



The World's Leading Destratification & Air Purification Fan Manufacturer

Web: www.airius.co.uk

Tel: +44 (0) 1202 554200

**PURIFY SPACES,
NEUTRALISE VIRUSES,
ELIMINATE ODOURS,
SAVE MONEY**



Neutralises 99% Of
Pathogens, Mould,
Odours & VOCs &
Provides You With
Clean, Fresh,
Healthy Air



TRUST IN AIRIUS

**Formed in 2004, we
have revolutionised**
the air purification and
energy reduction
industry.



**Airius has helped
thousands of businesses,**
from SMEs to major blue
chip companies make real
improvements in air quality,
as well as a significant
reduction in energy usage.

Table of Contents

- 03. What Is The Airius PureAir Pearl?
Neutralise pathogens, VOCs, odours, improve
comfort and save money
- 03. How Does It Work?
BiPolar brush-style ionisation & airflow circulation
- 04. The PureAir Pearl Series
Cutting edge purification and infection control
- 04. Features & Benefits
All inclusive advantages of the PureAir Pearl Series
- 06. The Power of Ions
The same way Mother Nature Cleans our air
- 07. Independent BiPolar Ionisation Test Results
Accredited 3rd party research data
- 08. Technical Data
Fan model, motor and coverage data
- 09. The Airius Guarantee
120 day money back guarantee & 5 year warranty
- 09. Installation
Mounting instructions
- 10. Case Studies
Installations, trials & feedback
- 12. Contact Details
Email, telephone & address information



What is the PureAir Pearl?



The Airius PureAir Pearl Series is a proven highly efficient air purification and surface cleaning system designed to deliver high levels of pathogen, particle and odour elimination in all types of indoor environments.

Featuring the latest in Needlepoint BiPolar Ionisation technology from one of the world's leading manufacturers of indoor air quality systems - Plasma Air, the PureAir Pearl Series uses the power of ions to provide continuous round-the-clock sterilisation, neutralising up to 99.9% of all known pathogens, VOCs and odours, in both the air and on all surfaces.

The PureAir Pearl also provides all the features and benefits of the world's most popular destratification and airflow circulation fan, balancing temperatures, improving comfort, reducing heating and cooling costs and cutting carbon emissions.

How does it work?

The PureAir Pearl Series integrates advanced needlepoint brush-style bipolar ion generator technology into the Airius World leading Destratification Fan System, providing the most efficient way of distributing high concentrations of positive (+) and negative (-) ions into complete internal spaces.

The ions polarity attracts them to all particles within the space, causing the particles to cluster together and make them filterable. They also bond with and neutralise pathogens, VOCs and odours by eliminating hydrogen atoms, breaking them down into their basic, harmless and odourless compounds, such as O₂, CO₂, N₂ and H₂O.

The PureAir Pearl

The PureAir Pearl Series is the most recent addition to the Airius range of air and surface sterilisation fan systems.

Providing continuous round-the-clock protection, the PureAir Pearl Series uses cutting edge ionisation technology to radically improve indoor air quality (IAQ), inactivating over 99.9% of all known pathogens, germs, bacteria, gases, VOCs (Volatile Organic Compounds), mould and odours in any indoor space. It also optimises and improves the performance of existing air filtration systems by attracting even the smallest of particles together, making them large enough to be filterable.

This combination of industry leading BiPolar Ionisation purification technology with Airius' patented columnar laminar airflow circulation, means that the PureAir Pearl Series is able to circulate its natural cleaning ions throughout all types of internal spaces more effectively than any competing purification fan.

In addition, while the air is continuously being purified the space is also being thermally equalised (destratification). This results in significantly improved HVAC efficiency and occupant comfort levels, offering potential energy savings of up to 50% by balancing floor and ceiling temperatures.

