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Instruction Manual
Instruction Manual

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Airfree



Airfree® Lotus
Airfree® Lotus

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Congratulations for having purchased your Airfree®.

Airfree® air purifiers are manufactured under license of US Patent 5,874,050, and many other patents pending worldwide. Airfree® was designed with the most advanced American and German technologies, to drastically destroy indoor airborne microorganisms and reduce ozone.

Different from other air purifier manufacturers, Airfree® does not spend much time in describing fancy technologies with difficult words and theories. Airfree® offers independent efficiency tests instead. For every Airfree® claim there is one independent test to prove it!

Please carefully read this manual to achieve the best air purifying results.
Enjoy your Airfree®.

Thank you,
AIRFREE® PRODUCTS

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Safety Instructions



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.



Do not place your Airfree® in direct contact with water or liquids as this may pose an electric shock hazard and damage to the unit itself.



Do not obstruct Airfree® air outlets with items such as towels, clothing, curtains, etc., as they can cause overheating and irreparable damage to the unit.



Do not attempt to open Airfree® or touch its internal components. Do not insert any objects as it may pose electric shock. Any attempt to open or tamper Airfree® will void this warranty.



To clean Airfree®, unplug it from the electric outlet and use a dry cloth to wipe off its surface. Do not attempt to open Airfree® to clean it inside. Only Airfree® authorized dealers have the expertise and authorization to repair your Airfree®.



Always keep Airfree® in its vertical position as shown in the picture. The Lotus' light will start blinking if Airfree® is not in its vertical call, or if it is poorly installed will eventually result in malfunctioning



In the event of a return for repair, make sure Airfree® is well protected preferably inside its original box to avoid further damage. To find the nearest Airfree® dealer visit: www.airfee.com



Airfree® shall not be placed near flammable and toxic products.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

The Invisible Enemies

Most people spend around 90% of their time indoors, at home or in the office.

The EPA – Environmental Protection Agency claims the quality of air indoors can be 100 times worse than outdoors. Some factors that contribute to indoor contamination:

- High concentration of people in rooms increase fungus, bacteria and virus development, and cross contamination
- New building insulation techniques reduce outside air interchanges and consequently air conditioning running cost, but in turn it drastically increase mold, and bacteria colonies
- Deficient air conditioning duct cleaning
- Concentration of organic material such as books, carpeting, curtains, and sofas.

Good air quality indoors is a must for those affected by respiratory diseases and allergies. Contaminated indoor air (fungus, airborne allergens, pollens, ozone) can trigger

- Asthma, bronchitis, rhinitis, and sinusitis
- Fungal infections in immune depressed patients
- Eye, throat and nose irritation
- Headaches, lethargy, irritability
- Cough and difficulty in concentration

Relation between microorganisms and related diseases.

Inoculums(*) X Virulency (**)

Human Resistance

(*) Quantity of microorganisms (**) Microorganism aggressiveness

The higher “Inoculums” and “Virulency” and or the lower “Human Resistance” results in greater contamination risk to people. The main contamination causes are several types of fungus, (some of them already resistant to the most powerful chemicals and poisons), bacteria, viruses, the fine dust mite excrements and skeletons containing powerful allergens and hazardous fungus, and the seasonal pollens.

Airfree® can safely and silently destroy those allergens

Applications



Healthy rooms with pure clean air - The efficient and noiseless Airfree® technology safely destroys mold spores, bacteria, viruses and other airborne organic microorganisms.



Respiratory allergies and Asthma - Airfree® drastically reduces airborne organic allergens and ozone, providing cleaner and safer environment for allergic people. Airfree® destroys mold spores, bacteria, viruses, dust mite allergens, pet dander and reduces ozone, all kept to minimum levels.



Children and Newborns - Studies demonstrate that reducing dust mite allergen exposure to young children will lessen the development of asthma.



Mold and Mildew - Airborne Mold spores that float throughout the house potentially cause allergic reactions. Those spores also start new mold colonies and expand existing ones. Airfree® destroys airborne mold and mildew spores, helping to prevent new contaminations.



