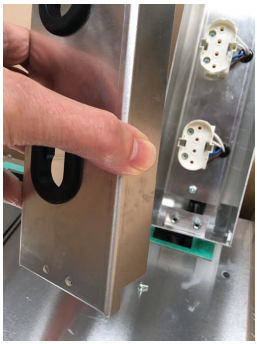
Locate the first leg over the two fixing holes. Hold the first leg in place and secure with the two Leg Screws.





When the first leg is secured into place replace the front cover.

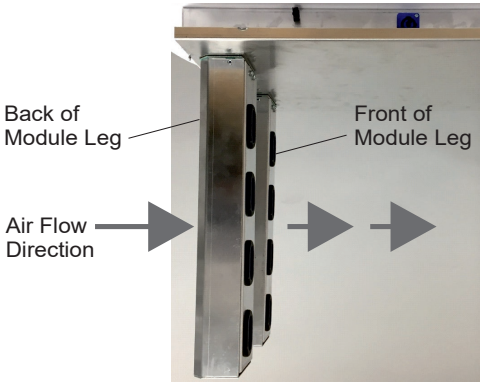




Locate the front cover into place and secure with the two Cover Screws previously removed.

The first leg is now in position. Secure the second leg into position by repeating the fixing method. Now slide into the UVC unit ensuring that the back of the legs are facing the direction of the airflow.

See illustration overleaf.



2.4.2 UV Lamps

Figure 4 - Single UV Lamp

3. Storage, Unpacking and Handling

3.1 Storage

Prior to installation, each UV-C Unit must be stored in its original packaging in a dry environment.

3.2 Shipping List

Each Unit is shipped with the following:

- ► This Technical and Operations Manual..
- ► UV lamp modules and or blanks as required.

It is strongly recommended that Purified Air commission the UV-C Unit. However, should the customer decide to complete these tasks and following the signing of the UVC Disclaimer indemnifying Purified Air against any negative consequences, the following additional items will also be provided:

- ► Keys to the UV-C door (required to activate the the safety micro-switch).
- ► UV-C lamps.

3.3 Unpacking and Handling

Strip away all packaging, wrapping and strapping (this must only be done by trained, professional installers).

WARNING!

These Units are heavy and the appropriate lifting and handling practices must be observed, for both unpacking and installation, to avoid personal injury or damage to the equipment.

See Technical Specifications for Unit weights.

CAUTION

Inspect the Unit and check it for damage. Ensure all safety features are in place and functioning.

4. Installation Guidance

4.1 Overview

4.1.1 Installation

Installation should be carried out by a trained professional installer.

As installations vary widely depending on the specific site requirements, this section only provides general guidance for the installer.

If in doubt, contact Purified Air Limited.

4.2 Model Dimensions and Service Space

The dimensions, and the necessary service space required at the front of the Unit, are detailed below for each Model.

