



# AIRPUR 20

## OZONE CLEANER

Product Manual

## 1. General Information

The AirPur 20 is a safe and easy-to-use commercial grade sanitising and deodorising system for indoor use. It incorporates a two-stage operating cycle that creates ozone and subsequently removes its residues. All this is done within an automatic two-stage working cycle without the use of chemicals or deodorants whatsoever. In the first stage of the working cycle, ozone is generated at a controlled rate, produced from oxygen present in the air by ceramic plates using corona discharge technology. In the second stage, any after-treatment ozone residual is converted back to oxygen, to leave the treated room after treatment well below regulated ozone safety levels. Ozone cleans faster than the cleaning agents that are frequently used, like chlorine or bleach, and leaves the area completely sanitised.

## 2. Declaration of Conformity

**AirPur 20 complies with CE Electrical Safety Rules.**

Compliance to EMC regulations EN 61000-61, EN 61000-62, EN 61010-1, EN 5501: To special order. The AirPur equipment is for indoor use only and has the necessary instructions of use and warnings attached to the outside of the enclosure with a reference to the Owner's manual, service and the limitations of use.

It also bears other mandatory information such as a supplier's name, CE marking, fuse, voltage and current ratings, etc. These units are RoHS compliant (restriction of hazardous materials).



## 3. Safety Precautions and Warnings

Read this manual carefully before operating the unit.

**DO NOT** expose this equipment to rain or moisture. Should any liquid come into contact with the system, unplug it and have it serviced by qualified personnel before operating it further.

**DO NOT** enter the treated room during the operation of the system, or before hearing the completion-of-cycle audio alert-signal.

**DO NOT BLOCK** inlet/outlet or place obstruction in their vicinity which may block airflow.

**DO NOT** disconnect the cable cord from the mains socket before the operation of the system is completed.

Unplug the equipment power plug when it is not in use. When unplugging, never pull the plug by the cord.

### **AVOID ELECTRICAL SHOCK**

This equipment is supplied with an earthed mains cable. Attempting to bypass the earth or to connect the unit to an unearthed socket is unsafe and strictly prohibited. This equipment has a mains fuse within the mains inlet, which will automatically open under certain conditions. Interfering with the fuse in any way as to prevent its automatic operation is unsafe and strictly prohibited. Before opening the equipment for maintenance, always disconnect it from the mains power.

## 4. AirPur 20 Specifications

### 4.1. Description

The Airpur 20 ozone generator is designed to completely sanitise the air, objects and surfaces in a room. The AirPur 20 with its ozone output of 20 grams per hour is the highest performing machine in its class. It generates a measured amount of ozone, a gas that naturally destroys odours and bacteria on contact, cleaning air and surfaces both simply and quickly.

### 4.2. Technical Specifications

**Mains supply UK and Europe:** 230V/ 50Hz / AirPur 10 140W, AirPur 20 180W.

**Noise level:** below 61dBA

**Ozone Output:** AirPur 10 all = 10g/hour (10,000 mg/h) typical. AirPur 20 all = 20g/hour typical.

**Operation:** Selectable automatic ozone activation & deactivation cycles timing.

**5 fully automated working cycle times of ozone production and destruction:**

15, 30, 45, 60, 120 minutes.

**Can be used when additional removal of ozone is desired in rooms with heavy soft furnishings.**

**Effective destruct filter area:** 1,300cmsq

**Effective destruct filter volume:** 3,900cm cube

**Control Panel:** Touch Keypad with operator LED prompts.

**Safety:** Mains fuse 3.5A slow, 20 x 5mm. 30-second start-up delays.

The AirPur provides audio and visual feedback of its operational status using LED indicators and an audio sounder. Air vents are protected by a fine stainless steel mesh. The internal fan is thermally and against stall protected and provided with a safety finger guard. Operating temperature of the enclosure is virtually that of ambient temperature.