Odors - Airfree® can reduce some odors like “mildew smell” and other organic odors.



Kitchens and Pantries - The reduction of airborne fungi and spores in areas protected by Airfree® helps prevent mildew on food.



Video, films, slides, sound and optical equipment - The reduction of airborne spores in rooms protected by Airfree® provides the best environment to store cameras, videos, pictures, slides, negatives and any device potentially affected by fungi. Quietly and safely Airfree® protects your belongings and memories.



Yachts, Cruisers - Airfree® safely eliminates fungi spores, mold, mildew, dust mites, bacteria, and strange odors. Many of which contribute to many common problems of boat owners.



Offices, Public Buildings - Populated rooms, corridors, and elevators offer a constant contamination risk to employees and guests. This situation is aggravated by the flow of hazardous fungi and other microbes entering through the A/C system, and the ozone generated by computers and photocopiers. The spread of airborne transmittable diseases can accelerate in this environment. Airfree® is a powerful weapon in the reduction of airborne contamination by viruses, bacteria, fungi, and a myriad of allergens.



Libraries and Museums - The fungi spores that become mold or mildew are always present. When the temperature and moisture in the environment are suitable for germination, the spore bursts and growth begins. This growth contaminates books, clothing, documents, and works of art. Airfree® destroys mold and mildew, providing a healthier environment for users and employees.



Schools, Kindergartens - Airborne transmittable diseases are a great concern for students, parents, teachers, and principals. Influenza, meningitis, rubella, and other nasty microbes flow freely in the air. The use of Airfree® in classrooms demonstrates the principal's concern for their students and staff well being. It also reduces schools' exposure to lawsuits, such as with mold-affected diseases that may be common throughout the USA.



Pollens - Pollens are no exception and like other microorganisms are totally destroyed when passing through Airfree® patented sterilizing core. After being destroyed the resulting harmless particles are released back to the environment.



Ozone (O3) - Ozone is a very toxic gas that according to EPA can damage lung tissue, cause chest pain, throat irritation and trigger asthma. The FDA, the US Food and Drug Administration, recommends not to use any equipment directly or indirectly generating ozone in Hospitals or where the patients are present. Airfree® is proven to reduce ozone levels by 26%, every time air passes through its ceramic core.



Viruses, Bacteria, Fungus and Germs - Airfree® destroys all airborne microscopic threatening microorganisms cited above including the smallest microbes like those of meningitis, pneumonia and scarlet fever, that can not be trapped in air filters or in other equipment using different technologies. Scientists confirm that virus, fungus, and bacteria molecular structure (composed by proteins), can not survive high temperatures as those seen inside Airfree® patented ceramic core.



Hospitals, Clinics and Laboratories - Airborne contamination is quite a concern for most hospitals. With Airfree®, the hospital environment becomes safer. Airfree® is indispensable in waiting rooms, infirmaries, and recovery rooms due to its efficiency in destroying airborne viruses bacteria, and fungi. Airfree® also reduces ozone that can affect patients with respiratory ailments. Laboratories no longer need to stop all activities for chemical air disinfection and will gain working hours.



Restaurants - Airfree® offers continuous air sterilized. Silently, Airfree® provides the additional protection that patrons expect. All viruses and bacteria that pass through Airfree's patented sterilizing ceramic core are destroyed. Restaurants are recommended to submit their floor plans to ensure proper coverage inside their facilities.



Dust Mites - Many allergic reactions are caused by dust mites. The fine dust generated from their skeletons and excrements contain hazardous fungus and allergens that when inhaled cause allergic reactions. Those allergens and fungus are totally destroyed inside Airfree® ceramic core. Fungus reduction by Airfree® in the indoor environment also reduces dust mite population as they need certain types of fungus to survive.