4

Suspended ceiling
installation



Benefits

- Patented brush-style BiPolar ion generator
- 99.9% inactivation of all surface pathogens
- 99.9% inactivation of all airborne pathogens
- 99.9% reduction of mould & odours
- 99.9% reduction of gases, vapours & VOCs
- Makes sub-micron ($<0.3\mu\text{m}$) particles filterable, eliminating pet dander, pollen, dust etc.
- Non-UV system with no bulbs or parts to replace
- 120 day money back guarantee (UK only)
- Round-the-clock air and surface sterilisation
- Reduces outdoor air intake required by 75%
- Tested & certified technology (UL, FAA, Ozone)
- Cost effective IAQ & infection control solution
- Designed for all types of buildings
- Keeps HVAC coils clean without using UV
- Small, versatile, easy to install ductless units
- Self cleaning purification system
- 5 year warranty



Call Airius today to receive
a fully tailored quotation for your building.

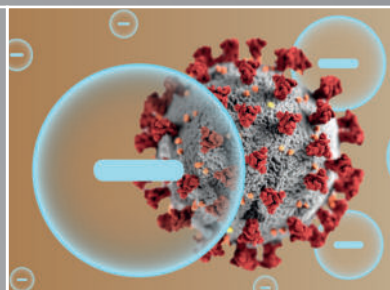
+44 (0)1202 554 200

Or email: info@airius.co.uk

All-inclusive features

CORONAVIRUS

In tests Plasma Air Ionisation technology showed a 99% reduction of MS2 Bacteriophage, a industry standard surrogate for SARS-CoV-2.



Tested & Certified

The PureAir Pearl's integrated Ion Generator from Plasma Air has been designed and tested to meet all applicable safety standards and are UL and ETL listed.



Ozone Free

Validated in third party testing as a zero Ozone emissions technology, achieving the highest UL 2998 certification standard.



Fresh Air Indoors

By improving the quality of your indoor air with the PureAir System, outdoor air intake levels can be reduced by up to 75%, saving you money.



Needle point carbon fibre strands emitting positive and negative ions, integrated within Airius' patented venturi nozzle.



Available to match any RAL colour code

The Power of Ions

Incorporating patented needlepoint brush-style bipolar ion generator technology, the PureAir Pearl Series purifies air in exactly the same way as Mother Nature.

Ions are all around us. They occur everywhere outdoors but are found in highest quantities in rural and countryside areas. They are created by the energy released from rushing water, waves and even sunlight and are one of the natural ways our planet cleans our air.

6

An ion is a molecule or atom that is positively or negatively charged, meaning it must gain or lose an electron to become neutral. This attracts ions to particles of an opposing charge and when they bond they cause a reaction, neutralising containments, eliminating odours and cleaning the environment around us.

When bonding with a pathogen such as a virus, ions react as Hydroxyl Radicals (OH), which removes the pathogen of a hydrogen atom. This disrupts the cell membrane, exposing and killing the pathogen inside. This process also neutralises VOCs and odours by breaking them down into their basic harmless compounds. When an ion bonds with other airborne particles such as dust and pollen, it shares its charge, attracting it to other particles. This causes a snowball effect that makes the particles large enough to be filterable or fall to the floor.

Ions have also been shown to have a positive effect on overall health and well-being, which is why being in the countryside, by a waterfall or the waves of the sea can be so relaxing and effective at relieving stress.

Tested & Certified

The Laboratories, Universities and Organisations below and in the table opposite are but a few of the certifying bodies to have tested Plasma Air BiPolar Ionisation Technology.