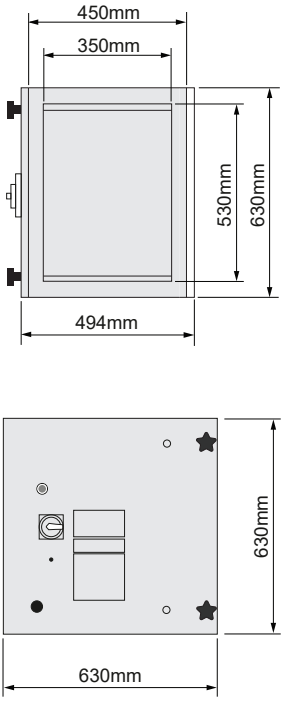


Figure 5 - UV-C 1500 - Dimensions

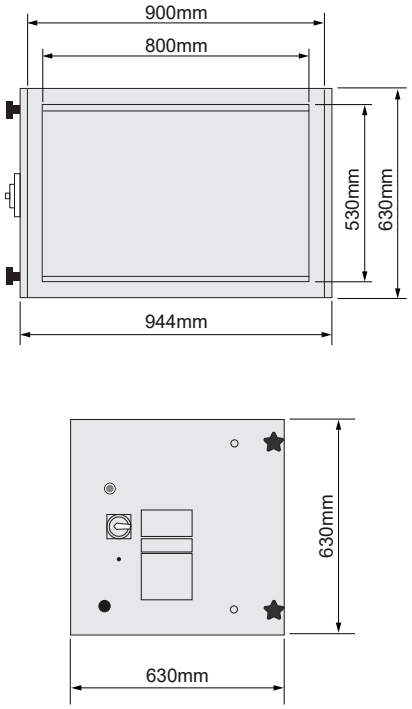


Figure 6 - UV-C 3000 - Dimensions

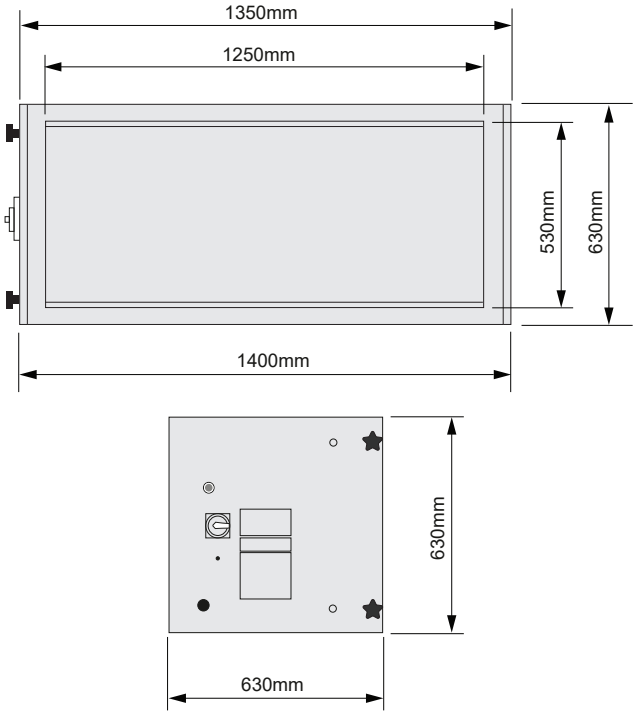


Figure 7 - UV-C 4500 - Dimensions

Figure 8 -

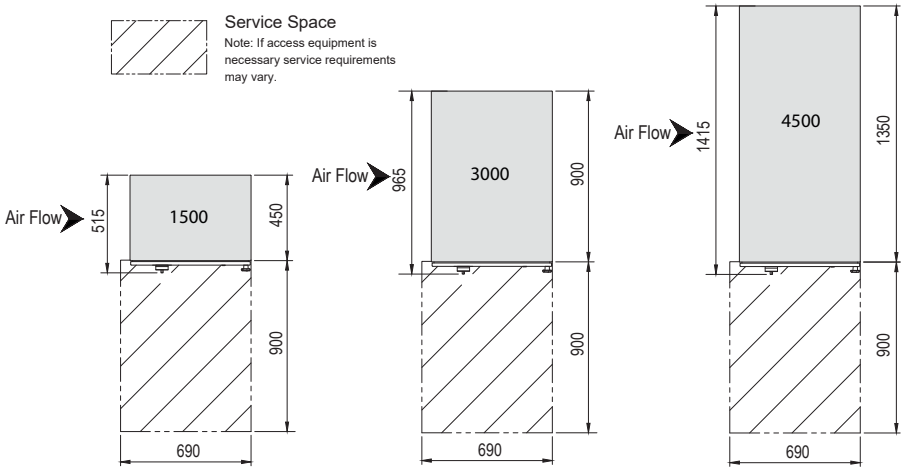


Figure 9 - UV-C 1500, UV-C 3000 and 4500 - Space Required for Accessing Light Modules

4.3 Pressure Loss Graphs

Any equipment added to a duct system will cause a drop in air pressure in the duct system, downstream of the added equipment.

To ensure that the duct system performs as expected, please note the Pressure Loss Graphs for each of the models:

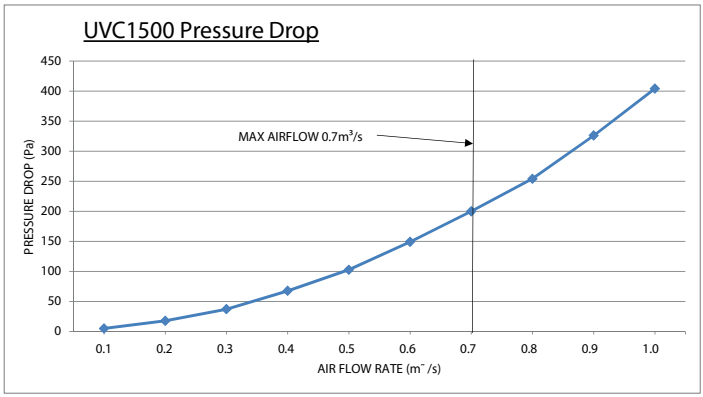


Figure 10 - Pressure Loss Graph - UV-C 1500

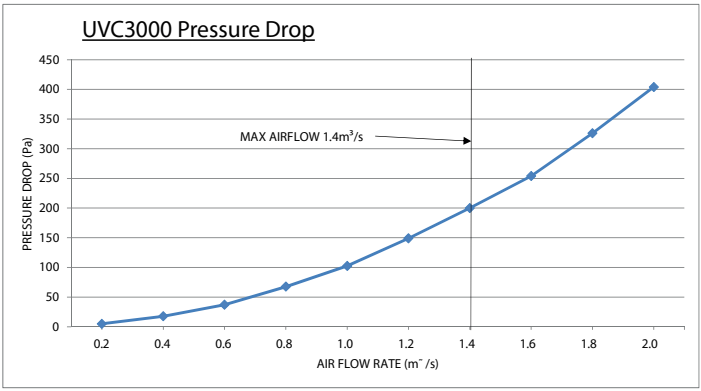


Figure 11 - Pressure Loss Graph - UV-C 3000

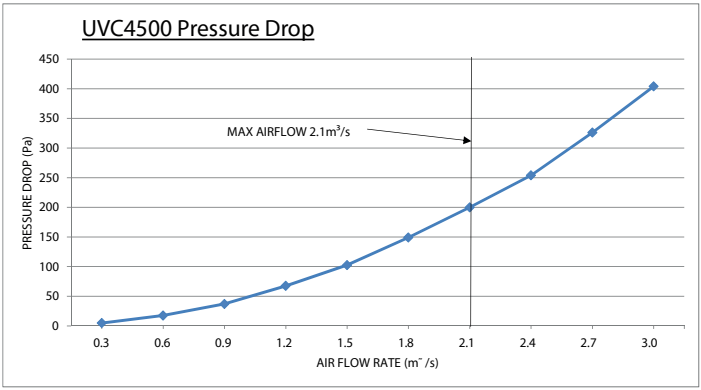


Figure 12 - Pressure Loss Graph - UV-C 4500

4.4 Installation of UV-C Models

Note: Installations can vary widely depending on the specific site requirements, therefore, this section only provides general guidance for the installer.

Before installing the Unit, its positioning should be considered. The Unit should be positioned with good access, to allow for future servicing and maintenance.

4.4.1 Installing the Main Chassis

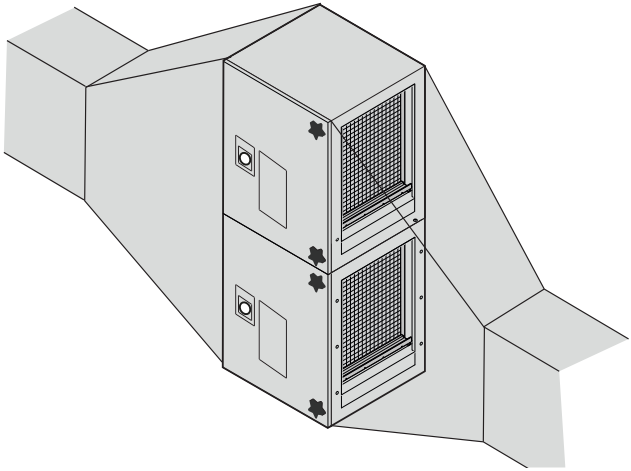


Figure 13 - UV-C 1500 Unit Installed

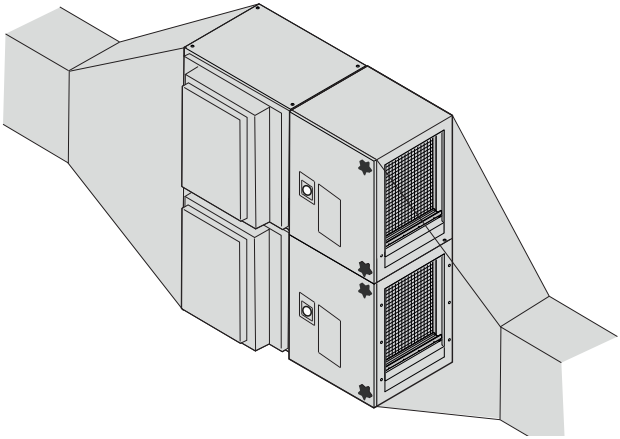


Figure 14 - UV-C 1500 Unit installed in conjunction with Purified Air's ESP Unit

4.4.2 Commissioning the UV-C 1500, UV-C 3000 and UV-C 4500

Once the UV-C Unit has been mounted in the ducting it is strongly recommended that Purified Air commission the Unit. The engineers are fully trained and carry protective equipment to ensure that they and others are not harmed when working on the unit. This also ensures that the installation has been carried out correctly and safely.

