

# UV-O 500



## TECHNICAL & OPERATION MANUAL



**This product contains lamps that produce UV light. Immediate or prolonged exposure to UV light can result in painful eye injury, skin burn, premature skin aging, or skin cancer.**

**This product creates OZONE (O<sub>3</sub>). 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 odor is readily detectable at low concentrations (0.01 to 0.05 ppm).**

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TAKE YOUR TIME TO CAREFULLY READ AND UNDERSTAND THE MANUAL BEFORE USING THE PRODUCT.  
ALLWAYS 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 Purified Air 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 the 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.

## Pictograms and instructions on the product

- The pictograms, warning and instructions attached to the product are part of the safety feature. They must not be covered or removed and must be present and legible during the entire life of the product.
- Immediately replace or repair damaged or illegible pictograms, warnings and instructions.

## 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 the treating odours which are released during the most common cooking processes in commercial kitchens. 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.

## 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 not, 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.

## General Use

**WARNING:** To guard against injury, basic safety precautions should be observed, including the following:

1. Inspect the product and check it for damage. Verify the function of the safety features.
2. Read and save all notices, warnings and safety instructions received with equipment.
3. **⚠️ WARNING:** Avoid exposure to direct or strongly reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.
4. **⚠️ WARNING:** Always disconnect power, to the equipment and unplug, before performing any service or maintenance.
5. **⚠️ WARNING:** Ozone is produced by the product. Ozone can be poisonous at certain concentrations.  
**UNIT MUST NOT BE OPERATED WITHOUT KITCHEN EXTRACT FAN RUNNING.**
6. **⚠️ CAUTION:** Do not operate without proper electrical ground.
7. Do not alter the construction or design. Do not remove safety labels or devices.
8. Do not use this equipment for other than its intended purpose, as described in the equipment manual.
9. Do not operate the unit if the power cord and/or plug are damaged, or if any other damage to the unit is visible or suspected.
10. Utility power must match power requirements listed on the unit label.
11. **. \*Hg - LAMP CONTAINS MERCURY, manage in accordance with disposal laws.**
12. Make sure the room is always sufficiently ventilated, particularly in smaller confined areas.

## Use of UV-O 500

The product is suitable for the filtration of extracted fumes from commercial kitchens. The product should always be used in combination with prefilters that are suitable for kitchen extract.

## Service, maintenance and repairs

**The maintenance of the UV-O 500 unit is a very specialist task and should not be carried out by anyone who has not received specialist training by Purified Air Limited**

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 and service techniques that have been approved by the manufacturer. Do not carry out any service, maintenance or repairs on the product before it has been protected against unintended starting. Clean and replace the lamps in accordance with the times indicated in section 6

**Maintenance of this manual. Appropriate PPE equipment should be worn at anytime when there is a possibility that the light emitted from the UV lamps can be viewed or come into contact with skin. If ozone can be smelt in the area where the UV-O 500 unit is installed, it has been incorrectly installed and should be isolated. Contact Purified Air for further information.**

## 3 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
- untreated wood

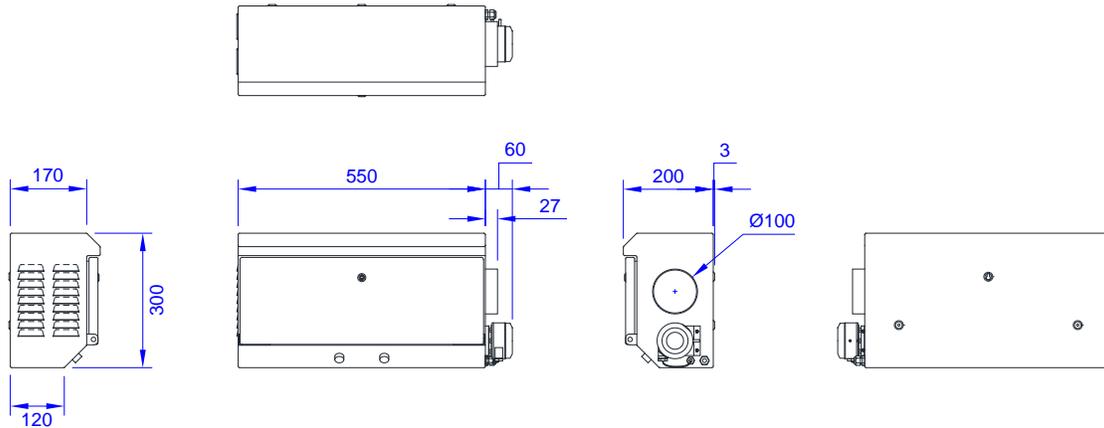
Do not dispose of the packaging material in the industrial waste

