

CATALYST 20 Plus

PRODUCT MANUAL



HI-Performance, Efficient Natural Air and Surfaces Odour Neutralizing and Disinfecting System with Automatic Conversion of Ozone Residue to Oxygen

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We strive to improve the quality of air in the working and living environment.

CATALYST 20 Plus

NATURAL CLEANER WITH CATALYST

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1. General Information

Catalyst 20 Plus Natural Cleaner is a safe and easy-to-use commercial grade deodorising and sanitising system for indoor use. This robust automatic system is characterized by high safety standards. It incorporates a two-stage operating cycle that creates ozone and subsequently removes its residues, allowing the immediate reoccupation of treated spaces. All this is done within an automatic two stage working cycle without the use of chemicals or deodorants whatsoever – truly in the “green way”. Odours are destroyed, not merely masked as by artificial scents or air fresheners.

In the first stage of the working cycle, the room is enriched at a controlled rate with ozone, produced from oxygen present the air by ceramic plates using corona discharge technology.

In the second stage, any after-treatment ozone residual is converted back to oxygen, so as to leave the treated room after treatment well below regulated safety levels.

2. Declaration of Conformity – Provided by Ozofresh Ltd

Model No. Catalyst 20 Plus Natural Cleaner

This unit fully complies with CE rules of EMC regulations:

EN 61000-61, EN 61000-62, EN 61010-1, EN 5501.

Catalyst 20 Plus 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. This unit is 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 disconnects the cable cord from 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.

Prior to opening the equipment for maintenance, always disconnect it from the mains power.

4. Catalyst 20 Plus Specification

4.1. Description

Catalyst 20 Plus is a light, portable and rugged unit. It features an advanced technology in the field of odour control and air-treatment. Ozone is produced internally from oxygen present in the air, passed by a fan through the equipment via ozone generating plates which use electrical energy of high voltage to produce corona discharge. Easy to use push button control panel with machine working time light indicators.

4.2. Technical Specifications

Mains supply UK and Europe: 230V/ 50Hz / 140W. For other countries or mains supplies, please contact Ozofresh Ltd.

Noise level: below 61dBA

Ozone Plates Rated Output: 20g/hour (or 20,000 mg/h) 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
- **5 fully automated cycles of ozone residue destruction / removal:** 15, 30, 45, 60, 120 minutes, when additional removal of ozone residue 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 ceramic slow, 20 x 5mm. 30 second start-up delays.

Catalyst 20 Plus provides audio and visual feedback of its operational status using LED indicators RUN (yellow), END OF TREATMENT (green), FORCED STOP (flashing green) and an audio sounder. Air vents are protected by a fine stainless steel mesh. 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 top cover.

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
90% non- condensing.

Ozofresh Ltd have a policy of continuous product improvement and reserve the right to modify or change this specification and change colour of the product without prior notice.

5. Typical applications

Ozone will destroy all known odours – from smoking, to damp and cooking, or paint fumes. 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. Whether it is an emergency or part of routine cleaning, Catalyst 20 Plus will become an invaluable part of your housekeeping or property restoration armoury.

6. Microbial Destruction

Ozone has the capability of destroying micro – organisms in the form of bacteria, fungi and viruses. This will entail maintaining a concentration of ozone of at least 2ppm 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 cycle is started, the system will begin generation of ozone after a 30 second delay in order to allow the operator to leave the room.

Remaining in the treated area whilst unit is in operation or entering before completion of 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.

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 CLEARLY AUDIBLE VIA A 3 SECOND AUDIO ALARM INDICATING THAT THE MACHINE IS NO LONGER IN OPERATION.

IMPORTANT: Do not spray chemicals, deodorants, etc. into the machine. This may cause the machine to malfunction and destroys the ozone filter.

8.1. Catalyst 20 Plus Front view



Ozone vent

Carry Handle

Control panel and
cycle selector

Run indicator

End of cycle

Power ON indicator

Ozone selection buttons

Ozone only selection

Fan

Mains inlet, switch & fuse

Numerical Counter - recording
machine service hours

Castors when fitted

8.2. Catalyst 20 Plus Rear and Side views with Power inlet with switch and fuse



Portable model

9. Operation

Place Catalyst 20 Plus 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 power cord to socket on the rear panel and only then connect it to the power source socket.

Key operational features

- Easy to use push button control panel with the set time LED indicators
- 5 Fully automated activation and deactivation/ destruction cycles: 15, 30, 45, 60, 120 minutes
- 5 Fully automated deactivation / destruction cycles: 15, 30, 45, 60, 120 minutes
- Instant safety stop button that automatically reverts the machine into the ozone destruct mode
- Initial 1 minute period of ozone plates drying
- Machine Running, End of Working Cycle and End of Emergency Destruct Indicators

REGULAR WORKING CYCLE selection:

Switch on the Catalyst 20 Plus using the mains switch at the rear 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:

For heavily soft furnished room you can 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 Catalyst 20 Plus:

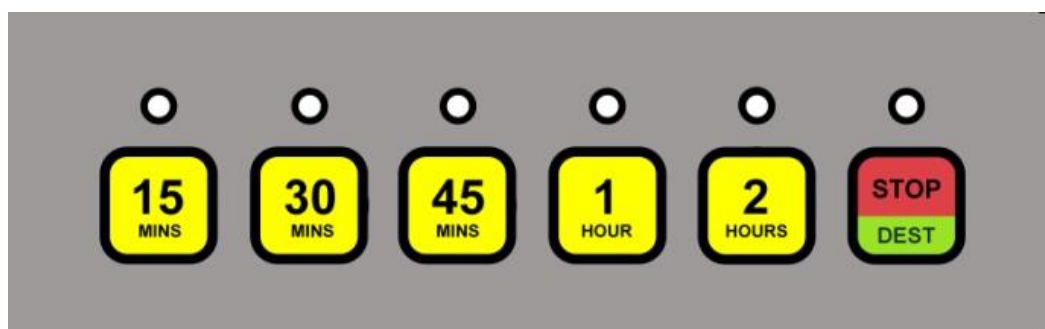
Push in the step switch situated on the front panel. Then select the working time.

OZONE RATE PRODUCTION:

Push in one or two 10g/hr step switches situated on the front panel. With both switches pushed in the unit produce 20g/hr of ozone. With either of the two switches is pushed in, the unit produces 10g/hr of ozone.

STOP FUNCTION:

Catalyst 20 Plus can be stopped at any time by pushing the red STOP button.



Catalyst 20 Plus 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 and 1 minute plates drying time.

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

The Standard Menu Working Cycle table serves as a guide. To achieve the desired result for rooms or spaces that are more 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 Pure Air 10 will run for the entire duration of the time set. The times available are: 15, 30, 45, 60, 120 minutes.

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.

11. Catalyst 20 Plus Self-test Functions

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

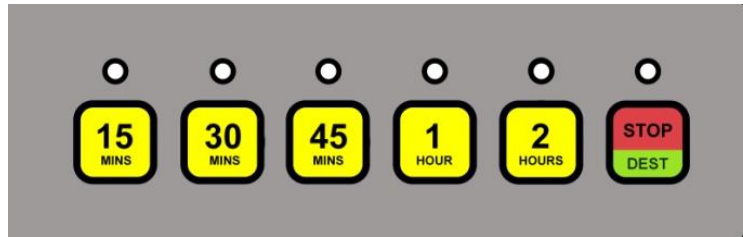
- LED indicators
- Ozone generators
- The fan
- The shutter motor and mechanism
- Shutter microswitches
- Buzzer
- Hour counter

To test each of these begin with Catalyst 20 Plus 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 **30MIN**
- Release the buttons to stop the test

- To continue with further tests, hold the **STOP** button whilst pressing another TIME selection button.

Catalyst 20 Plus 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	STOP and 2 HOURS	Buzzer sounds
Service hours counter	STOP and 1 HOUR	Counter steps up
Plates + fan + shutter microswitch	STOP and 45 MINS	Smell of ozone, fan running Activate for only a few secs.
Fan	STOP and 30 MINS	Fan running
Shutter mechanism + shutter Microswitch	STOP and 15 MINS	Shutter engage + sound

12. Maintenance and Service

Preventative maintenance and inspection of your Catalyst 20 Plus is recommended periodically or every 150 hours as indicated by the in-built service counter in order to ensure trouble-free performance.

Call OZOFRESH LTD or their agent for advice or to schedule a service, pickup or visit.

As an alternative, Catalyst 20 Plus 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 Machine Usage Time in hours

The hour reading counter is situated at the bottom corner of the machine front panel. It is to record and show the machine service time in hours. The service life of Ozone destruct catalyst depends on the pollution, contamination and cleanness of the air in the areas treated. The catalyst / ozone filter can be washed once in lukewarm water. New replacements and spare parts are available from Ozofresh Ltd or their authorized distributors.

See Section 10 for the Standard Menu Cycle Times.

12.2. Do - It - Yourself Catalyst filter exchange:

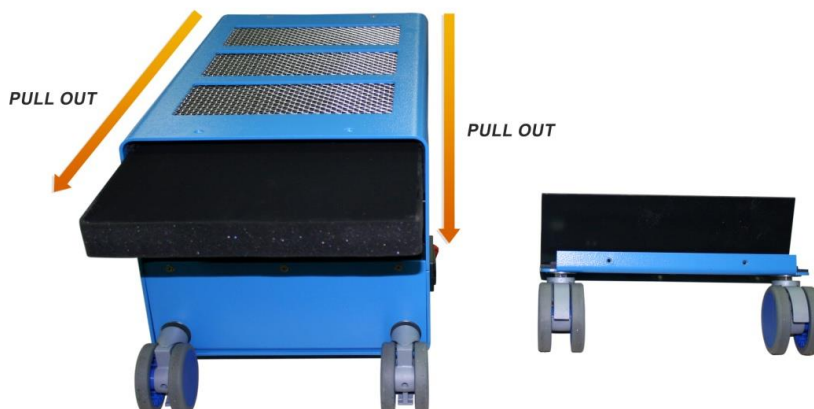
The tools you will need: 2.5mm Allen hex key

Removal of bottom filter cover

Undo and remove the 6 x Stainless steel countersunk hexagonal M4 C/S socket 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 pry 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.

Contact Ozofresh Ltd or their authorized distributors.

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: _____

IMPORTANT:

**When the machine has finished its cycle, turn it off and remove
from the area treated to prevent misuse.**

