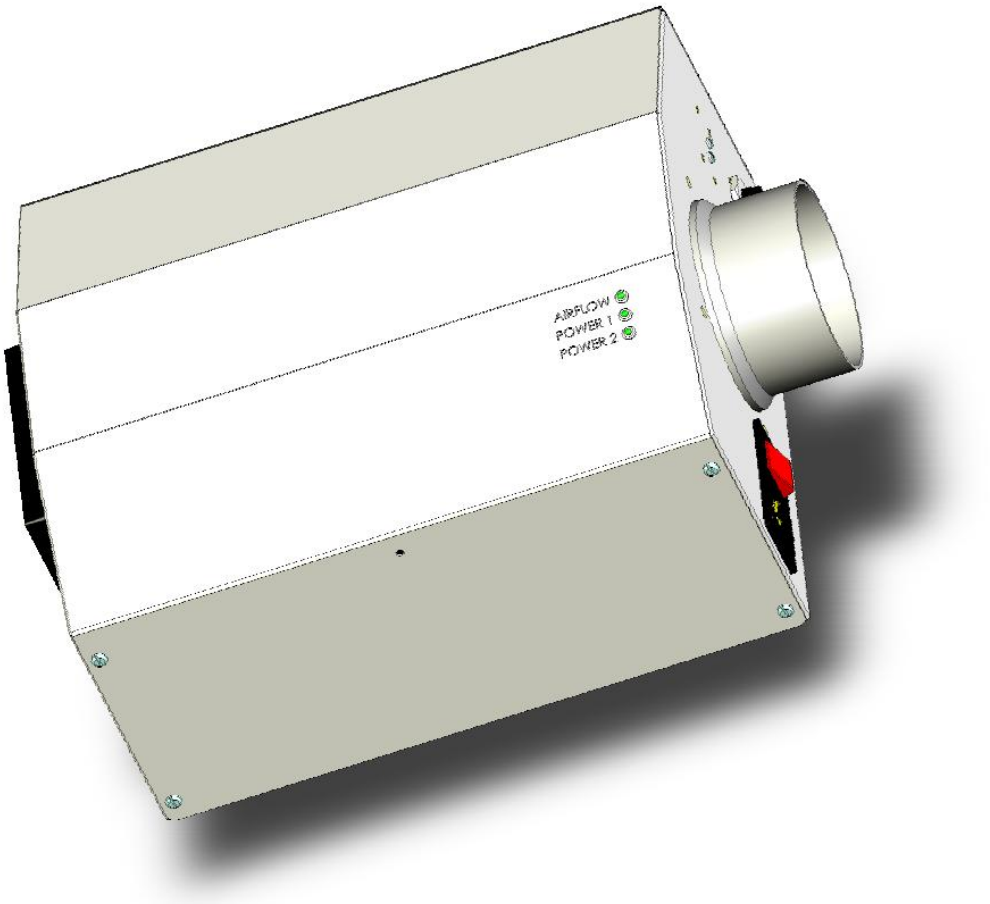
Installation, Operating & Instruction Manual

Plasma Clean Xtract 2100 Series



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Congratulations on purchasing a Plasma Clean air purifier.

Plasma Clean air purifiers utilise advanced air cleaning technology developed by the University of Manchester, UK. Unlike most products in the marketplace which simply mask the problem, Plasma Clean air purifiers act by effectively reducing odours and destroying microbes in the air, helping to dramatically improve air quality, leaving your environment smelling fresh and clean.

Before you start to enjoy the benefits of your Plasma Clean air purifier product, please read this manual carefully and in particular pay attention to the Safety Precautions section. Once you have read the information, please keep this manual safe for future reference.

If you have any questions, please do not hesitate to contact your Plasma Clean representative, who will be only too happy to help.

Thank you,

The Plasma Clean Team

P.S PLEASE DON'T FORGET TO COMPLETE AND RETURN THE ENCLOSED WARRANTY REGISTRATION!