**Service:** No consumable materials. Removable ozone destruct filter cartridge.

Inbuilt service hour meter. 500 hour or Annual service inspection intervals are recommended.

In-built test of key functional parts via the control keyboard.

**Dimensions:** 420 x 265 x 225mm

**Ozone outlet:** Vent on the top cover.

**Air output rate:** 335 m3/hr in ozone generation mode, 295 m3/hr in ozone destruct mode.

**Weight:** 9.5 kg approx.

**Shipping weight:** 10.5 kg approx.

**Construction:** Commercial grade, Lightweight aluminium

**Certification:** CE, RoHS.

**Models available:** Mobile on castors, Portable.

### 4.3. Normal Environmental Conditions

**Environment:** Indoor Use Only.

**Temperature:** -5°C to 40°C.

**Humidity:** Maximum relative humidity 95% non- condensing.

## 5. Typical applications

The AirPur 20 can be used by any organisation where good air quality is vital. It can help return rooms to service within 15 minutes, making it ideal for offices, care homes and hotels. In fact anywhere that rapid elimination of contaminants and odours is key to a better environment and will make your customers feel safer. Ozone naturally attacks and eliminates odours, smells, bacteria, viruses, micro-organisms by breaking up their molecular structures. As a gas, it can penetrate those hard to reach or inaccessible areas and is especially effective at getting to odours trapped in soft furnishings like carpets and curtains.

## 6. Microbial Destruction

Ozone has the capability of destroying microorganisms in the form of bacteria, fungi and viruses. This will entail maintaining a concentration of ozone at high levels for a minimum of 2 minutes at ambient room temperature and humidity throughout the treatment area.

## 7. Preparing room for treatment

### CAUTION:

**Before starting operation** ensure that the treated area has been vacated, including animals, plants and items containing natural rubber.

### Important!

When the cycle is started, the system will begin the generation of ozone after a 30-second delay to allow the operator to leave the room.

**Remaining in the treated area whilst unit is in operation or entering before completion of the cycle may be hazardous to your health.**

**YOU MUST ensure that no person can enter the room until the cycle is complete.**

**Use appropriate signage if necessary.**

### CAUTION:

**DO NOT ATTEMPT TO ENTER THE ROOM WHILST MACHINE IS IN OPERATION.**

**A LIGHT "RUN" INDICATOR SITUATED ON THE MACHINE FRONT PANEL SHOWS WHEN A WORKING CYCLE IS IN PROGRESS.**

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OZONE IS A POWERFUL OXIDIZER. USE THIS EQUIPMENT WITH CARE AND IN **UNINHABITED AREAS ONLY**. READ ALL OPERATING INSTRUCTIONS BEFORE USING THIS MACHINE. RE-OCCUPY TREATED AREAS ONLY AFTER THE SELECTED CYCLE OPERATING TIME HAS ELAPSED.

THIS IS AUDIBLE VIA A 3 SECOND AUDIO ALARM AND THE "RUN" LIGHT SWITCHED OFF INDICATING THAT THE MACHINE IS NO LONGER IN OPERATION.

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## 9. Operation AirPur 20

- Place the AirPur in the centre of the room to be treated.
- Ensure that the air inlets and outlets on the front and top of the machine are unobstructed.
- Connect the power cord to the socket on the AirPur side panel and only then connect it to the power source socket.

### Key operational features

- Easy to use push-button control panel
- 5 Fully automated activation and deactivation/ destruction cycles:  
15, 30, 45, 60, 120 minutes
- Instant safety stop button
- Initial 1 minute period of ozone plates drying

### Regular working cycle selection:

- Switch on the AirPur using the mains switch at the side of the machine.
- Once on, select the treatment time. Appropriate LED is turned on. Leave the room within the 30-second countdown.

### Ozone destruct only cycle selection all models:

For heavily soft furnished rooms you can use the ozone residue deactivation /destruction cycle by holding down the combined red and green STOP / DEST button while selecting the desired destruction time.

