

STERIL-AIRE®

*World Leaders for
Airport UVC*



Brochure for International use only.

How Steril-Aire Benefits Airports

INTERIOR ENVIRONMENT

Improved IAQ

- Air from AC System up to 99% free of microorganisms *
- Reduction in staff sickness**
- Reduction in staff absenteeism**
- Reduction in distribution of passenger airborne infections ***
- Partial pandemic protection of passengers***
- Reduction in VOCs & odours*
- Surface decontamination



DE Fixture and UVC Emitter®



SE Fixture and UVC Emitter®

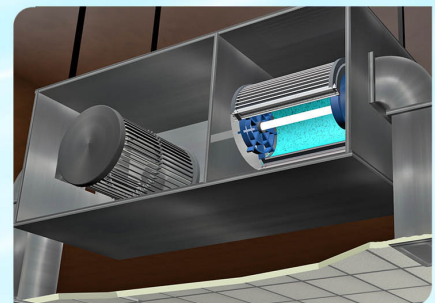
FACILITIES *****

Automatic coil cleaning

- Reduced AC maintenance
- Reduction of maintenance labour & chemical costs
- AC energy saving (10-20%)
- Reduction in carbon footprint
- Reduction in air-register & ceiling tile cleaning
- Coil Condensate Recovery/Recycling

Extension of equipment life:

- Coil
- Chiller



Steril-Zone Ceiling Mounted Unit

* Subject to UVC Dosage applied

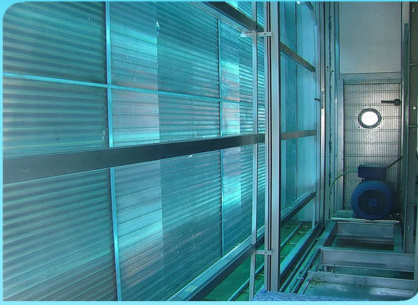
** See Case Study: McGill University, Montreal, Canada

*** ASHRAE Airborne Infectious Diseases Position Document

*** Use of Steril-Aire UVC at Tan Tock Seng Hospital at height of SARS pandemic (2003)

**** See Case studies at www.steril-aire.com

Airport Use of Steril-Aire UVC



HVAC system

- AHUs
- Fan-coils
- Splits
- Wall Package Units
- Unit Ventilators
- Heat Wheels
- Refrigeration
- Forced Air Systems
- Humidifiers

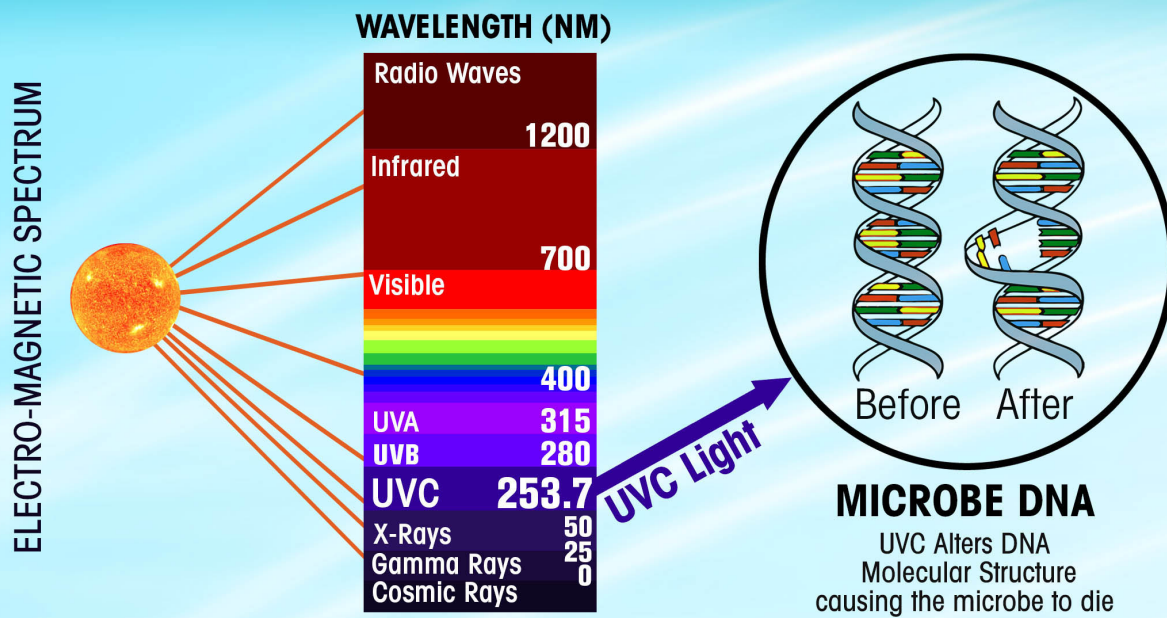
Locations

- Check-in Area
- Security Area
- Retail & Restaurants
- Boarding Lounge
- VIP Lounges
- Air-bridge
- Terminal Monorails
- Restrooms
- Elevators
- Air Curtains
- Immigration & Customs
- Isolation Rooms
- Baggage Claim
- Offices & Staff Areas
- Cooling Towers

In Room

- Steril-Zone
- Ceiling Mounted
(Only for use when room is unoccupied)