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Safety Precautions

The unit is intended for commercial use only and must be installed by a suitably qualified electrician.

This air cleaner is built to CE standards and must be operated in strict accordance to this manual.

This air cleaner is designed for indoor installation only and must be protected from excess moisture.

Do not install in explosion risk areas.

Always ensure that good access is provided for system maintenance

Do not remove cover

Do not place the unit, plug or mains cable in direct contact with any liquids

As with any electrical equipment, do not let the device be manipulated by children and always ensure adequate supervision if operated in the vicinity of children or pets.

Do not place near flammable, explosive or toxic products

Do not operate near open flames, fires or heating appliances

Do not open, or disassemble the unit other than as specified in the cleaning instructions under Care and Maintenance.

Do not touch any internal components as this may result in an electrical shock

Do not touch the fan (where installed), or insert any item through the fan grills

Do not insert any objects into the unit as this may result in an electric shock

Do not operate with pre-filter or covers removed

Do not operate if mains cable or plug is damaged

Do not operate if unit malfunctions

Do not operate if unit has been dropped or is damaged

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If the plug or mains cable are damaged or require replacement this must be undertaken by your Plasma Clean representative or a similarly qualified individual

Installation precautions

Always keep in a vertical position

Mount on a stable vertical surface, allowing sufficient air circulation

Leave at least 2m of space from televisions and radios to prevent electrical interference

Do not obstruct the inlets or outlet of the unit with fabrics or furniture. This will cause overheating and affect efficiency of operation.

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Working Safely with Ozone

Exposure limit value: **0.2PPM (V/V) 15 minutes according to EH 40 (UK)**

Ozone is an irritant and a powerful oxidising agent

This unit is designed to inject ozone and ions directly into ductwork for odour and grease control purposes only

In the event that ozone is accidentally released into the room, evacuate immediately

Ventilate the room by opening all external doors and windows

Do not attempt to enter the room until sufficient time has elapsed for the ozone concentration to be at a safe level

Ozone has a half life of around 20 minutes

In an emergency use an activated carbon filter breathing mask to gain access to the area

Read all instructions before activating the air purification system

The UK Health and Safety Executive (HSE) have issued Health and Safety Guidelines concerning ozone:

EH38 'Ozone: health hazards and precautionary measures'
EH40 'Occupational Exposure Limits'

A Materials Safety Data Sheet is available from Plasma Clean on request.

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The Plasma Clean Xtract odour control system is designed to inject ozone and charged ions into ductwork to assist in the reduction of odours in accordance with DEFRA, 2005: Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems. The unit should be sized to deliver approximately 1ppm/V ozone in normal operating conditions. Where there is excessive odour, smoke or grease present in the ductwork, a greater input of ozone and charged ions may be required.

PLASMA CLEAN XTRACT UNITS ARE DESIGNED FOR INDOOR USE ONLY.

The unit is easy to install and will provide satisfactory operation subject to 'good housekeeping' i.e. regular cleaning and inspection

Electrical Information

Description:	Plasma Clean Xtract
Type:	2100 series
Model:	XT2100-2-0-L-0-000
Mains voltage:	230V 1PH
Frequency:	50Hz
Power rating:	130W
Current:	0.6A

Model Information (common configurations)

Model No:	*Power*	*Internal Fan*	*Power Monitor*	*Description*
XT2100-2-0-L-0-000	**High**	**No**	**Internal**	**Standard unit**
XT2100-2-F-L-0-000	**High**	**Yes**	**Internal**	**Standard unit with internal fan**
XT2100-2-0-L-0-PM1	**High**	**No**	**External**	**Standard unit with power monitor with indicator light ON when system OK**
XT2100-2-0-L-0-PM0	**High**	**No**	**External**	**Standard unit with power monitor with indicator light ON when system IN FAULT**
XT2100-2-0-L-0-PM1	**High**	**Yes**	**External**	**Standard unit with internal fan and power monitor with indicator light ON when system OK**

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Installation

THIS UNIT MUST BE OPERATED UNDER NEGATIVE PRESSURE ONLY

DO NOT POSITION THE UNIT IN A POSITION WHERE GREASE FROM DUCTWORK CAN DRIP INTO THE OUTLET OF THE UNIT

It is recommended that the unit is installed by a suitable electrically qualified person.

