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Instruction Manual

Instruction Manual

®

Airfree



Airfree babyair/E40/E60/E80/E125/P40/P60/P80/P125/P150/

Airfree babyair/E40/E60/E80/E125/P40/P60/P80/P125/P150/

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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.



Children should be supervised to ensure that they do not play with the appliance.



Before plugging in Airfree slightly shake it to check for any loose parts in its interior caused by unusual transportation event. If loose parts are noticed, please return the unit to the retailer.



Do not place your Airfree in direct contact with water and liquids which may pose electric shock hazard and damage to the unit itself.



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



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



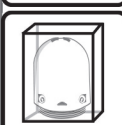
Airfree as any other electric equipment shall not be manipulated by children.



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 anti-stress light will start blinking if Airfree not in its vertical call, or if poor installed or with eventual malfunctioning.



In the event of a return for repair, make sure Airfree is well protected preferably inside its original box to avoid further damage. Airfree nearest dealer may be seen at www.airfree.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 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 drastically increase mould, 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 mould 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 mould 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.



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



Odours - Airfree can reduce some odours like “mildew smell” and other organic odours.



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.



Yatches, Cruisers - Airfree safely eliminates fungi spores, mould, mildew, dust mites, bacteria, and strange odours. Many of which contribute to many common problems to 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 mould 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 mould 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, rubeolla, 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 reduce school exposure to lawsuits, like with mould-affected diseases so may common throughout the USA.



Pollens - Pollens are no exception and like other microorganisms are totally destroyed when passing through Airfree patented sterilising 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 in 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, gaining working hours.



Restaurants - Airfree offers continuous air sterilisation. Silently, Airfree provides the additional protection that patrons expect. All viruses and bacteria that pass through Airfree's patented sterilising ceramic core are destroyed. Restaurants are recommended to submit their floor plans to insure 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 Mould

Guide for Airfree installation in mould 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 mould spore reduction.
- 3 - Clean mould 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 mould from an infected item or surface. Those surfaces must be cleaned manually.

Airfree will prevent spores released by existing mould 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 Anti-Stress Light

2- Side Shells

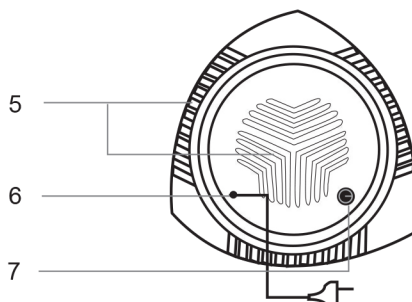
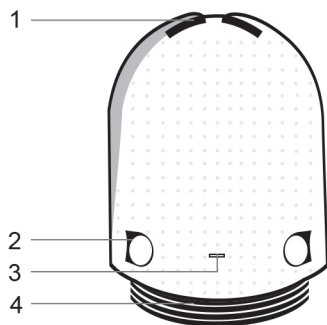
3- On/Off Led

4- Base

5- Air Inlets

6- Power Cord

7- Anti-Stress Light Dimmer



The Airfree's anti-stress light has an esthetic effect and may be relaxing. It is possible to adjust the light intensity using the dimmer at Airfree's base. The light does not intervene or has any relation with Airfree's patented sterilisation core functioning. (*) **Anti-stress lights not available in the Airfree E40/E60/E80/E125.**

Installing and Connecting



Plug power cord to the nearest outlet.

Make sure the surface is dry (never place Airfree on wet floor or immerge in water) Make sure side blue led is on. Switch on dimmer and the anti-stress light should glow from the top lid (1). After 10 minutes the top lid should be warm.



Place Airfree on the floor. Do not install it under furniture or shelves, behind curtains as it will reduce air flow and Airfree efficiency in reducing microorganisms.



Place each Airfree® in rooms up to 16m² for E40/P40 or 24m² for E60/P60 or 32m² for E80/P80 or 50m² for E125/P125 or 60m² for P150 or 22m² for babyair. 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 can only be used in rooms with minimum air volume of 330 cu. ft. (10 m³), 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.