4.4.3 Commissioning of the UV-C 1500, UV-C 3000 and UV-C 4500 by Others

As the Unit is owned by your company, you may wish to commission it yourselves. If this is the case, one of your Directors must sign the UVC Disclaimer acknowledging that you fully understand the dangers associated with the installation procedure. On receipt of the signed UVC Disclaimer, Purified Air will supply the correct number of lamps required for the configuration of the UV-C Unit that has been ordered.

Commissioning of the Unit is carried out as follows:

1. Unlock and open door to UV-C. Remove boxed lamp module and assemble (see instruction in Section 2.4.1).
2. Insert UV lamps by pushing them into sockets on module arms. Do not touch the glass of the UV lamps with your bare hands because it can affect its efficiency.
3. Slide the module/modules in to the rail at the top of the UV-C until it pushes against the back plate. Insert any blank plates if required to space module/modules evenly.
4. Wire the UV-C Unit into the mains via an isolation switch (not supplied) mounted not more than 1 meter from the Unit, in an easily accessible location:

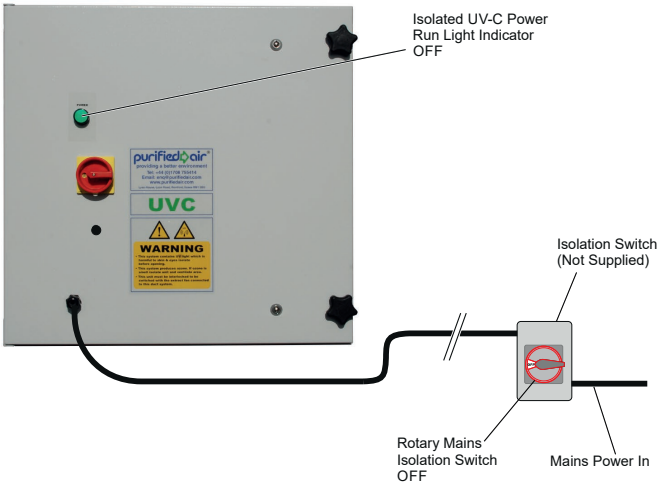


Figure 15 - UV-C with Isolation Switch

- ► The Unit's mains connection terminals are located on the isolator in the Door of the Unit.
- ► The mains cable is run through the cable gland located under the Rotary Isolator Switch.

Note: To check that all UV lamps are working, it is necessary to bypass the micro-switches on the inside top front of the UV-C to enable the Door to be open when the Unit is in operation. This procedure should only be undertaken by a qualified Purified Air engineer (unless the UVC Disclaimer has been signed - see above).

CAUTION
Appropriate PPE equipment should be worn during this check.

5. Once the lamps have been fitted and the electrical connection completed, the Door can be closed and locked.

4.4.4 Changing Airflow Direction

It is recommended that this procedure be carried out by Purified Air engineers. These engineers are fully trained and carry protective equipment to ensure that they and others are not harmed when working on the Unit.

INFORMATION
The UVC unit itself is not air flow specific but the internal lamp modules are.

4.4.5 Change of Airflow Direction by Others

As the Unit is owned by your company, you may wish to change the airflow direction yourselves. If this is the case, one of your Directors must sign the UVC Disclaimer acknowledging that you fully understand the dangers associated with the installation procedure. On receipt of the signed UVC Disclaimer, Purified Air will return a copy of the disclaimer with a set of keys and the required number of UV-C for your Unit.

INFORMATION
We would recommend that if lamps have already been fitted in the Unit that they are carefully removed and placed in a safe place. When the lamps have been removed rotate the modules to the correct orientation.

To adapt the Unit for a change in the airflow direction:

1. Turn the Unit's Isolation Switch to the OFF position.
2. Turn the Unit's Door Rotary Isolator Switch OFF.
3. Make sure the Unit is fully isolated.
4. Unlock the Unit's Door.
5. Slide out the UV Lamp Assembly.
6. Release the wiring from the UV Lamp Assembly.
7. Keep the front of the UV Lamp Assembly as removed.
8. Turn the UV Lamp Assembly through 180 degrees.
9. Reconnect the wiring to the UV Lamp Assembly.
10. Slide the UV Assembly back into the Unit.
11. Close and lock the Door.
12. Turn the Unit's Isolation Switch to the ON position.
13. Turn the Unit's Door Rotary Isolator Switch ON.

14. The Run Light Indicator Power (Green) should be on.

4.4.6 Building Management System

The ability to connect to a Building Management System is an optional extra. Should this be a requirement for a Unit which has already been installed, Purified Air can supply this at an additional cost.

5. Operation and Control

5.1 Control Panel

The Control Panel contains the Unit's Rotary Mains isolator Switch and the Run Light Indicator.