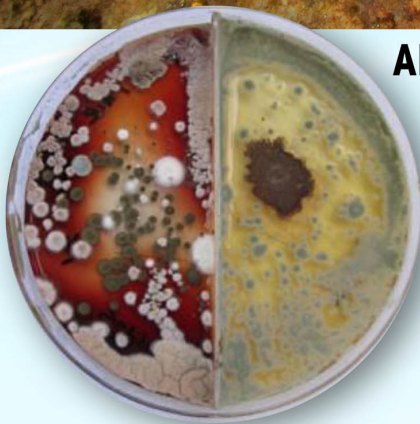
The Science of Steril-Aire UVC



Air-Conditioning Cooling Coil



AIR BIO-TEST



Before Steril-Aire

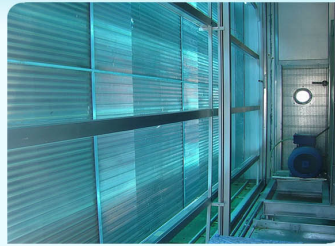


After Steril-Aire

Steril-Aire UVC Products

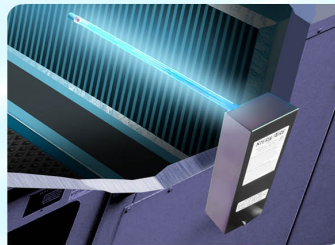
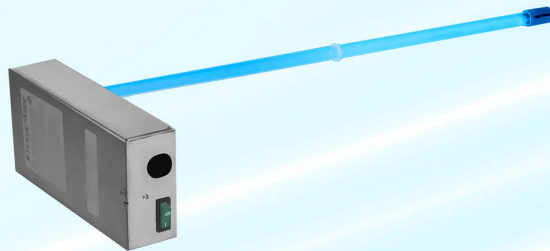
Full catalogue at www.steril-aire.com

DE SERIES UVC EMITTER[®]



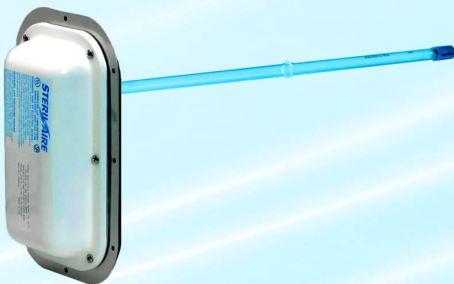
- For use in medium to large AHUs.
- Double-ended Emitters are mounted internally and fitted end-to-end to fit any size coil.
- Available in: 18", 24", 30", 36", 42", 62" inch lengths (46, 61, 76, 91, 107, 157 cm lengths).
- Universal power-supply: 110 to 277V - 50/60 Hz

SE SERIES UVC EMITTER[®]



- For fan-coils, heat-pumps, unit ventilators, packaged AHUs, terminal units, and ducts.
- Mounted on exterior of AHU. Tube installed through a one-inch hole (2.54 cm) drilled through the AHU casing.
- Available in 12", 16", 20", 24", 30", 36", 42" inch lengths (30, 41, 51, 61, 91, 107 cm lengths).
- Universal power-supply: 110 to 277V- 50/60 Hz
- Also available as an internally mounted kit with 12" to 61" (30 to 155 cm) SE Emitter tubes.

SEN SERIES UVC EMITTER[®]



- For exteriors including roof-top units, AHUs, heat-pumps, fan-coils, terminal units, and ducts.
- NEMA 4 rated.
- Mounted on exterior of AHU. Tube installed through a one-inch hole (2.54 cm) drilled through the AHU casing.
- Available in 12", 16", 20", 24", 30", 36", 42", inch lengths (30, 41, 51, 61, 91, 107 cm lengths).
- Universal power-supply: 110 to 277V- 50/60 Hz

Validation Multiple Airports Around the World

Case Studies (www.steril-aire.com)

Auckland Airport, New Zealand:

- 2,480,000 kWh AC Energy saving
- \$ 272,000 Annual Savings
- 99% reduction in mould and bacteria colonies
- Return on investment in under 18 months



Cagliari Airport, Sardinia, Italy:

Official letter confirmed:

*"perfect cleaning of coils, improved airflow,
heat transfer and energy savings"*

- Los Angeles World Airport (LAX), USA
- Florida Airport, USA
- Phoenix Airport, USA
- Honolulu Airport, USA
- Los Cabos Airport, Mexico
- Tocumen Airport, Panama
- Guarulhos Airport, Brazil
- Bridgetown Grantley Adam Airport, Barbados
- Townsville Airport, Australia



Industry UVC Acknowledgement: ASHRAE

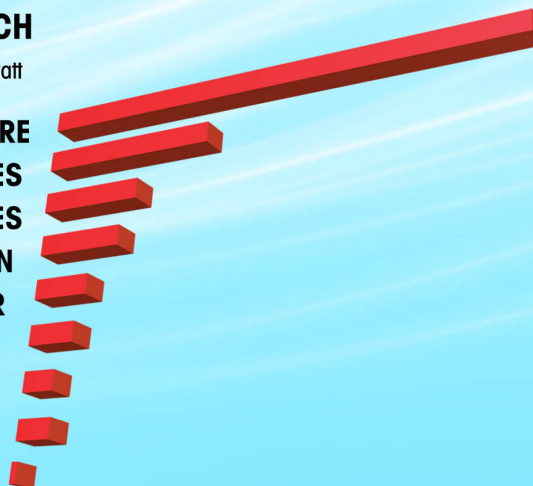
- Director's Letter June 24th 2009
- Chapter 17 - 2012 ASHRAE Handbook (HVAC Systems and Equipment)
- Chapter 60 - 2011 ASHRAE Handbook (HVAC Applications)

USA HOMELAND SECURITY RESEARCH

Dose $\mu\text{W}\cdot\text{sec}/\text{cm}^2$ per watt



STERIL-AIRE
SANUVOX TECHNOLOGIES
ULTRAVIOLET DEVICES
NOVATRON
LUMALIER
DUST FREE
ATLANTIC UV
AMERICAN UV
ABRACAIR LLC



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