Hotels and Retire Homes - The use of Airfree® in guest rooms shows concern on behalf of the hotel to its guests well being. The use of Airfree® can contribute to a higher occupancy rate and may provide a good line of defense in case of lawsuits. Airfree® has independent tests proving its efficiency.

Airfree® and Mold

Guide for Airfree® installation in mold contaminated rooms

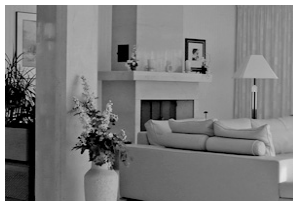
- 1 - Install your Airfree® unit in accordance with the user manual
- 2 - Allow your unit to run for at least one week to achieve significant airborne mold spore reduction.
- 3 - Clean mold infected items and surfaces, since they are a continuous source of new spores.

It is important to stress that Airfree® will not destroy or remove mold from an infected item or surface. Those surfaces must be cleaned manually.

Airfree® will prevent spores released by existing mold colonies from contaminating other areas, and will inhibit the growth of existing and new colonies.



Without Airfree®



With Airfree®

Illustration images based on Airfree® Independent Test results. Results may vary depending on the room and environment conditions.

Airfree® Description

1- Top lid with air outlets and illumination

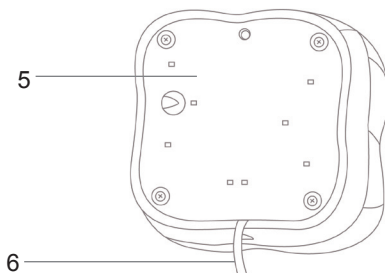
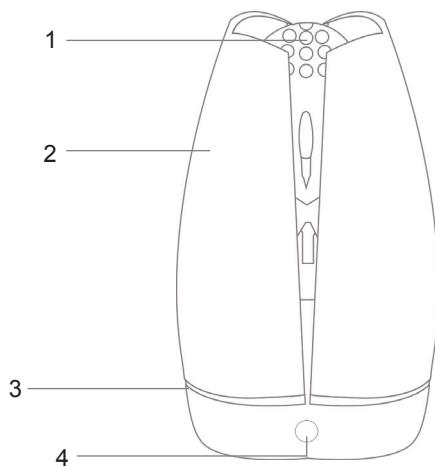
2- Moving Petals

3- Air inlets

4- Led color control sensor

5- Base

6- Power cord



The Airfree® Lotus' light does not intervene or has any relation with Airfree's patented sterilized core functioning.

Installing and Connecting



Plug power cord into the nearest outlet.

Make sure the surface is dry. Never use the Airfree® as a stand alone nor in wet conditions.



Place Airfree® on a flat surface do not under furniture, shelves, or behind curtains, as it will reduce airflow and Airfree® efficiency in reducing microorganisms.



Place each Airfree® Lotus in rooms up to 650 ft². For larger rooms use proportionally additional Airfree® units. The use of just one Airfree® in rooms larger than recommended will reduce Airfree® efficiency.



Airfree® must be continuously on in the same room, 24 hours a day.



Airfree® is to be used in rooms with minimum air volume of 330 ft³, free of obstacles.



Airfree® can be installed in rooms equipped with air conditioning and heating systems. However it is recommended not to place Airfree® nearby them to avoid potential interference in Airfree® air flow.



Airfree® can be placed in corridors but its air sterilization effects will not affect adjacent rooms.



Airfree® shall not be placed near doors or under windows to avoid sterilized air to exit the room.



To change globe light colors press the sensor on the back of Airfree®. Each touch will switch to the next color. For the random mode please switch to pink and let it be. Maintaining finger pressed on the sensor will increase or diminish brightness.



To open Airfree® Lotus' petals, press the top lid centre.



