SES SANITATION SINCERING SYSTEMS

PURIFIED AIR, INFECTION CONTROL, STOP ODOURS, SAVE MONEY

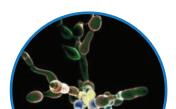
PUREAIR series

Kill 99% Of Germs, Bacteria, Viruses, Reduce Odours, Mould, VOCs & Have Fresh, Clean & Healthy Air

Tel: 0131 210 0340 Web: www.sanitationengineeringsystems.co.uk











Already installed in,

thousands of businesses nationwide...

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What is the Airius PureAir?

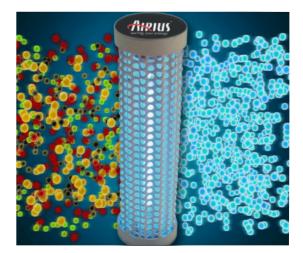
he PureAir Series is an air purification and airflow circulation fan system, incorporating the latest in PHI (Photohydroionization) Cell technology to efficiently and effectively neutralise up to 99% of all harmful germs, bacteria, viruses, mould and other contaminants in any internal environment.

The PHI Cell emits 'lonised Hydroperoxides', a naturally occurring cleaning agent, which are circulated throughout spaces via the fan. As the fans continue to circulate internal atmosphere, the PHI circulates its neutralising lonised Hydroperoxides, providing 24/7 continuous Air Purification.

The PureAir 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 reducing carbon emissions.



How does it work?



The PureAir Series incorporates a patented PHI (Photohydroionization) Cell within the fan unit, which projects a broad spectrum HE/UV light on to a quad metallic catalyst target in a moist atmosphere. This process causes a unique oxidation reaction that produces friendly oxidisers called 'Ionised Hydroperoxides'.

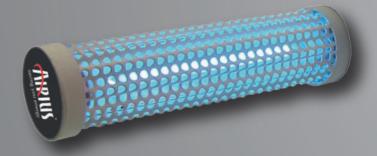
Hydroperoxides are known as 'Mother Nature's Cleaning Agent' and are what make the air smell clean after a Thunderstorm.

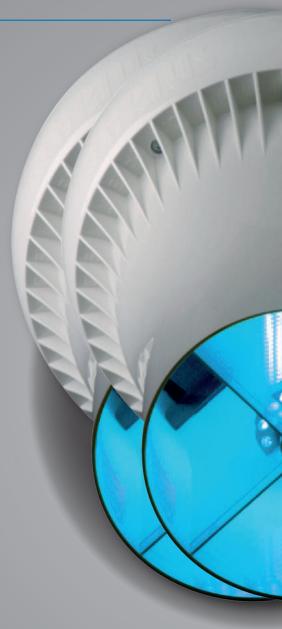
PureAir Series

he PureAir air purification and infection control system significantly improves indoor air quality (IAQ) reducing viruses, bacteria, gases, VOCs (Volatile Organic Compounds), mould and odours by up to 99.99% whilst its advanced atmosphere oxidisation technology gives indoor environments fresh, clean and odour free air.

This makes it the perfect low cost solution for hospitals, care homes, doctors & dentist surgeries, children's nurseries and food preparation facilities etc. in maintaining a clean, healthy and odour free environment.

In addition, while the air is continuously being purified the space is also being thermally equalised (destratification). This results in improved comfort through the elimination of hot and cold spots and the potential for a significant reduction in energy consumption by balancing the floor and ceiling temperatures.





Benefits

- Continuous air purification
- Kills over 99% surface bacteria & viruses
- Kills over 97% airborne bacteria & viruses
- Reduces odours by over 99%
- Reduces mould by over 98%
- Reduces gases, vapours & VOCs by over 80%
- Clean & healthy care environment
- 99% of microbes in sneeze killed within 3 feet
- 120 day money back guarantee (UK only)

- Reduces staff absenteeism
- Reduces Sick Building Syndrome
- Advanced oxidisation technology
- Simple to install with no ducting required
- Small, versatile, unobtrusive units
- Established and proven technology
- Cost effective Indoor Air Quality solution
- No maintenance required
- 5 year Fan & 2 year PHI cell warranty

Call SES today to receive a fully tailored quotation for your building. 0131 210 0340

All-inclusive features

Advanced Oxidisation

The PureAir uses a safe yet aggressive oxidisation process to break down harmful containments, leaving only Oxygen & Hydrogen remaining.