For best results, position the unit with an injection point located closest to the source of odours in order to maximize dwell time. In any case the dwell time must be no less than 2 seconds.

The system is powered via a fused spur which is interconnected to the main extraction fan control to ensure that the Plasma Clean Xtract unit(s) only operate when the main fan is operating.

You will require the following items which are not supplied as standard, but which can be ordered from Plasma Clean:

- Suitable wall screws and raw plugs
- Suitable length of 100mm ozone resistant ducting
- Spigot-type connector – flat or radius
- Iris or butterfly damper (if necessary to restrict airflow)
- High velocity sealant
- Anemometer (fan-type)
- Spare pre-filter assembly

Before installation make sure that the unit is not damaged. Ensure that your electrical supply matches that of the Plasma Clean Xtract unit and observe all building and electrical codes before proceeding.

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Xtract

plasmaclean

CE

HVCA

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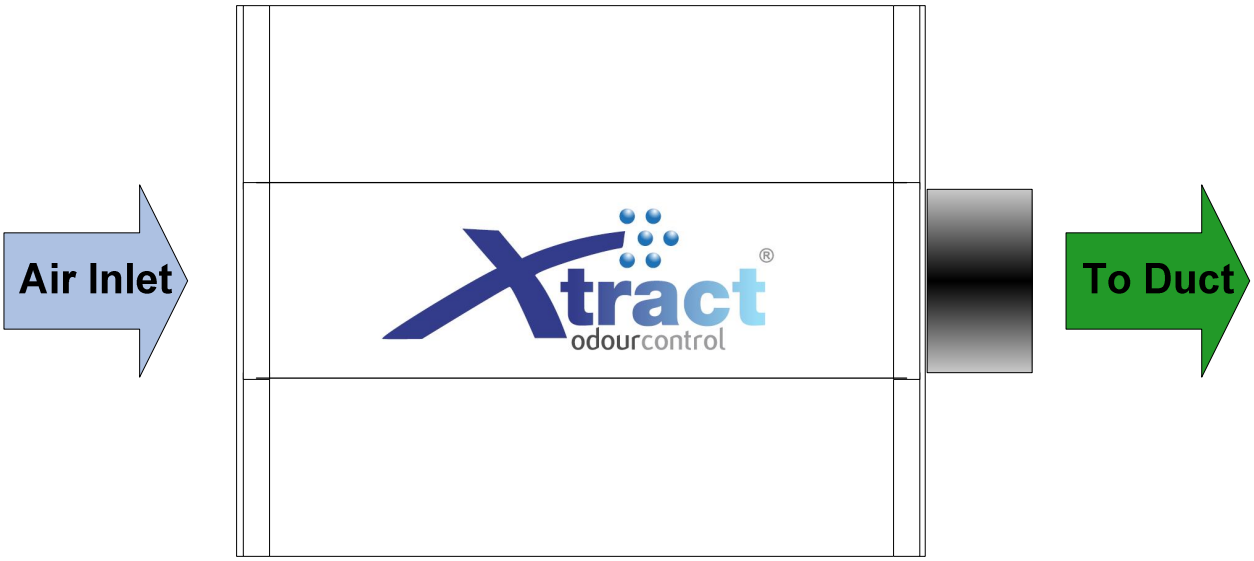
Warning: Do not remove the system cover as it will invalidate the warranty

The Plasma Clean Xtract unit should be mounted in a vertical position at a height where easy access for maintenance can be achieved. The unit is designed for wall mounting and care should be taken that the wall has sufficient load bearing capacity.

Check before installing that adequate space is available for access and for removal of the pre-filter and ozoniser components. At least 300mm access is required at the inlet side of the unit (see Figure 1).