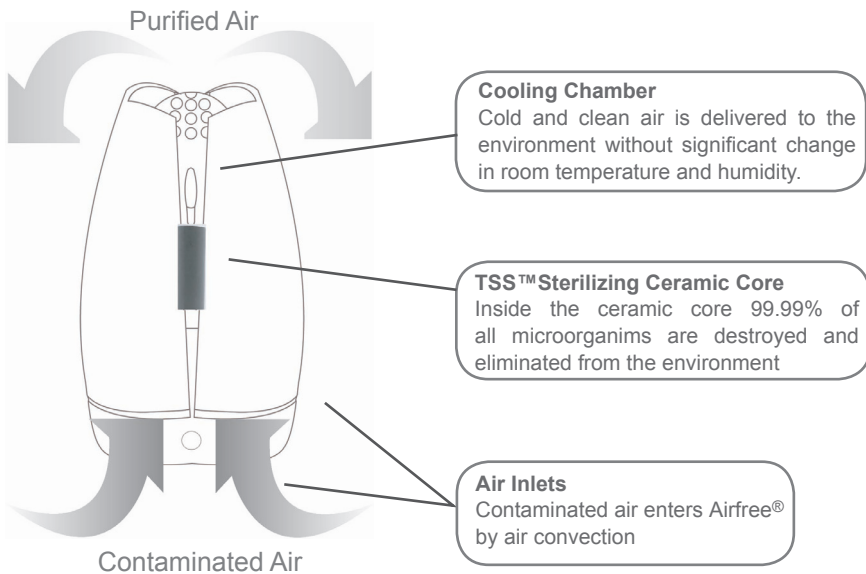
To close the petals, move them simultaneously towards the centre.

Technical Characteristics



Model	Lotus
Capacity	650ft²
Electric Consumption	52W
Voltage	120V
Noise	Totally Silent
Weight	5.2 lb
Dimensions	Length: 7.7 in Width: 7.7 in Height: 13 in

How does Airfree® Work? Maintenance



How Airfree® works?

Contaminated air silently enters Airfree® by air convection and is sterilized inside Airfree® patented ceramic core where all microorganisms are destroyed at high temperatures. Regardless of how hazardous a virus, fungus or bacteria might be they can not resist the powerful heat inside the ceramic core and are destroyed. The heat inside the ceramic core forces sterilized air out to the heat exchanger causing air convection, which generates negative pressure underneath the ceramic core, so contaminated air is “sucked” in at Airfree® bottom air inlets in a continuous and silent thus efficient air flow.

The association of the ceramic core, special ceramic and air flow reduces at the same time toxic ozone.

AIRFREE® TECHNOLOGY EFFICIENCY TESTS BY INDEPENDENT LABORATORIES, INSTITUTES AND UNIVERSITIES IN FOLLOWING COUNTRIES.

Laboratory	Local	Reduction of Microorganisms		
		Fungus	Bacteria	Dust Mite alergens DerP-1
Insect R&D Limited Cambridge, UK	Laboratory			70.6% to 97.95%
SGS Natec Institute* Hamburgo/Germany	Laboratory Office	99%	99%	
Technical Micronics Control Huntsville/USA	Laboratory	93%	78%	
Univ. Complutense de Madrid Madrid/Spain	Clinical Laboratory	69%	79%	
AINIA Valença Spain	Cold Chamber	86%		
INETI* Lisbon/Portugal	Torre do Tombo Portuguese National Archive	93%	94%	
INETI* Lisbon/Portugal	RTP Video Archive	74%	70%	
INETI* Lisbon/Portugal	Bank Branch	77%		
Univ. Nova of Lisbon	Laboratory	90%	62%	
Campana Laboratory/ São Paulo/Brazil	Chemical Laboratory	99%	83%	
INETI* Lisbon/Portugal	Closed Environments	98%	87%	
INETI* Lisbon/Portugal	Hotel Rooms	92%	82%	

Above and other tests can be seen at our web site www.airfree.com

* Certified by ISO 17025

1. How does Airfree® work?

Airfree® destroys microorganisms at its heated capillaries. Contaminated air is dragged into Airfree's ceramic core by air convection and microorganisms are destroyed at high temperatures regardless of how resistant and dangerous they might be.