Tested & Certified

Certified by Universities & Laboratories as well as the Chinese Government, who have approved PureAir Technology for SARS protection in all subways & government buildings.



Cleans Air & Surfaces

The PureAir Series not only provides airborne protection, but also eliminates over 99% of all surface germs, bacteria & viruses.



Improved Comfort

As well as cleaning air & surfaces the PureAir circulates airflow and balances temperatures to save up to 50% on HVAC costs.

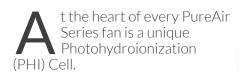




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PureAir PHI Cell

The PureAir PHI Cell[™] is the latest advancement in Photohydroionization[™] Technology, using an Advanced Oxidisation Process to clean air and eliminate odours.



The PureAir PHI Cell is proprietary broad spectrum, high efficiency UV bulb, which works with a hydrated quad-metallic target.

UV Light is projected onto the hydrated target, which acts as a catalyst for a reaction with water vapour (a hydroxyl radical reaction of the broad spectrum). This results in the production of hydroperoxides, super oxide ions, passive negative ions, hydroxides and ozonide ions.

These safe and naturally occurring ions and oxides are circulated throughout spaces via the fan, which then bond with germs, bacteria and viruses, reacting with an advanced oxidisation process that breaks them down, rendering them inert, safe and odour free. In addition to biological pollutants they also neutralize chemicals such as mercury, benzene, formaldehyde, chloroform, and ammonia.

Tested & Certified



The Laboratories, Universities and Organisations above are but a few of the certifying bodies to have tested the PureAir PHI Technology.

These, in addition to all the Testing Organisations named in the table opposite, have had their results reviewed and verified by the United States Government.

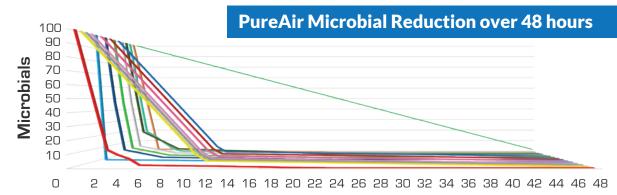
Reviewed and Concurred by:

James a Start James A. Hart, P.E. Chemical Engineer Ohio License No.58285

Sharon B. Rinehimer Attorney, FL and NJ Bar Florida Bar No. 354872

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PureAir Independent Test Results



Hours

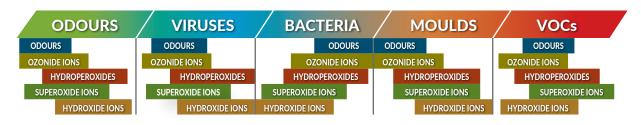
	Reduction	Time Period	Tested By	
MRSA	99%+	24 Hours	Kansas State University	
NORWALK VIRUS	99%+	24 Hours	Midwest Research Institute	
BIRD & SWINE FLU	99%+	24 Hours	Kansas State University	
SARS	99%+	24 Hours	Kansas State University	
PSEUDOMONAS SP.	99%+	24 Hours	Kansas State University	
BACILLUS SPP.	99%+	24 Hours	Kansas State University	
CANDIDA ALBICANS	99%+	48 Hours	Kansas State University	
E. COLI	99%+	48 Hours	Kansas State University	
STREPTOCOCCUS PNEUMONIAE	99%+	48 Hours	Kansas State University	
STAPHYLOCOCCUS AUREUS	99%+	48 Hours	Kansas State University	
BACILLIUS GLOBIGII	99%+	48 Hours	Kansas State University	
STACHYBOTRYS CHARTARUM	99%+	24 Hours	Kansas State University	
LISTERIA	99%+	24 Hours	NEI-Chinese Government	
STREPTOCOCCUS SP.	96%+	48 Hours	Kansas State University, Steris Labs, KAG, Eco Labs	
OZONE / EMF	-	-	FSIS, UL, ETL, TUV, CSA, ISSES, Disney	
ODOURS	-	-	C&W Engineering	
Pet Odours	72%+	24 Hours		
Perfume Odours	63%+	24 Hours		
Cleaning Chemicals	55%+	24 Hours		
SMOKE	-	-	C&W Engineering	
Odour	70%+	24 Hours		
Particulates	25%+	24 Hours		
CHEMICAL COMPOUNDS	-	-	NELAP Accredited Independent Lab	
Methyl Mercaptan	100%	24 Hours		
Butyl Acetate	100%	24 Hours		
Methyl Metharcyline	100%	24 Hours		
Hydrogen Sulfide	80%+	24 Hours		
Carbon Disulfide	30%+	24 Hours		
VOCs	-	-		
D-limonene	98%+	24 Hours	NELAP Accredited Independent Lab	
Toluene	29%+	24 Hours		
Methyl Ethyl Ketone	13%+	24 Hours		
MOULD	-	-	California Microbiology Center, Independent Accredited Lab - IBR, Kansas State University, University of Florida, United Stares Air Force, R&D Labs, C&W Engineering, University of Cincinnati, Kane Regional Hospital	
Bacteria	99%+	48 Hours		
Mould	97-98%+	48 Hours		
Yeast	90%+	48 Hours		