### Product

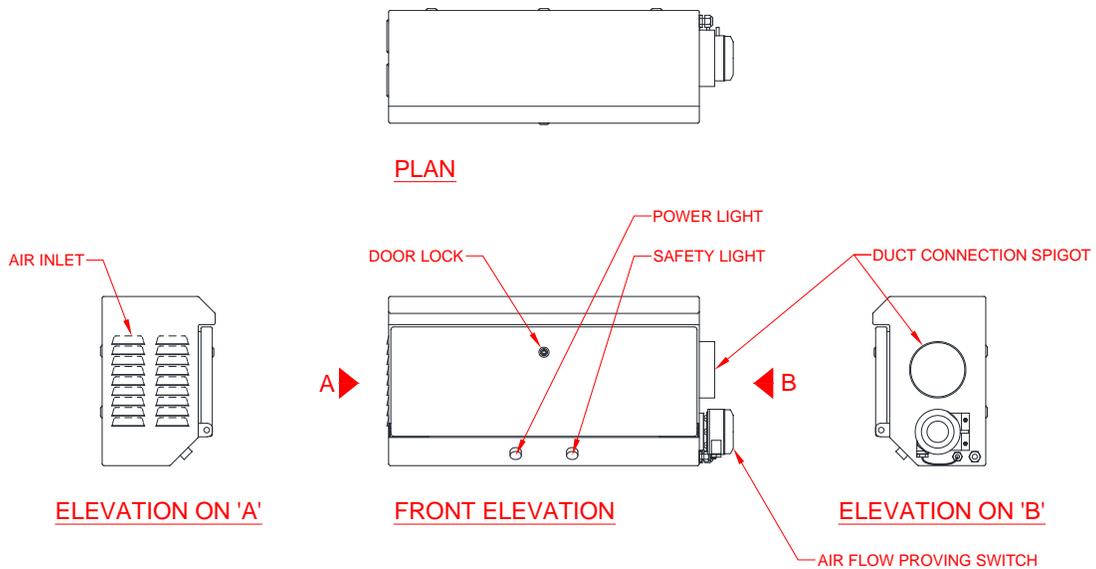
Products which you would like to dispose of may still contain valuable substances and materials. Do not dispose of the product in the industrial waste.

## 4 GENERAL DESCRIPTION

This UV-O 500 can remove, at high efficiency, odorous compounds. The UV-O 500 is designed to be installed in the extraction ducting of a commercial kitchen down stream of the extraction hood and upstream of the fan.