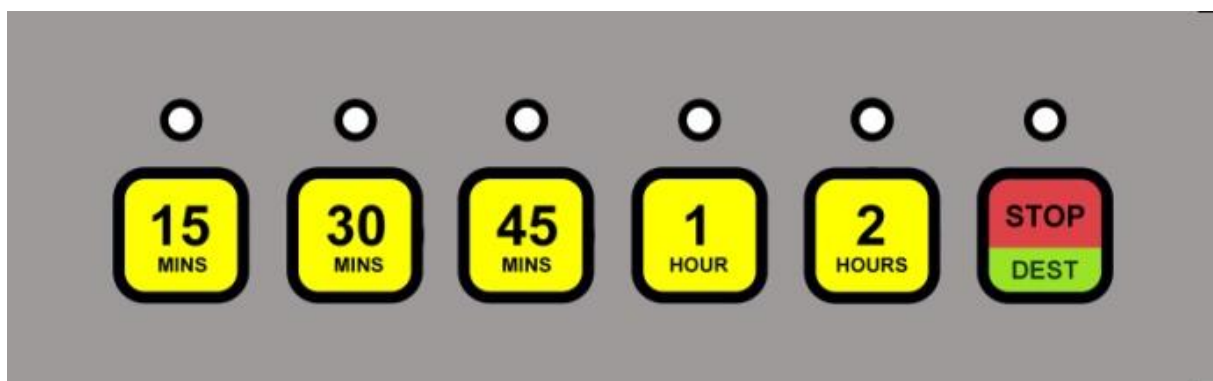
### Ozone only mode selection -

Push in the step switch situated on the front panel. Then select the working time.

### STOP FUNCTION:

The AirPur can be stopped at any time by pushing the red STOP button.

### AirPur 20 Control Panel and LED indicators



**10. Total Working Cycles Times, Generation, Dwell and Destruct Times for approx. room sizes and do not include the initial 30-second safety delay or 1 minute plates drying time.**

**MODELS WITH STANDARD WORKING CYCLES**

TOTAL CYCLE TIME MINUTES	OZONE GENERATION TIME MINUTES	DWELL TIME WITH FAN RUNNING MINUTES	OZONE DESTRUCT TIME MINUTES	ROOM SIZE APPROX. METRES CUBE
15	3	2	10	30+
30	7	2	21	50+
45	15	2	28	70+
60	25	2	33	100+
120	60	5	55	150+

**MODELS WITH SHORT WORKING CYCLES**

TOTAL CYCLE TIME MINUTES	OZONE GENERATION TIME MINUTES	DWELL TIME WITH FAN RUNNING SECONDS	OZONE DESTRUCT TIME MINUTES	ROOM SIZE APPROX. METRES CUBE
10	2.5	1	7.5	30
15	3.5	1	11.5	50
20	4.5	1	15.5	70
30	7	1	23	100
60	25	1	35	150

*The Standard Menu Working Cycle table serves as a guide. To achieve the desired odourised or sanitised result for rooms or spaces that are heavily contaminated, you may need to run longer cycles for increased Ozone levels in the room.*

**Ozone Residue Destruction Only Cycles**

While holding the combined **RED / GREEN (DEST)** button, select the desired time. The AirPur will run for the entire duration of the working cycle set.

This cycle is recommended for rooms with heavy soft furnishings or when the smell of even minute levels of ozone residue may be detected by someone with the sensitive sense of smell.