Plasma Air Independent Test Results

	Reduction	Time Period	Tested By
MS2 BACTERIOPHAGE (COVID19 Surrogate)	99.99%	10 minutes	Spanish Ministry of Defense
MRSA	99.99%	4 hours	Microbac Laboratories, Inc
PSEUDOMONAS AERUGINOSA	99.99%	1 hour	Istanbul Faculty of Medicine
STAPHYLOCOCCUS EPIDERMIDIS	99.94%	15 minutes	Novaerus Research and Development Labs
INFLUENZA A (H1N1)	99.90%	20 minutes	Airmid Health Group Ltd
CLOSTRIDIUM DIFFICILE	99.90%	40 minutes	Airmid Health Group Ltd
MEASLES (HPV3)	99.87%	30 minutes	Airmid Health Group Ltd
FORMALDEHYDE	99.68%	2 minutes	Aerosol Research & Engineering Laboratories
NITROGEN DIOXIDE	99.49%	8 minutes	Aerosol Research & Engineering Laboratories
E COLI	99.43%	2 hours	EMSL Analytical Inc
TOLUENE	99.00%	10 minutes	Camfil Laboratories
ASPERGILLUS NIGER	98.85%	6 hours	Aerosol Research & Engineering Laboratories
TVOC	98.60%	1 hour	LAWN Environmental Protection Ltd
CLADOSPORIUM CLADOSPOIODES	97.69%	2 hours	EMSL Analytical Inc
CANDIDA ALBICANS	97.69%	2 hours	EMSL Analytical Inc
MYCOBACTERIUM SMEGMATIS	97.00%	30 minutes	Airmid Health Group Ltd
AIRBORNE BACTERIA	95.30%	1 hour	LAWN Environmental Protection Ltd
PENICILLIUM	95.00%	-	Professor Joseph F. Boatman
STAPHYLOCOCCUS AUREUS	91.50%	1 hour	Istanbul Faculty of Medicine
ASPERGILLUS FUMIGATUS	91.10%	15 minutes	Intertek
DICHOBOTRYS ABUNDANS	90.00%	-	Professor Joseph F. Boatman
BACILLUS SUBTILIS VAR. NIGER	89.30%	1 hour	Istanbul Faculty of Medicine
PARTICULATE REDUCTION			
Size = PM ₁ : 1.0µm	99.00%	7 minutes	Camfil Laboratories
Size = PM _{2.5} : 2.5µm	99.00%	7 minutes	Camfil Laboratories
SMOKE PARTICULATE	96.30%	1 hour	LAWN Environmental Protection Ltd

Disclaimer: All the tests above were performed on Plasma Air BiPolar Ionisation technologies carried out by accredited 3rd party organisations, institutions and businesses. Multiple data points are used to formulate performance validation statements. Contact Airius for further details on any of these tests. Ionisation products are not medical devices and no medical claims are made.

CORONAVIRUS

Testing carried out by the Spanish Ministry of Defense using MS2 Bacteriophage, an industry standard surrogate for SARS-CoV-2 (COVID-19). Tests conducted in simulated ICU hospital rooms, located within a Madrid hotel converted into a residence and confinement centre for medical staff during the pandemic.

A reduction of approximately 2 log units of the bacteriophage was obtained in the air that was ionized by the Plasma Air system. This corresponds to a 99% reduction after exposure to ionisation.

It is important to note that no medical claims are made.

7

Additional Research Supporting BiPolar Ionisation Technologies

BiPolar Ionisation research has also been conducted by numerous parties throughout the world to measure the efficacy of BiPolar Ionisation, showing it to be highly effective in inactivating or reducing:

Disclaimer: The research shown in the table opposite supports the efficacy of BiPolar Ionisation, attained through collaborative research with organisations globally. Multiple data points are used to formulate performance validation statements. Contact Airius for further details on any of these tests. Ionisation products are not medical devices and no medical claims are made.

	Tested By
SERRATIA BACTERIUM	Harvard School of Public Health
ENTEROCOCCUS	Aachen University of Applied Sciences
STAPHYLOCOCCUS	Aachen University of Applied Sciences
SARCINA	Aachen University of Applied Sciences
MICROCOCCUS	Aachen University of Applied Sciences
BACILLUS SUBTILIS	Aachen University of Applied Sciences
PSEUDOMONAS	Medical School of Luebeck
ENTEROCOCCUS	Medical School of Luebeck
WHITE STAPHYLOCOCCUS	Shanghai Municipal Center for Disease Control
CANDIDA	Shanghai Municipal Center for Disease Control
CLADOSPORIUM	Ishikawa Health Service Association
ASPERGILLUS	Aachen University of Applied Sciences
PENICILLIUM	Aachen University of Applied Sciences
STACHYBOTRYS	Aachen University of Applied Sciences
ALTERNARIA	Aachen University of Applied Sciences
MUCOR	Aachen University of Applied Sciences
MITES	School of Advanced Sciences, Hiroshima University
POLLENS	School of Advanced Sciences, Hiroshima University
VOCs	Green Clean Air
Acetone	Green Clean Air
Chloromethane	Green Clean Air
Dichlorodifluoromethane	Green Clean Air
Ethyl Acetate	Green Clean Air
Heptane	Green Clean Air
Methylene Chloride	Green Clean Air
Methyl Ethyl Ketone	Green Clean Air
Tetrachloroethene	Green Clean Air
Toluene	Green Clean Air
Trichlorofluoromethane	Green Clean Air