Ensure that the unit is positioned close to the ductwork, with at least 300mm at the air inlet side to enable the end plate to be removed to replace the pre-filter and inspect the ozone tubes.

Wall Mounting

Using suitable wall screws and wall plugs mount the unit upright onto a suitable load bearing vertical surface using the keyhole mounting holes on the back of the unit.

Ensure that the unit is positioned in close proximity to the ductwork, and in a position upstream from the main fan in the ductwork system. This will ensure that the unit is subjected to negative pressure.

Check that the unit position complies with the guidance provided under the 'Installation Precautions' section.

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Connection to ductwork

The outlet of the Plasma Clean Xtract is connected to the ductwork by a suitable length of 100mm flexible ozone resistant ducting joined by a suitable spigot-type connector.

The flexible ducting is held in place by jubilee clips.

An optional iris or butterfly damper, positioned between the unit and the ductwork, is used to control the air flow through the unit

Electrical Connections

THE UNIT MUST BE INTERLOCKED TO THE MAIN FAN CONTROL OR A DIFFERENTIAL PRESSURE SWITCH ARRANGEMENT TO ENSURE THAT THE SYSTEM ONLY OPERATES WHEN THE MAIN SYSTEM FAN OPERATES

The unit is pre-wired and fully tested for operator safety and complies with Health and Safety regulations.

Mains cable entry is made at the isolator.

Ensure the cable does not represent a trip hazard.

Controls

Mains Switch
An illuminated rocker switch is located on the unit.

Safety
A flow switch is located inside the unit to ensure that the unit does not operate when there is no air flow. For example when the inlet is restricted or when the main ventilation fan is not operating.

Commissioning

THE LINEAR VELOCITY OF AIR FLOWING THROUGH THE UNIT SHOULD BE BETWEEN 1-2M/S AS MEASURED BY A FAN TYPE ANEMOMETER AT THE INLET.

The unit has an internal flow proving switch to ensure that the unit is only switched on when there is adequate flow through the unit. With the unit is switched on, an indicator lamp on the front of the unit illuminates when there is adequate flow.

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If the lamp does not illuminate when the unit is switched on and with the main ductwork fan operating, this indicates that there is insufficient air flow through the unit and so the unit needs to be repositioned to ensure adequate airflow.

IF THE LAMP DOES NOT ILLUMINATE, CHECK THE AIR FLOW USING A FAN TYPE ANEMOMETER.

NOTE: If the flexible tubing is too long (>1m) or has too many bends then this can introduce pressure drop which affects air flow through the unit. If this occurs, then reduce the length of the flexible ducting.

Operation

The Plasma Clean Xtract unit incorporates:

Pre-filter - filter to retain large particulates
Ozoniser tubes - main components for ozone and ion production

Air is drawn by the main ductwork fan through the Xtract unit. Dust and other larger particulates are captured by the pre-filter. Ozone and charged ions are produced as air passes through the ozoniser tubes, these active elements are injected into the ductwork where they immediately begin to act on odours.

Additional Information

The following items are not supplied as standard and can be purchased from Plasma Clean if required.

- **100mm flexible aluminium ducting**
- **Spigot-type connector – flat or radius**
- **Iris or butterfly damper**
- **Jublilee clips**
- **High velocity sealant**
- **Spare pre-filter**
- **Replacement ozone tubes**

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Care and Maintenance

Attention is normally confined to the routine inspection of the pre-filter.

For maximum efficiency establish a regular inspection cycle based on routine checks during the first few weeks of use.

Pre-filter

Plasma Clean recommends holding a spare pre-filter for more rapid interchange

Housing

It is recommended to clean your Plasma Clean Xtract unit on a weekly basis.