**Fig.1**

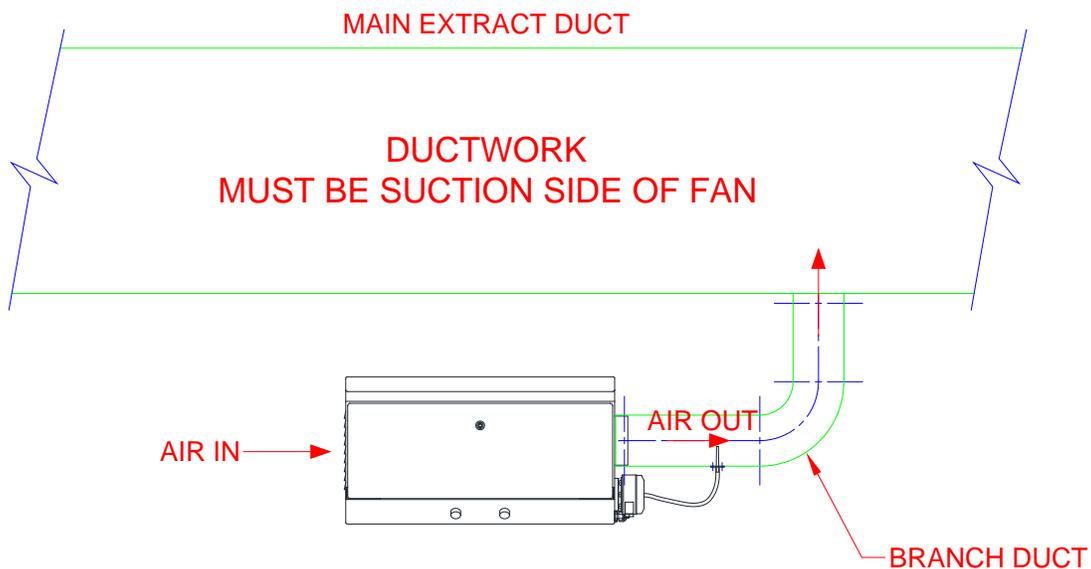


**Fig.2**

## Technical Specification

Electrical Supply:	200/240V 50Hz
Maximum Power Consumption:	120 Watts
Maximum Air Volume:	1m <sup>3</sup> /s
Weight:	10.5kg

## 5 INSTALLATION



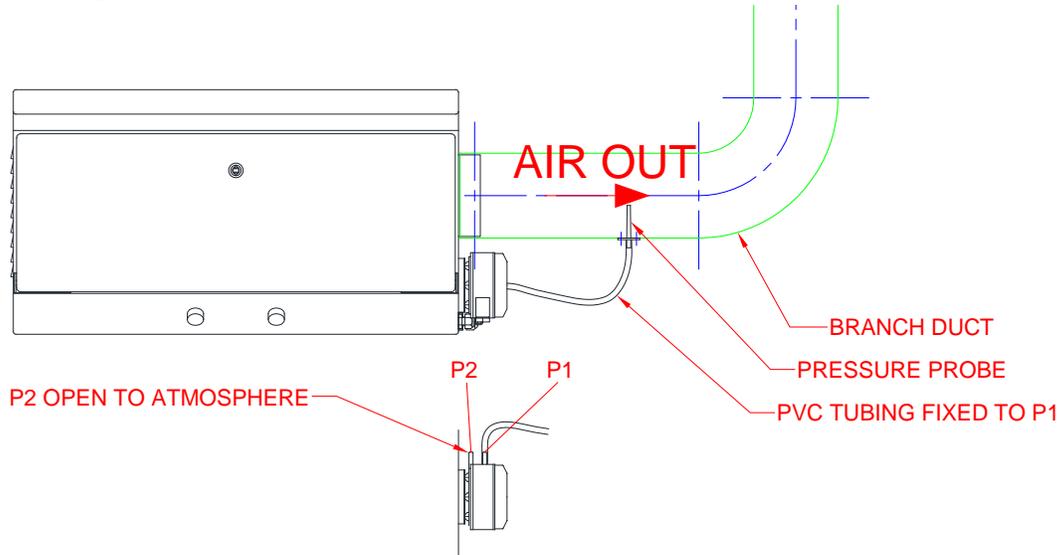
**Fig.3** TYPICAL INSTALLATION

It is recommended that the unit is commissioned by Purified Air Ltd to ensure that the unit is installed correctly and safely. The following are very important safety points that must be adhered.

- The unit must be installed on the suction side of the fan
- The operation of the UV-O 500 must be linked to the operation of the extract system. This is achieved by connecting the Air Flow Proving Switch as follows:

Fix the negative pressure probe only (using a 2mm drill and 7mm drill) to the BRANCH DUCT which connects the UV-O 500 to the main extract duct, connecting this via the PVC tube to port P1 and leave unused port P2 open to atmosphere (see Fig.3 & Fig.4). Also link the power supply between the extract fan and the UV-O 500.

To give a signal of fan running, wire onto terminals 1 and 3. Set the dial at about 30Pa. DO NOT set below 20Pa.