Please Note: The use of PureAir Pearl or NeedlePoint BiPolar Ionisation technology is not intended to take the place of reasonable precautions to prevent the transmission of pathogens. It is important to comply with all applicable public health laws and guidelines issued by federal, state, and local governments and health authorities as well as official guidance published by the Centers for Disease Control and Prevention (CDC), including but not limited to social distancing, hand hygiene, cough etiquette, and the use of face masks.

Technical Data

Every Airius PureAir Pearl Series fan features a top of the range, highly reliable & energy efficient motor, independently tested by BSRIA, along with the latest in ion purification from Plasma Air.

Unit Dimensions & Weights

	Model S3	Model S2	Model S1
Range	PureAir Pearl	PureAir Pearl	PureAir Pearl
Ceiling Heights ¹	2.5m - 3.5m	3.5m - 4.5m	4m - 5.5m
Nozzle Heights ¹	2m - 3m	3m - 4m	3.5m - 5m
Dia. Coverage ¹	Up to 10.5m	Up to 12.5m	Up to 14.5m
Floor Area ¹	Up to 86m ²	Up to 122m ²	Up to 165m ²
Volts ²	230	230	230
Watts ²	13	16	32
RPM ²	980	1230	1450
CFM ²	317	404	457
m ³ /hr ¹	540	690	780
AMPS ²	0.06	0.06	0.14
Operating Temp ²	-20°C - 70°C	-20°C - 70°C	-20°C - 70°C
Thermal Shut Off ¹	110°C	110°C	110°C
Reset Temp ¹	90°C	90°C	90°C
Noise Level ²	0 - 21dB(A)	0 - 21dB(A)	0 - 21dB(A)
Height (Inc Handle)	330mm	330mm	330mm
Height	229mm	229mm	229mm
Diameter	286mm	286mm	286mm
Weight	3.0 KG	3.0 KG	3.0 KG

Data above is calculated at 50Hz.

¹Motor data provided by motor manufacturer and is subject to change at any time.

²Noise Levels recorded at floor level from units installed at maximum ceiling height. Accurate as of January 2021. Each facility has unique fluid dynamics, please contact supplier to specify your system.



Series warranty

All Airius PureAir Pearl Series fans come with a full 5 year Warranty. Simply return defective units to Airius, carriage paid and upon receipt Airius will dispatch a new unit by return carriage fully paid.

To avoid refurbishment and cleaning charges, all units returned must adhere to the returns criteria.

For further details email info@airius.co.uk or call on +44 (0) 1202 554200.



Installation

9

Typically, Airius PureAir fans are installed in the ceiling with the nozzle pointing downwards directly above an open floor area.

PureAir units are easy to install using simple hooks and chains/cables; an installation guide is available.



Case Studies

Plasma Air's BiPolar Ionisation Technology has been installed throughout a wide range of industries, including Offices, Gyms, Hotels, Schools, Casinos and Greenhouse Facilities.

The Twelve Hotel



Named Ireland's 'Hotel of the Year', The Twelve Hotel is a luxury boutique hotel that wanted to extend its high standards of service to include indoor air purification. This would provide guests who may have breathing challenges, chemical or pet sensitivities, or simply a concern for their health with fresh, clean, healthy air. As a popular pet friendly hotel, the client also wanted to control and reduce the level of pet odours.

Following installation of the same BiPolar Ionisation technology from Plasma Air that is integrated within the PureAir Pearl Series, The Twelve Hotel were extremely impressed with the results.