2. Are there any side effects?

No. Airfree's new technology uses heat to purify the air. No side effects, no emissions, NO IONS, nor new particles are generated. Airfree® should be used in all homes and offices, quietly, constantly, and efficiently purifying the air.

3. My Airfree® does not stop blinking. What does that mean?

Cause 1: Airfree® incorporates an automatic energy-saving feature that automatically shuts off the ceramic core when it reaches over the required temperature to start and maintain the air convection that draws the air into the machine to destroy microorganisms and organic odors. In this event the ceramic core shuts down for a few minutes, and the top lights will blink (in the models that have top lights). During this period Airfree® continues to sterilize the air.

Cause 2: Another factor to Airfree's blinking occurrence is the ambient air over 35 °C when Airfree® auto-regulates itself to turn off the ceramic core for a few minutes while still sterilizing the air, causing the top lights to blink in those models that have the top lights. During this event there is no energy consumption.

Cause 3: Airfree® incorporates state of the art electronics detecting any improper placement or device malfunctioning. If the top lights does not stop blinking, please ensure that your Airfree® unit is in the upright position. If the top and bottom air inlets are free of blockage, or if your Airfree® is connected to a faulty electric outlet. Just in case always plug your Airfree® into a different outlet. If in the next 10 minutes the top lights continue blinking and your Airfree® unit is correctly installed, that indicates that the device may be defective in which case please contact your dealer.

4. What is Airfree's air cleaning capacity?

Airfree® Lotus was designed for rooms up to 650 ft².

5. Can I install Airfree® in my walking closet ?

Yes, as long as it has at least 330 ft³. Airfree® should not be placed under shelves or its efficiency will be reduced.

* as reference 330 ft³ is approximately 7'x7'

6. Can I use Airfree® in air conditioned rooms?

Yes.

7. How do I know if Airfree® is no longer working?

Check the top lid, if it is warm Airfree® is working.

8. Can I place Airfree® at the corridor to reach the whole house?

No. Airfree® will just reduce air pollution in the corridor's area.

9. Can I place Airfree® in a closed room?

Yes. Please remember such a room must have at least 330 ft³. * 330 ft³ is approximately 7'x7'

10. Does Airfree® eliminate bacteria and viruses?

Yes. Unlike the air filters in the market Airfree® is more efficient with the smallest microorganisms as they are easily carried by Airfree's airflow into its heated ceramic core.

11. Can I change Airfree® from one room to another?

Airfree® must always be plugged in the same room 24 hours a day. Airfree's patented technology works gradually and cannot have its cycle interrupted. Moving it from one room to another will interrupt the cycle and will recontaminate the room. See question 13 below.

12. Should I turn off Airfree® when I leave house?

No. Airfree® must always be on.

13. What happens if Airfree® is disconnected or there was a black out?

Airfree® will take approximately the same time to recover the previous reduced contamination level.

14. Does Airfree® heat up a room?

No. Airfree® does not noticeably increase room temperature. To have an idea 2 Airfree's plugged in the same room will contribute as much heat as the presence of one adult in that same room.

15. Does Airfree® provoke any change in room's the relative humidity?

No.

16. Does CADR measure the effectiveness of the Airfree®?

Not at all. CADR is not designed to test the Airfree® technology. The AHAM seal (usually found on the back of an air cleaner's box) lists three Clean Air Delivery Rate (CADR) numbers: one for tobacco smoke, one for pollen and one for dust. The CADR indicates volume of filtered air delivered by an air cleaner. The higher the tobacco smoke, pollen and dust numbers, the faster the unit filters the air. The main reason why CADR is not designed for Airfree® is because Airfree® does not filter but destroys microorganisms instead, CADR only applies to volume of filtered air delivered by an air cleaner as stated above. CADR does not measure microorganism reduction like mold and bacteria only detectable by a microbiology lab. Airfree® destroys (not trap or attract to other surface) any microorganism regardless of how small they might be. 99.99% of all organic particles are fully destroyed when passing through the Airfree® U.S. patented ceramic core.