Disconnect from the mains and use a dry cloth to wipe its outer surface

For stubborn dirt use a soft cloth, dampened with water, taking care not to allow any water to drip inside the unit

Ensure that unit is dry then reconnect plug to the mains

Do not attempt to open the unit and clean inside

Do not use furniture polish, detergents, solvents, bleaches or any liquid sprays to clean the unit

Disposal

Please recycle where facilities exist

Electrical products should not be disposed of with normal household waste

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WARRANTY

Plasma Clean Limited (who is called “Plasma Clean” in this warranty) warrants that, for the warranty period set out in paragraph 2 below, the enclosed Product will be free from defects in material and workmanship, and agrees that it will, at its sole discretion, either repair or replace any defective Product subject to the following terms and conditions:

1. This limited warranty extends only to you, the customer, as the end-user of the Product. You may have additional rights under applicable law. This limited warranty does not affect such rights.

2. The warranty period is 12 (twelve) months from the date on which you purchased the Product. You must notify your reseller, dealer or Plasma Clean (or its authorised service company) of any defects as soon as possible after you have become aware of them. Please be aware that claims made 12 months after the purchase date will not be valid.

3. This limited warranty is valid and enforceable in the countries of the European Union.

4. This limited warranty does not cover general cleaning and maintenance, nor does it cover the performance or costs of any modification or adjustments which may be necessary to adapt the Product to meet any local technical or safety standards which are applicable in the country in which the Product is intended to be operated.

5. This limited warranty shall not apply in respect of the following:

   i. any deterioration due to normal wear and tear including all surfaces and all other externally exposed parts that are scratched or damaged due to normal customer use.
   ii. defects caused by the Product being subjected to any of the following: use in contradiction with the user guide, rough handling, exposure to moisture, dampness or extreme thermal or environmental conditions or rapid changes in such conditions, corrosion, oxidation, unauthorised modifications or connections, unauthorised opening or repair, use of unauthorised spare parts, misuse, improper installation, accident due to forces of nature, spillage of food or liquid, influence from chemical products or other acts beyond Plasma Clean’s reasonable control unless the defect was caused directly by defects in materials or workmanship.
   iii. products in respect of which the product serial number (or equivalent) has been removed, erased, defaced, altered or made illegible.
   iv. defects caused by employing the Product to other than its intended use.
   v. defects caused by a non-Plasma Clean product being connected or used in conjunction with the Product.
   vi. products rented on a periodical basis.

6. All defective parts or Products, which have been replaced by Plasma Clean during the warranty period, shall become the property of Plasma Clean.

7. A repaired or replaced Product(s) will be warranted for the balance of the original warranty period or for ninety days from the date of repair or replacement, whichever is the longer.

8. You are requested to keep your original proof of purchase, such as the receipt. You will need it to prove the date of purchase in respect of any warranty claims.

9. To make a claim pursuant to this limited warranty, please:

   i. contact the retailer or dealer from whom you purchased the Product; or, call the warranty service hotline on the following number: +44 161 443 4125 or e-mail us on Info@plasma-clean.com or write to us at Plasma Clean Limited, Broadstone Knowledge Mill, Broadstone Road, Stockport, Cheshire SK5 7DL UK

   ii. follow the instructions given to you in respect of the Product, which may include the method of returning the Product to your reseller or dealer or to Plasma Clean (or its authorised representative) for repair or replacement; and

   iii. if requested, send to Plasma Clean , or present to the reseller or dealer from whom you purchased the Product either a legible and non-modified original warranty card which clearly indicates the name and address of the retailer or dealer from whom you purchased the Product, the date and place of purchase, the product type and the serial number (or equivalent) or a legible and non-modified original purchase receipt containing the same information.

10. In the event of a return or repair, please ensure that the unit is well protected preferably inside its original packaging to prevent further damage.

11. You may be required to pay the cost of returning any defective Product to Plasma Clean, or the re seller or dealer from whom you purchased the Product. However, Plasma Clean will pay the cost of delivering any repaired or replaced Product back to you.

This limited warranty is granted to you by Plasma Clean Limited (Registered no: 04949576), whose registered office is at The Core Technology Facility, 46 Grafton Street, Manchester, M13 9NT

Version: 301110

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