**Fig.4**

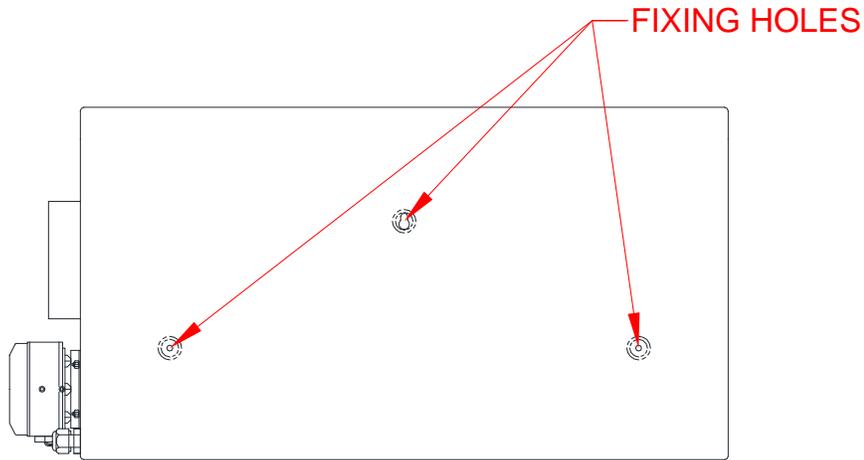
- The UV-O 500 will produce ozone which is a poisonous gas with a distinctive smell. The kitchen extract system into which the UV-O 500 system is installed must be sound with no holes that will allow ozone to escape. If ozone is smelt within the premises the UV-O must be switched off immediately.
- Care must be taken that the kitchen extract point is not close to air inlets, windows etc. where elevated ozone levels will cause a problem.
- Rigid ducting should be used to connect the UV-O 500 unit.

The following points should also be considered.

The UV-O 500 unit should be located in close proximity to the kitchen extract ducting.

The unit should be positioned with good access to allow for future servicing and maintenance.

There are three fixing holes on the rear of the casing for fixing to a wall, see Fig.5. It is important to make sure that the fixing used will not allow any UV light to escape.



**Fig.5**

100mm diameter galvanised metal ducting should be used to connect the UV-O 500 unit to the kitchen extract duct (see Fig.3). The ducting should connect securely to the spigot on the side of the unit and should spigot into the kitchen extract duct.

It must be proved that when the kitchen extract fan is running air passes through the air inlet of the UV-O 500 and into the kitchen extract duct. **Under no circumstances should the unit be used if airflow is the opposite direction.** The vent on the air inlet must be kept clear to allow the airflow through the system. The air flow needs to be at least sufficient to activate the airflow sensor.

Once the UV-O 500 has been mounted and the ducting connected the special UV lamps should be inserted. Access is via the front panel which hinges open once the lock has been released. The lamp holder can be released from its fixings to make installation of the lamps easier. The lamps clip into position and connect with the plugs supplied. **The UV-O is supplied with 2 lamps.** Once the lamps have been fitted the front cover can be replaced.

The UV-O 500 should now be wired into the mains via an isolator (not supplied) mounted not more than 1 meter from the unit with easy access. The connection terminals on the UVO 500 are located on the end of the lamp holder section shown in Fig.6. Cable needs to be run through the cable gland located on the end of the UVO 500 in the bottom right hand corner, below the air flow proving switch.



**Fig.6**

Once unit is wired and necessary safety requirements have been adhered to the UVO-500 can be switched on. The safety switch light indicates that the various safety switches, the airflow and micro switch are engaged and that airflow is present. The power light indicates that power is present.

**Note:**

To check that all UV lamps are working it is necessary to attach bypass switches, to the micro switches on the inside top front of the UV-O 500 to enable the front panel to be open when the unit is in operation. This procedure should only be undertaken by a qualified Purified Air engineer.

**Appropriate PPE equipment should be worn during this check.**

## 6 MAINTENANCE

**The maintenance of the UVO-500 unit is a very specialist task and should not be carried out by anyone who has not received specialist training by Purified Air Limited**

If you carry out the simple maintenance and cleaning described below at the regular intervals, then any problems will mostly be detected and corrected before they result in a total breakdown of the product.

Action	Every 2 months (depending on degree of pollution)	Every 3 months	Every 12 months
Clean UV lamps	X		
Replace UV lamps			X
Replace Filter	X		
Clean the inside of the product and remove dust/grease		X	

### **Cleaning the UV lamps**

UV lamps should be cleaned using alcohol wipes and a lint free cloth. Care should be taken not to handle the lamps with bare hands as this will damage the glass of the lamp.

It is a matter of experience to determine when the product needs to be cleaned, since the nature and the degree of pollution depend strongly on the particular situation, humidity, intensity of use, etc. Nevertheless the UV lamps should be cleaned regularly.

**Appropriate PPE equipment should be worn at anytime when there is a possibility that the light emitted from the UV lamps can be viewed or come into contact with skin.**



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