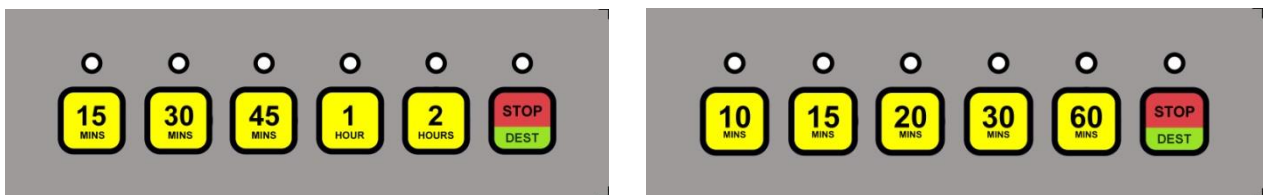
The AirPur 20 has built-in test functions which can be used to test each of the main functional electronic components of the machine:

- LED display
- Ozone generating system
- The fan
- The shutter mechanism
- Shutter microswitches
- Buzzer
- Hour counter

To test each of these start with the AirPur in the OFF position on the power switch.  
Turn the power ON while holding the RED **STOP** button.

- To engage the test function press and hold the **STOP** button continuously and then activate a time Select button, for example 30 mins
- Release the buttons to stop the test
- To continue with further tests, hold the **STOP** button whilst pressing another TIME Select button.

### AirPur Control Panel



The table indicates which function is activated by holding each pair of the buttons simultaneously

Test Function	Select Buttons – press and hold simultaneously	Result
Buzzer	<b>STOP</b> and <b>2 HOURS / 60 MIN</b>	Buzzer sounds
Hours counter	<b>STOP</b> and <b>1 HOUR / 30 MIN</b>	Counter steps up
Plates + fan + shutter microswitch	<b>STOP</b> and <b>45 MINS / 20 MIN</b>	Smell of ozone, fan running Activate for only a few secs
Fan	<b>STOP</b> and <b>30 MINS / 15 MIN</b>	Fan running
Shutter mechanism + shutter microswitch	<b>STOP</b> and <b>15 MINS / 10 MIN</b>	Shutter engage + sound

## 12. Maintenance and Service

Preventative maintenance and inspection of your AirPur is recommended periodically or every 150 hours as indicated by the in-built service counter in order to ensure trouble-free performance. Please note that the figure on the counter shows the Ozone Generation time only which represents about 30% of the overall machine working time. It is therefore equivalent to about 500 hours of the overall AirPur working time.



**Tools required to service the AirPur units:**

Hex screwdriver tool 2.5 mm across flats to remove the M4 casing screws.  
 Hex screwdriver tool 5.0 mm across flats to remove the handle.

The AirPur is designed with in-house maintenance and servicing in mind and these tasks may be undertaken by the owner. This is done entirely at the owner’s risk.

**12.1. Machine numerical counter registering Ozone Generation Time in hours**

The hour reading counter is situated at the bottom corner of the machine front panel. It is for indication only as the degree of usage the Ozone destruct catalysts depends on the pollution and contamination of the areas treated. The catalyst/ozone filter can be washed once in lukewarm water.

See Section 10 for the Standard Menu Cycle Times.

**12.2. Do - It - Yourself Catalyst filter exchange:**

**Removal of the bottom filter cover. The tools you will need:** 1 x 2.5mm Allen hex key

Undo and remove the 5 x Stainless steel countersunk hexagonal M4 C/S machine screws holding the filter cover situated at the bottom of the machine. Keep these safe.

Next: Carefully remove the filter cover. You may use a flat screwdriver to prairie it away – see a small notch at the middle of the inner edge.

Slide-out the filter and replace it with a new one. The filter is made from a soft aluminium substrate, therefore handle it with care. When inserting, apply pressure to a wide area along the edge rather to one point.



**12.3. Replacement of the ozone plates and other parts**

For any part replacements contact Axair.



13. Sample 'Cleaning in Progress' Sign



**STOP!**  
**DO NOT ENTER THIS ROOM**  
High Concentration Ozone Cleaning &  
Sterilization in Progress



**You MUST NOT enter this room for any reason until  
after the Ozone  
Cleaning Cycle has completed!**

Cleaning cycle START Date: \_\_\_\_\_ Time: \_\_\_\_\_

Cleaning cycle END Date: \_\_\_\_\_ Time: \_\_\_\_\_

Authorized System Operator: \_\_\_\_\_