



## AIR DISINFECTION AND SURFACE MICROBIAL CONTROL OF CRITICAL AIR SYSTEMS IN HOSPITAL, FOODTECH AND PHARMACEUTICAL FACILITIES

Where air disinfection and microbial control are paramount...  
Only with UV Solutionz High Intensity 'HE' & 'EE' Series UVC Lamps  
can you be assured of pure indoor air quality.

### CRITICAL AIR AHU MICROBIAL TESTING



Agar plate sample showing mould growth from Cooling Coil



Agar plate sample from Cooling Coil after UVC



Agar plate sample showing bacterial growth from Cooling Coil



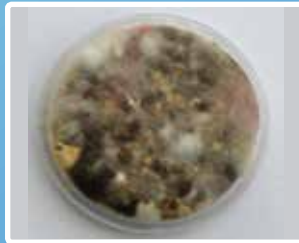
Agar plate sample from Cooling Coil after UVC



Agar plate air sample showing bacterial growth



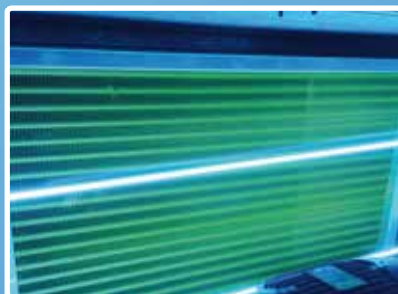
Agar plate air sample after UVC



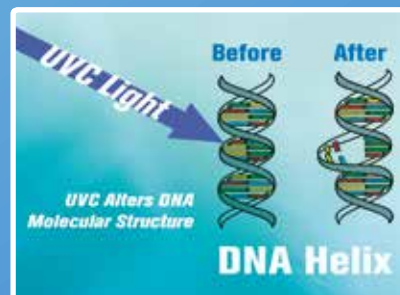
Agar plate sample from duct surface 10 metres downstream of AHU



Agar plate sample showing microbial reduction through starvation effects of UVC implementation



'HE' Series UVC Lamps cantilevered across AHU cooling coil in critical hygiene area.



High intensity UVC light alters the molecular bonds of affected microorganisms, preventing them from replicating and therefore destroying them.

#### NEW ZEALAND BUILDING CODE: CLAUSE G4 VENTILATION

G4.3.2 Mechanical air-handling systems shall be constructed and maintained in a manner that prevents harmful bacteria, pathogens and allergens from multiplying within them.

Only UV Solutionz High Energy UVC technology installed to our specifications can effectively and continuously meet these code requirements!

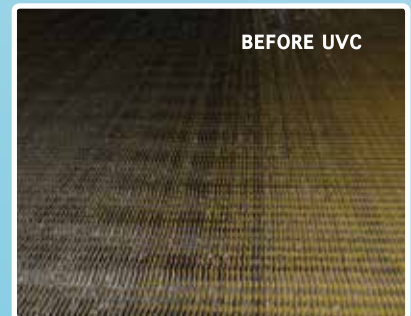


## INCREASE HVAC ENERGY EFFICIENCY, REDUCE OPERATING COSTS AND IMPROVE IAQ IN COMMERCIAL/INDUSTRIAL BUILDINGS

Leading NZ companies and government organisations are discovering the multiple benefits provided through the integration of UV Solutionz High Intensity 'HE' Series UVC Lamps to their existing and new HVAC systems.

### UV SOLUTIONZ 'HE' SERIES UVC BENEFITS INCLUDE:

- HVAC optimization leading to significant energy reductions in existing systems.
- Reduction in OPEX costs; electricity, coil and duct cleaning.
- Typical Return on Investment achieved within the 2½ years (or sooner) through energy and maintenance savings.
- Carbon footprint reduction.
- Improved 'Indoor Air Quality' leading to a healthier indoor environment.
- Efficient microbial and odour control in supplied air.
- A reduction in absenteeism created by staff sickness.
- Easily retrofitted to any existing HVAC system.



Air Conditioning systems (Evaporators, Air Handling Units and Fan Coil Units) are an ideal environment for the prolific growth of mould and bacteria that will, over time, cause a Biofilm build up on cooling coil surfaces; insulating the metal fins, affecting heat transfer and allowing any airborne particulates to adhere to the coil, causing fouling of the coil spaces and the restriction of airflow. This Biofilm also acts as an incubator for biological contaminants that are continuously released into the building's supply airstream, affecting occupant health and productivity.

A correctly engineered and installed high energy UVC system from UV Solutionz will affectively eradicate all airborne pathogens while also removing the built up Biofilm and adhered particulates throughout the whole coil. After a short time this continuous coil clearing will return the performance of the air system back to its original designed parameters, chillers and fans will back off based on increased heat transfer and enhanced airflow, thus reducing the unit's overall energy consumption. This ultimately results in an attractive ROI through energy and maintenance savings, plus a healthier and more productive indoor environment.



UV Solutionz 'Ezi-Install' System makes it simple to retrofit to any existing AHU