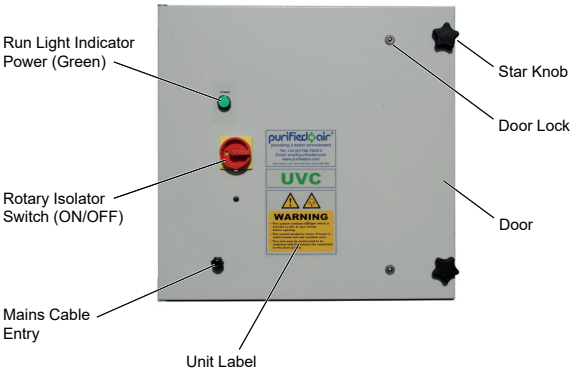


Figure 16 - Control Panel

5.2 Before Use

Before use, to guard against injury, ensure that all safety precautions have been taken and that environmental conditions are suitable for operation of the Unit, see the Safety Section and Warnings and Cautions.

5.3 Switching the Unit On

To start the Unit from the Control panel:

1. Ensure that the kitchen extractor fan is running.
2. Turn on the Rotary Mains Isolation Switch (On/Off) to the 'On' position.

   Note: The green Power Light will illuminate, indicating that power is being supplied to the Unit.

WARNING

Please contact your service agent if the green Run Light Indicator fails to illuminate when the Rotary Mains Isolation Switch is in the 'On' position.

WARNING

- **If ozone can be smelled in the area where the UV-C Unit is installed, the Unit has been incorrectly installed**
- **It should be isolated via the Mains Isolator Switch and Purified Air contacted for further information.**

5.4 Switching the Unit Off

To turn the Unit off from the Control Panel:

Rotate the Rotary Mains Isolation Switch (On/Off) to the 'Off' position.

Note: The green Run Light Indicator will extinguish.

WARNING

Please contact your service agent if the green Run Light Indicator fails to extinguish when the Rotary Mains Isolation Switch is in the 'OFF' position.

6. Cleaning and Maintenance

These procedures are normally carried out by Purified Air engineers. These engineers are fully trained and carry protective equipment to ensure that they and others are not harmed when working on the Unit.

WARNING!

When working with UV Light:

- **Over exposure to the radiation is not immediately felt.**
- **Persons exposed do not realise the hazard until after the damage has been done.**

It is recommended that the Unit is thoroughly inspected annually in addition to the Servicing Schedule. Please contact Purified Air for the Servicing Schedule.

6.1 Cleaning and Maintenance by Others

As the Unit is owned by your company, you may wish to clean it yourselves. If this is the case, one of your Directors must sign the UVC Disclaimer acknowledging that you fully understand the dangers associated with the unit.

Furthermore, you assume full responsibility for taking every appropriate precaution to ensure that no person comes to harm when accessing the Unit.

6.2 Introduction

If you carry out the cleaning and maintenance described below at the regular intervals, paying attention to the Warnings and Cautions, then most problems will be detected and corrected before they result in a total breakdown of the Unit.

WARNING!

- **Overdue cleaning and maintenance can cause fire.**
- **Always switch OFF the Unit and isolate the electricity supply before carrying out the activities below.**
- **Do not carry out any cleaning or maintenance on the Unit before it has been protected against unintended starting.**

CAUTION

- **Observe the maintenance intervals given in this manual.**
- **Over due maintenance can lead to high repair costs and modifications can render the warranty null and void.**
- **Always use tools, parts and maintenance techniques that have been approved by Purified Air.**

6.3 Cleaning and Maintenance Tasks

Determining when the Unit needs to be cleaned is a matter of experience and judgement, since the frequency and degree of the cleaning required depends strongly on factors such as location, humidity, intensity of use, etc. Nevertheless, the UV lamps and the inside of the Unit should be cleaned regularly, at intervals not exceeding 3 months, using the procedures outlined in this sections.

6.3.1 Cleaning the UV Lamps

WARNING!

Appropriate PPE equipment must be worn at all times when there is a possibility that the light from the UV lamps can be viewed or come into contact with skin.

CAUTION

Natural oily deposits left by fingers and palms can leave an opaque mark on the lamp and so reduce UV transmission. These deposits also cause the quartz to break down, causing premature lamp failure.