CORONAVIRUS

We are evaluating testing on the Wuhan Coronavirus (COVID-19) with partners in both the U.S. and China. However, we have validated test results showing 99+% reductions on similar 'enveloped' or protein jacketed virus types.

This has been reviewed by Associate Director of the National Agriculture Biosecurity Center and past Distinguished Professor of Meat Science - Dr. James Marsden of Kansas State University, who supports that the evidence suggests "there is every reason to believe PureAir PHI Technology would also be effective in reduction of COVID-19". It is important to note that no medical claims are made.

PureAir PHI Organic Kill Spectrum



Technical Data

Every PureAir Series fan features a top of the range, highly reliable & energy efficient motor, independently tested by BSRIA, along with a top of the range RGF Photohydroionization Cell.

Unit Dimensions & Weights

TECH SPECS	Model 10	Model 15	Model 25	Model 45
Range	PureAir	PureAir	PureAir	PureAir
Ceiling Heights ¹	2.5m - 4m	4m - 6m	6m - 8m	8m - 12m
Nozzle Heights ¹	2m - 3.5m	3.5m - 5.5m	6m - 7m	7.5m - 11m
Dia. Coverage ¹	8m - 10m	9m - 11m	11m - 13m	11m - 13m
Floor Area ¹	48m² - 72m²	60m² - 90m²	89m² - 133m²	89m² - 133m²
Volts ²	230	230	230	230
Watts ²	21-22	24-25	40-41	52
RPM ²	980	1230	1450	1450
CFM ²	318	406	459	595
m³/hr¹	540	690	780	1010
AMPS ²	0.06	0.06	0.14	0.19
IP Rating	IP55	IP55	IP55	IP44
Operating Temp ²	-20°C - 70°C	-20°C - 70°C	-20°C - 70°C	-25°C - 70°C
Thermal Shut Off ¹	110°C	110°C	110°C	135°C
Reset Temp ¹	90°C	90°C	90°C	125°C
Noise Level ²	0 - 21dB(A)	0 - 21dB(A)	0 - 31dB(A)	0 - 35dB(A)
Height (Inc Handle)	444mm	546mm	546mm	605mm
Height	311mm	413mm	413mm	455mm
Diameter	325mm	325mm	325mm	375mm
Weight	3.2 KG	4.1 KG	4.1 KG	6.3 KG
Shipping Height	370mm	450mm	450mm	490mm
Shipping Width	380mm	340mm	340mm	370mm
Shipping Length	380mm	340mm	340mm	370mm
Shipping Weight	6 KG	6 KG	6 KG	9 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 February 2020. Each facility has unique fluid dynamics, please contact supplier to specify your system.

Series warranty

All PureAir Series fans come with a 5 year Fan Replacement Warranty, a well as a 2 year PHI Cell Replacement Warranty. Simply return defective units, carriage paid and upon receipt we 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 call on:

0131 210 0340.



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PUREAIR PHI CELL	Max Purification Coverage ²	Estimated Run Time	Housing	
5" (127mm) Cell ¹	271.8m³	25,000 Hours	UV bulb, encased in a protective poly tube, encased in a metal cell	
9" (228mm) Cell ¹	1,472.5m³	25,000 Hours		

¹Data provided by cell manufacturer and is subject to change at any time. ²Units must be used in conjunction with additional airflow circulation fans to achieve Maximum Purification Coverage.