Do not place Airfree in the corridor to try to reach the whole house. In this case Airfree will only reduce air pollution in the corridor area.

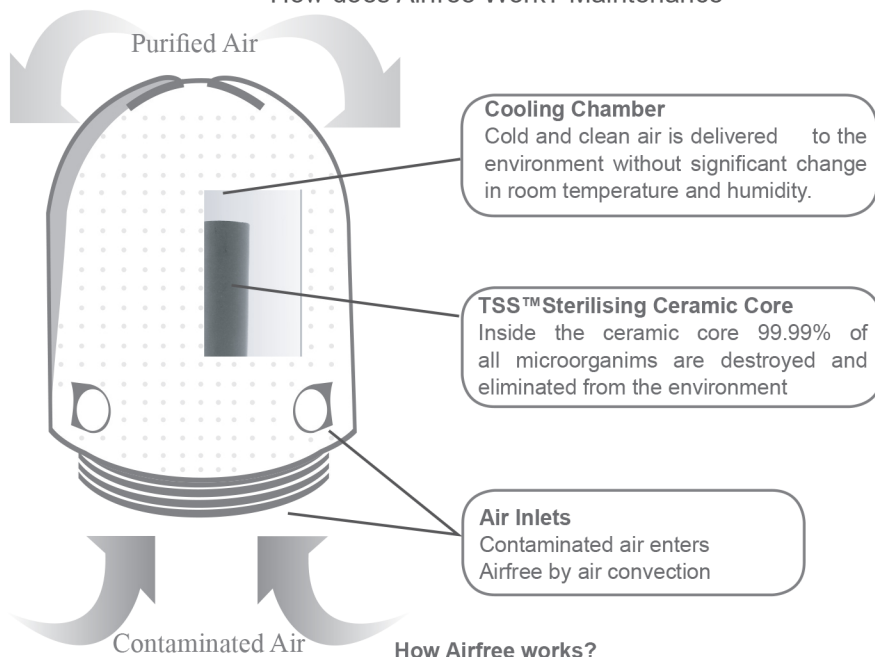


Airfree shall not be placed near doors or under windows to avoid sterilised air to exit the room.

Technical Characteristics

Model	Airfree® babyair	E40/P40	E60/P60	E80/P80	E125/P125	P150
Capacity	22m ²	16m ²	24m ²	32m ²	50m ²	60m ²
Electric Consumption	45W	40W	45W	48W	50W	52W
Voltage	220V - 240V	220V - 240V	220V - 240V	220V - 240V	220V - 240V	220V - 240V
Noise	Totally Silent	Totally Silent	Totally Silent	Totally Silent	Totally Silent	Totally Silent
Weight	1.09 Kg	1.09 Kg	1.09 Kg	1.09 Kg	1.27 Kg	1.48 Kg
Dimensions	height: 26.5cm diameter: 21.5cm	height: 26.5cm diameter: 21.5cm	height: 10.4cm diameter: 8.4cm	height: 10.4cm diameter: 8.4cm	height: 10.4cm diameter: 8.4cm	height: 10.4cm diameter: 8.4cm

How does Airfree Work? Maintenance



How Airfree works?

Contaminated air silently enters Airfree by air convection and is sterilised 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 sterilised 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 EFFICIENCY TESTS BY INDEPENDENT LABORATORIES, INSTITUTES AND UNIVERSITIES IN FOLLOWING COUNTRIES.