Use caution when cleaning near the ends of the lamps, as excessive pressure may remove or smear the coating protecting the lamp electrodes

To clean the UV lamps:

1. Isolate the Unit from the mains power supply by turning the Rotary Mains Isolation switch to the OFF position.
2. Double check that the mains power supply has been isolated and that the Power Light (Green) is ‘Off’.
3. Unlock the front Door and open it.
4. Disconnect the power cable that leads from the inside of the door to the module.
5. Please put on suitable gloves in case of contact with the lamps
6. Remove the spacer, if there is one, then slowly move the module towards you, carefully remove the first 4No. lamps on the front module arm and place them in a safe place ready for cleaning. Then move the module forward again so that you can carefully remove the second 4No. lamps. Place the lamps in a safe place ready for cleaning. If your unit has more than one module carefully reach into the unit just past the first module and disconnect the interconnecting cable between the two modules.
7. Remove the module and place in a safe place ready for cleaning.
8. If more than one module is present repeat the process.
9. Clean the lamps by wiping them over with a high-quality alcohol wipe.
10. Once clean, dry with a clean lint free cloth.

6.3.2 Cleaning the UVC module:

1. Wipe the module arms and the module top, where the arms come out of, with a high quality de-greaser sprayed on to a lint free cloth.
2. Once clean, dry with a clean lint free cloth.
3. If there is more than one module in the UVC repeat this process.

6.3.3 Cleaning the UVC spacers:

1. If spacers have been used in the UVC unit wipe them over with a high quality de-greaser sprayed on to a lint free cloth.
2. Once clean, dry with a lint free cloth

6.3.4 Cleaning the inside of the UVC:

1. Wipe over the inside surfaces of the UVC unit with a high quality de-greaser sprayed on to a lint free cloth.
2. Once clean, dry with a clean lint free cloth.

6.3.5 Re-assembling the UVC unit:

1. After you have re-checked to make sure that all components are thoroughly dry, slide in the first spacer if required then slide the module back into the the UVC unit making sure that the module arms are facing the direction of the air flow.
2. Carefully replace the lamps into the module arms ensuring that you wear suitable gloves to protect the surface of the lamps.
3. If there is more than one module repeat the process but please ensure you have connected the modules electrically with the inter connecting lead and that the final module is connected to the door.
4. Once all spacers, modules and lamps have been replaced and all of the modules have been re-connected close and lock the front door.
5. Power-up the Unit from the mains power supply by turning the Rotary Mains Isolation switch to the ON position.
6. Double check that the mains power supply has been powered-up and that the Power Light (Green) is ‘ON’.

7. Troubleshooting

If the Unit does not function correctly, consult the checklist below to see if you can correct the error yourself.

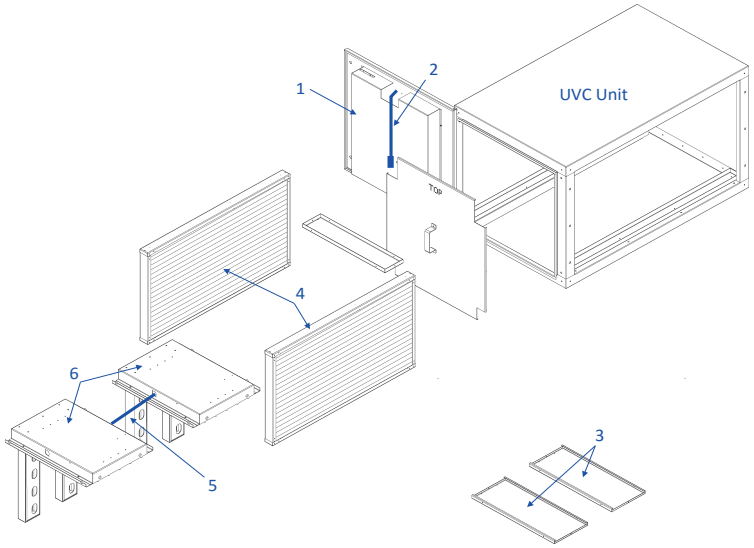
INFORMATION
A number of problems in the checklist below can also be caused by defects in equipment connected to the Unit. This manual only deals with problems and solutions directly related to the Unit itself.

Problem	Possible Cause	Solution
Front run light not on	Loss of electric power	Check that power is going to the Unit. If not, turn on power.
		If there is power to the Unit, contact Purified Air.

CAUTION
Should it not be possible to correct the error, consult a qualified service engineer.

8. Spare Parts List and Components Illustration

Item Number	Item Description	Part Number
1	Door with Electronics	UVCA
2	Power Cable	UVCP
3	UVC Spacers	UVMAIN
4	UVC3000 Light Baffle (two module)	UVCBAFFLE3
5	Interconnecting Cable	INTERCONLEAD
6	UVC Modules	UVMODULE
Not shown	UVC Lamps	UVOMINIBULB
Not shown	UVC Air Flow Switch	AIRFLOW04
Not shown	UVC Ballast	UVBALLAST
Not shown	UVC Starknobs	HANDWHELL
Not shown	UVC 1500 Light Baffle (one module)	UVCBAFFLE1
Not shown	UVC 4500 Light Baffle (three module)	UVCBAFFLE4



8.1 Spare Parts Ordering

All parts listed in Section 8. Spare Parts List and Components Illustration (above) are available as spare parts.