Installation

Typically, PureAir fans are installed in the ceiling space with the nozzle directed directly downwards and performs best when the air column is unimpeded to the floor.

Units must be hung using fixings such as hooks, chains, cables etc to professionally installed hardware capable of supporting a minimum of five times the weight of the unit.



Case Studies

 Airius PureAir PHI Cell Technology has been installed throughout a wide range of industries, including Hospitals,
 Schools, Care Homes, Offices and Manufacturing Facilities.

Sunrise Senior Living



Eden Gardens is a Sunrise Senior Living Community specializing in Alzheimer's patients. They were struggling to maintain a fresh and healthy environment in their assisted living facilities. In particular, their Alzheimer's unit was losing an average of 3 residents per month due to dissatisfaction over air quality or illness, such as pneumonia. This represented a £60,500 loss, or more than 100% annual turnover in residents each year.

Eden Gardens were delighted with the results following installation of the PureAir system into their Assisted Living facilities and recorded:

- O deaths due to communicable diseases
- O cases of pneumonia
- £60,500 increase in revenue
- £8,700 saved in avoided refurbishment costs
- £3,300 saved on chemical air fresheners
- Reduction in staff illness
- Increased waiting list







Tarara Winery needed to find a solution that would help reduce mould and VOC's, as well as provide airflow circulation and temperature equalisation throughout the winemaking facilities on their 475 acre vineyard. Their main goal was air purification in their winemaking cave.

The client was extremely pleased with the results following installation and found:

- Complete & thorough airflow circulation
- Immediate improvement in indoor air quality
- Mould reduced by 92% within 3 weeks
- All perceived VOC's eliminated in 2 weeks
- Notable improvement in product quality and reduction in spoilage due to airborne organisms and VOC's
- Significant reduction in HVAC costs.



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Colleton Medical Center

Colleton Medical Center is an HCA Health Care Facility ranked in the top 15% Hospitals for quality care. They installed PureAir PHI Cell technology and monitored the effectiveness on airborne and surface transmitted diseases, such as MRSA, over a 2 year period. The Hospital was extremely pleased with the results and now recommend PureAir PHI Technology as a key strategy to pathogen intervention.



Upon completion of the 2 year study, Colleton Medical Center found and confirmed (With Kansas State University Testing):

- Number of MRSA related infections reduced by 23% & 39% over the 2 year period
- MRSA, Norwalk Virus, Strep, Listeria,
- Candidia all reduced by 99%Deactivates 99% of microbes in a human
- sneeze before it travels 3 feet

Tandara Lodge Care

Tandara Lodge Community Care is a residential aged care facility that also provides a wide range of health care services within the local community. Their objective was to save energy on heating and cooling costs, as well as to clean the air and installed SES units throughout their whole facility, 20 of which were PureAir Series units.

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In the 5 years that followed installation Tandara Lodge have not had a single notifiable outbreak, which is a significant achievement in the Aged Care Industry. They also benefited from:

- O notifiable outbreaks in 5 years
- £1,000's saved on containment and clean-up
- Reduced sickness from seasonal disease

KANSAS CITY Wyandotte County Health

This Case Study was carried out in a Wyandotte County Healthcare Building using PureAir PHI Technology 12 hours a day, 7 days a week, for 30 days. Units were installed in their Paediatric and Prenatal Clinics to help reduce organisms, including mould, MRSA, Staphylococcus Aureus and Pseudomonas

found in the air and on surfaces.

Both Clinics experienced excellent results:

- 90+% reduction in mould, MRSA, Staphylococcus Aureus and Pseudomonas
- Provided an air purification solution and data which has influenced best practices for Building Engineers, Infection Control and Occupational Health Care Professionals



Fandara Lodge

- Reduced staff sickness and absences
- Reduced energy costs due to
 thermal destratification





In partnership with



Sanitation Engineering Systems Ltd

Innovative House 2 Boyd Street Falkirk FK27BL

Tel: 0131 210 0340 Web: www.sanitationengineeringsystems.co.uk V 3.1 SES