Laboratory	Local	Reduction of Microorganisms		
		Fungus	Bacteria	Dust Mite allergens DerP-1
Insect R&D Limited Cambridge, UK june, 2005	Laboratory			70,6% to 97,95%
SGS Natec Institute* Hamburg/Germany september to november, 2000	Laboratory Office	99%	99%	
Technical Micronics Control Huntsville/USA april 28 to may 14, 1998	Laboratory	93%	78%	
Univ. Complutense de Madrid Madrid/Spain october 21, 1997	Clinical Laboratory	69%	79%	
AINIA Valença Spain june 9 to august 22, 2003	Cold Chamber	86%		
INETI* Lisbon/Portugal january 13 to february 18, 1999	Torre do Tombo Portuguese National Archive	93%	94%	
INETI* Lisbon/Portugal may 7 to june 18, 1999	RTP Video Archive	74%	70%	
INETI* Lisbon/Portugal april 3 to may 5, 1998	Bank Branch	77%		
Univ. Nova of Lisbon june 5, 1998	Laboratory	90%	62%	
Campana Laboratory/ São Paulo/Brazil april 14 to april 29, 1999	Chemical Laboratory	99%	83%	
INETI* Lisbon/Portugal november 12 to december 10, 2004	Closed Environments	98%	87%	
INETI* Lisbon/Portugal march 19 to april 30, 2001	Hotel Rooms	92%	82%	

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

* Certified by ISO 17025

Frequently Asked Questions

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 by automatically shutting off the ceramic core when it has reached a temperature range to facilitate air convection (air in the room is drawn into the machine to destroy impurities, contaminants and odours). The ceramic core shuts down for a few minutes, the indicator light turns off, and the top lights emitting diode (L.E.D.) blinks. Airfree continues to sterilise the air during this time. This indicates the conservation of electric power consumption and the preservation of the ceramic core.

Cause 2: Another contributory factor to Airfree's blinking occurrence is the ambient air (air in the environment). When the ambient air reaches 35 °C, Airfree auto-regulates itself with the ceramic core "shut off" for a few minutes but still continues with its sterilising activity (the blinking of the top lights signals this occurrence). In this process energy is conserved and Airfree's safety mechanism is enhanced.

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, the blinking may be due to a faulty electrical outlet. Please plug it in into a proper outlet. If in the next 10 minutes the top lights continues blinking and your Airfree unit is correctly installed, this indicates that the device may be malfunctioning. Please promptly contact your dealer in such case. (*) **The Airfree® E40/E60/ E80/ E125 does not incorporate the Anti-stress lights.**

4. Is there any risk when the top light of Airfree is blinking?

No. When Airfree electronics detect any irregularity it automatically shuts off the TSS™ ceramic core
(*) **The Airfree® E40/E60/ E80/ E125 does not incorporate the Anti-stress lights.**

5. What is Airfree's air cleaning capacity?

E40/P40 was designed for rooms up to 16m². E60/P60 for rooms up to 24m². E80/P80 for rooms up to 32m². E125/P125 for rooms up to 50m². P150 for rooms up to 60m². Airfree babyair for rooms up to m².

6. Can I install Airfree in my walking closet ?

Yes, as long as it has at least 330cu.ft (10m³)*. Airfree should not be placed under shelves or its efficiency will be reduced.

* as reference 330cu.ft (10m³) is approximately 7'x7'

7. Can I use Airfree in air conditioned rooms?

Yes.

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

Check the top lid, if warm Airfree is working.

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

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

10. Can I place Airfree in a closed room?

Yes. Please remember such a room must have at least 330cu.ft (10m³)*. * **330cu.ft is approximately 7'x7'**

11. 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.

12. 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.

13. Should I turn off Airfree when I leave house?

No. Airfree must always be on.

14. 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.

15. 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 mould 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.

16. How does Airfree destroy dust mites?

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

17. 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.

18. 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.

19. Does Airfree reduce tobacco smell?

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

20. Does Airfree release any gas or chemical product?

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

21. Does Airfree heat up a room?

No. Airfree does not noticeable 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.

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

No.

23. Does Airfree need filter replacement?

No.

24. Does Airfree consume a lot of energy?

No. Airfree's consumption is just 40 Watts for E40/P40, 45 Watts for E60/P60/BabyAir, 48 Watts for E80/P80, 50 Watts for E125/P125 and 52 Watts for P150.

25 - Does Airfree anti-stress light interfere with Airfree sterilising function?

No. The anti-stress light has an esthetic effect may be relaxing or simply used as a night light in children or newborn bedrooms. According to chromo therapy the blue light has calming and relaxing effect.

26 - 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 200°C, 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.

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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