Please quote the Part Number when ordering.

9. Wiring Diagram

9.1 Main Module Wiring

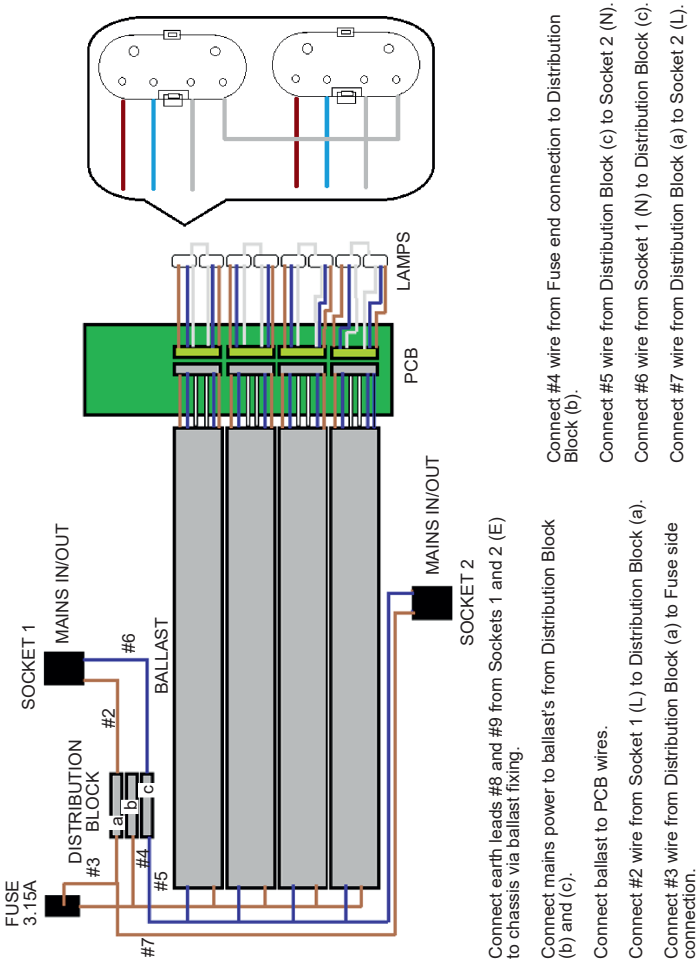


Figure 16 - Main Module Wiring Diagram

9.2 Door Wiring Diagram

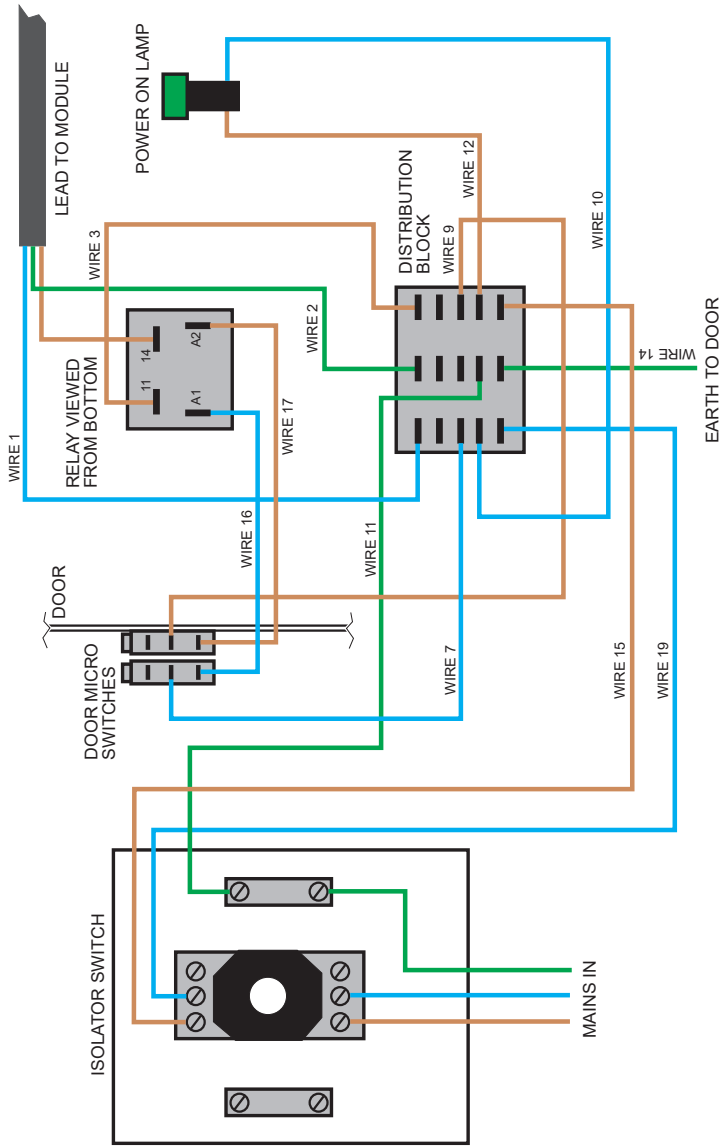


Figure 17 - Door Wiring Diagram

10. Equipment Disposal

10.1 Packaging Material Disposal

INFORMATION

The appliance's packaging materials are manufactured from recyclable materials in accordance with applicable local regulations.

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

- Cardboard (corrugated)
- Wood (untreated)

Do not dispose of the packaging material in the industrial waste.

10.2 Used Unit Disposal

Units which you would like to dispose of may still contain valuable substances and materials.

Do not dispose of the Unit in the industrial waste.

WARNING

LAMPS CONTAIN MERCURY (Hg), dispose of in accordance with local disposal laws.

11. Contact Details

At Purified Air, we pride ourselves on our excellent levels of customer service and maintenance.

11.1 Nationwide Coverage in the UK

We can offer nationwide coverage with teams of directly employed service engineers working out of our UK hubs.

For all Service and Maintenance enquiries, please contact via:

service@purifiedair.com

0800 018 4000

11.2 Service and Maintenance Contracts

With every installation, we offer the opportunity to sign up for one of our service and maintenance contracts. These are structured to suit individual needs, on a post pay basis with the customer only being invoiced after each service, saving them both time and money against ad hoc servicing requests.

11.3 Dependability

So, whether you have our commercial kitchen exhaust filtration equipment in your restaurant, cafe or take away, you can rest assured that we will always be there when you need us.

11.4 Global Sales

For all installations of our equipment outside of the UK, please refer back to your designated distributor.

12. Warranty Statement

Your new UV-C Unit is guaranteed against the cost of breakdown repairs for one year from the date of the original purchase.

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

What is covered?

- Repairs necessary as a result of faulty materials, defective components or manufacturing defect.
- The cost of functional replacement parts, but excluding consumable items.