- Safe, clean air for guests throughout
- Reinforces a brand of high standards
- Pet odours eliminated
- Rapidly eliminates VOCs
- Prevents mould issues in Pool area
- Improves conditions for staff during cleaning activities



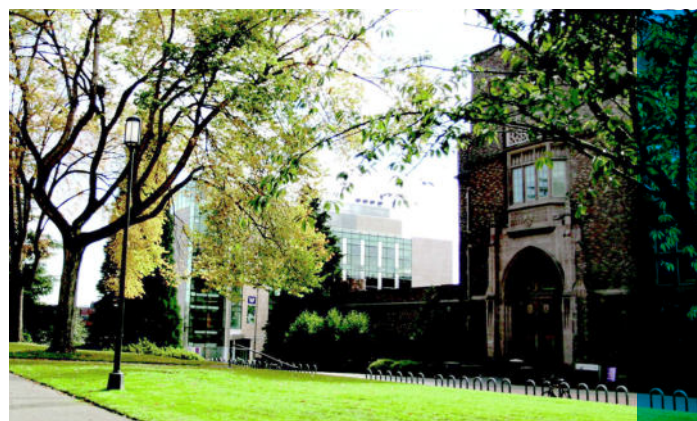
University Biology Lab

Louisiana
University

A university in Louisiana needed to address odour issues from chemicals and compounds in their biology lab built in the 1950s, which were impacting students concentration levels.

The University upgraded the Lab's HVAC system but this did not resolve the issue. Instead the University turned to Plasma Air and their Ionisation purification systems.

- Problem odours significantly reduced
- Improved student concentration levels
- Removed harmful toxins from the air
- Cleared lab of any unwanted particles
- Minimal maintenance required





Meadowbrook Elementary

Specifically developed to provide students with a superior learning environment, Meadowbrook Elementary School has become a leading example of sustainable building design, with Indoor Air Quality as one of its key objectives.

The same BiPolar Ionisation technology from Plasma Air as featured in the PureAir Pearl was specified early in the design process.



By combining this with the latest ASHRAE Standard 62.1 outside air intake was reduced by over 50%, resulting in a significant reduction in capital costs and equipment.

- 50%+ reduction in outside air intake
- Reduction in HVAC equipment required
- Minimises HVAC installation costs
- Ongoing running costs minimised
- Low maintenance
- Maintains effective learning environment



Virtua Weight Loss Centre



Nonprofit healthcare provider Virtua needed to upgrade an inadequate outside air intake system in their newly renovated Centre for Weight Loss.

The building was dated and fitted with a residential HVAC system, but upgrade options were limited due to a lack of space.

To overcome this they specified a VRF (Variable Refrigerant Flow) system with Plasma Air BiPolar Ionisation, which reduced the level of outside air intake required and therefore reduced the demand from the VRF system to achievable levels.

- Boosted performance of VRF system
- Suitable for environments with limited installation space

- Reduced outside air requirement
- Significant reduction in energy costs
- Lowers carbon emissions
- Avoided expensive alternative solutions



Soulshine Cannabis

Soulshine Cannabis wanted to improve efficiencies and save money by recycling moisture run off, however HVAC units were contaminating the water with excess mould growth and resulting in high HVAC cleaning costs.



Following installation of BiPolar Ionisation from Plasma Air, Soulshine were able to virtually eliminate mould from the air handlers and reduce HVAC cleaning costs by 50%.

- Saving of 900+ litres by recycling run off
- \$6,000 annual saving in air handler cleaning
- Virtually eliminated HVAC mould growth
- Improved plant quality with virtually no bacteria, mould or yeast



Airius Europe, Middle East & Asia

Airius Europe Ltd
Holwell Farm, Cranborne
Dorset
BH21 5QP, UK
Tel - +44 (0) 1202 554200
Fax - +44 (0) 1202 554396
Email - info@airius.co.uk
Web - www.airius.co.uk

Airius Americas

811 South Sherman Street
Longmont
Colorado
80501 USA
Tel - (00) 1 888 247 7327
Email - Info@airiusfans.com
Web - www.airiusfans.com

Airius Oceania & S.E. Asia

P.O. Box 1812
Byron Bay
NSW
2481 AUSTRALIA
Tel - +61 (2) 6608 2736
Email - info@airius.com.au
Web - www.airius.com.au

USA and foreign Patents granted to AIRIUS LLC, USA, further patents pending. AIRIUS & AIRIUS SYSTEMS is the copyright property of AIRIUS LLC, USA. All material issued by, or emanating from, Airius Europe Ltd is the Copyright property of Airius Europe Ltd, UK.