17. How does Airfree® destroy dust mites?

Mold reduction in the environment causes reduction in the mold dependant dust mite population. Airfree® also destroys the harmful toxins and fungus freed by dust mite feces that trigger respiratory allergies.

18. How does Airfree® eliminate fungi?

As mentioned before, Airfree® eliminates airborne microorganisms included fungi and spores. By eliminating spores new colonies are unlikely to develop, representing less future airborne spores.

19. How does Airfree® destroy viruses?

Those microscopic microorganisms are easily eliminated inside Airfree's ceramic core capillaries. The temperature inside of Airfree's capillaries is much higher than required to destroy them. Airfree® is your greatest ally in respiratory disease prevention.

20. Does Airfree® reduce tobacco smell?

Yes, Airfree® reduces any kind of organic smell in the ambience including tobacco.

21. Does Airfree® release any gas or chemical product?

No. Airfree's sterilized process is natural. Please check our website for conclusive tests regarding particles and ozone.

22. Does Airfree® need filter replacement?

No.

23. Does Airfree® consume a lot of energy?

No. Airfree® Lotus' consumption is just 52 Watts.

24 - Does Airfree® Lotus' light interfere with Airfree® sterilizing function?

No. The light has an aesthetic effect may be relaxing or simply used as a night light in children or newborn bedrooms.

25 - Where do the microorganisms go after they are destroyed?

As all living organisms, microorganisms and their products are basically composed by carbon, oxygen and nitrogen. Since Airfree® reaches nearly 400 °F, all the components are supposed to suffer a combustion process, which liberates carbon dioxide (the same product released by our respiration) and water. Some carbon (or ashes) may remain in the process. If there is some residual allergen left, we might consider that they suffer denaturation, a process involving loss of conformation and function. It should be noted that we are talking about reactions that occur in a microscopic level, so all these processes or by-products won't be perceived. In this case, there is no need to worry about maintenance.

26 - How does chromotherapy work?*

The reaction to colors varies from individual to individual. The most common attributes of colors are believed to be:

Red - Color of joy, activity, warmth, fire, power, passion and strength. Red brings vitality to physical functions and reduces inertia, melancholy, sadness, depressions and lethargy.

Pink - Protective and nourishing color, warm and soft. It stimulates affection and feelings of love and compassion.

White - White reflects all other colors and represents peace, chastity, innocence, purity and truth.

Violet - Reflects dignity, nobility and self-respect. It helps normalize hormonal or glandular activities.

Dark Blue - A refreshing, relaxing and serene color. It helps cleansing your thoughts and feelings, producing clarity in your communication.

Blue - Creates a notion of space, serenity and peace. It produces a relaxing and tranquillizing effect.

Green - Its energy reflects participation, adaptability, generosity and cooperation. This color eases emotions, helps correct reasoning and amplifies consciousness and understanding.

Yellow - Relates to the sun shining light, joy and good mood reinforcing the nervous system and muscles, including the heart, helping circulation.

Orange - Dynamism. Relates to ardour and enthusiasm energizing the body and helping assimilation.

*Airfree® does not endorse the chromotherapy but simply offers consumers the option to choose light colors.

Warranty

This product is warranted by AIRFREE® PRODUCTS, to the original purchaser to be free from defects in material and workmanship under proper use for a period of two years from date of purchase. During this period, and upon proof of purchase and date of purchase, this product will be repaired or replaced with same or similar model without charges for parts or labor (except for a €10 charge for insurance and handling) at distributor address. To be eligible for the warranty, please register at www.airfree.com or complete your warranty card at the time of purchase and mail it to the distributor. To obtain warranty service, please send the product sales receipt or proof of Purchase, and a check or money order for €10 payable to the distributor. This warranty does not apply to a product that has been misused, abused, or altered without limiting the afore-mentioned, bending or dropping the unit, defects in the electrical installation or fluctuating power levels are presumed to be defects resulting from misuse or abuse.

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