What is not covered?

- Transit, delivery or accidental damage or misuse and abuse.
- Any installation which fails to meet the installation, location and operating requirements and parameters outlined in this manual.
- Manufacturing defects only affecting the Unit's cosmetic appearance.
- Repairs required as a result of unauthorised repair or installation by anyone other than a Purified Air approved installer.
- Any damage caused to the Unit by its use by anyone other than authorised, trained and qualified users or personnel under the supervision and responsibility of authorised, trained and qualified users.
- Any damage caused to the Unit by incorrect servicing procedures.
- Use of the Unit in any application which is not specifically mentioned in this manual or approved, in writing, by the manufacturer.
- The guarantee is applicable only to new products and is not transferable if the product is resold.

Purified Air disclaims any liability for incidental or consequential damages.

The guarantee does not in anyway diminish your statutory or legal rights.

Please keep your purchase receipt or other proof of purchase in a safe place. you will need to have it should the product require attention under guarantee.

13. Certification

13.1 EC Declaration of Conformity

Purified Air Limited
Lyon House
Lyon Road
Romford
Essex RM12BG

Tel: +44 1708 755414
Fax: +44 1708 721488
Email: enq@purifiedair.co.uk
www.purifiedair.co.uk

EC Declaration of Conformity

Document Number: DoC UVC 1201

We; Purified Air Limited at above address, declare the products detailed below comply with the requirements of the following EU Directives,

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2004/108/EC
- RoHS Directive 2011/65/EU

Equipment description	*UV-C Odour Control*		
Make/Brand	*PurifiedAir*		
Model reference	*UVO 500*	*UVO 1000*	
	UVC 1500	*UVC 3000*	*UVC 4500*

Compliance of the equipment has been assessed with respect to the essential requirements and with reference to the following harmonised standards:

- *EN 61347-1:2008*
- *EN 61547:2009*
- *EN 55015:2006 + A2:2008*
- *EN 61000-3-2:2006 + A2:2009*
- *EN 61000-3-3:2008*

A technical file for this equipment is retained at the above address

Gareth Smith - Technical Director.
Purified Air Limited
June 2017

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