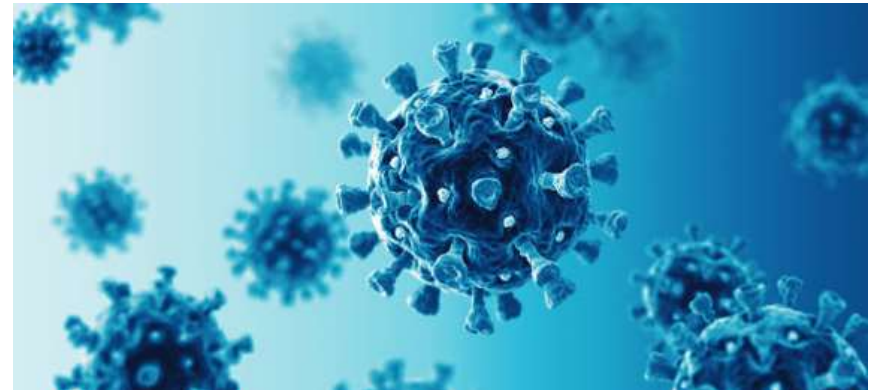


GERMICIDAL UVC EMITTER

INFORMATION PACK

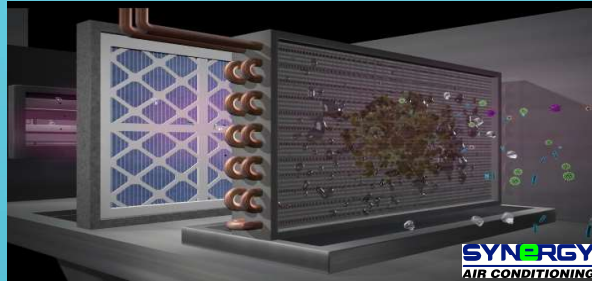
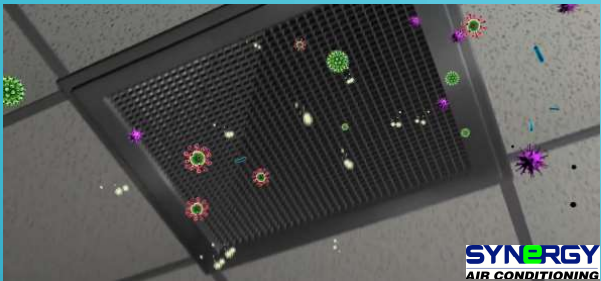
- ELIMINATE BACTERIA AND VIRUS
- PURIFY THE AIR YOUR LOVED ONES BREATHE
- HELP CREATE SAFER WORK ENVIRONMENTS
- MAINTAIN AND SUSTAIN SYSTEM EFFICIENCY
- REDUCE RUNNING COSTS
- REDUCE REPAIR AND ONGOING CLEANING COSTS
- REDUCE THE NEED FOR HARMFUL CLEANING CHEMICALS
- CLEANER SAFER AIR



SYNERGY

AIR CONDITIONING

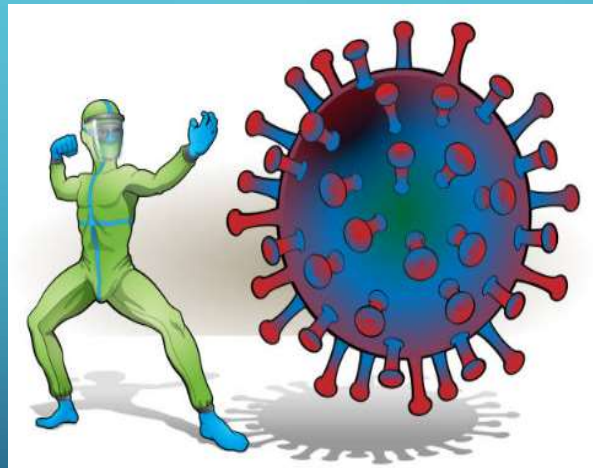
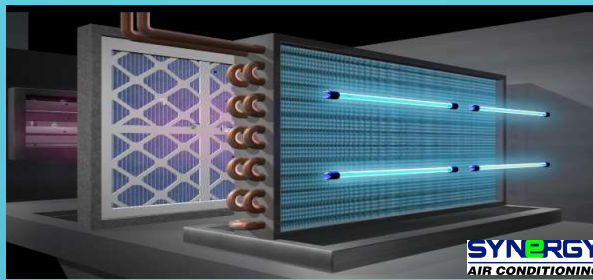
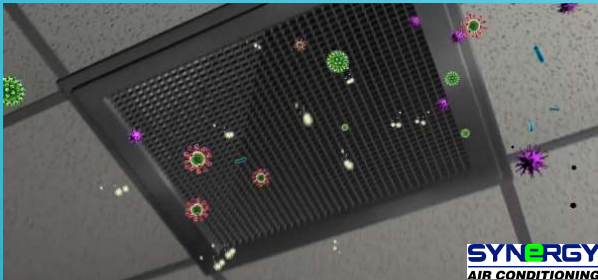
WHY THE NEED FOR A UVC EMITTER?



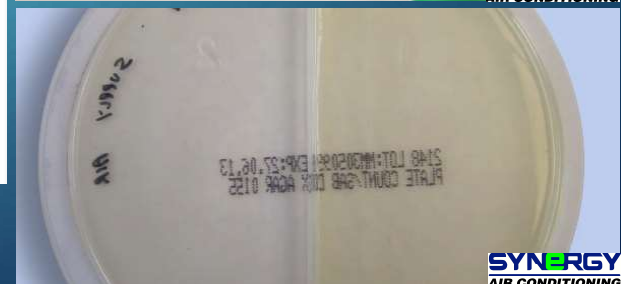
**AIR CONDITIONING SYSTEM
WITHOUT UVC EMITTERS**



IMPACTS OF INSTALLING OUR GERMICIDAL UVC EMITTERS

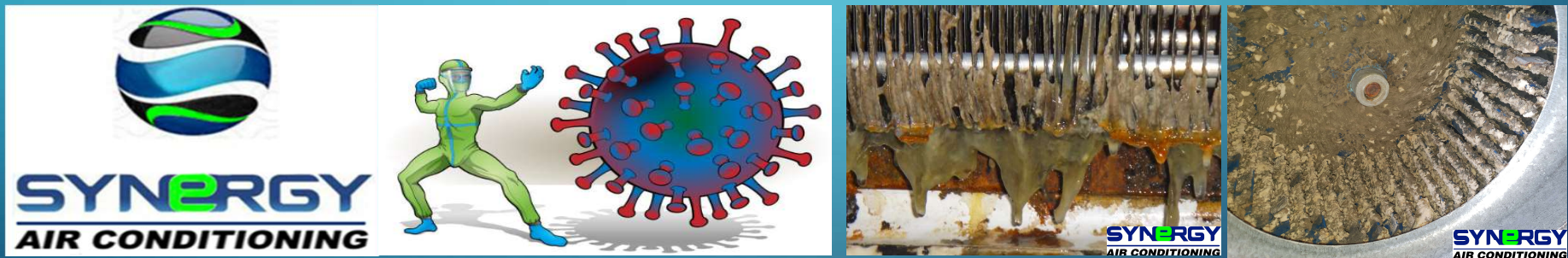


WITH OUR UVC EMITTERS YOU
CAN BREATHE EASY



BENEFITS OF INSTALLING OUR UVC EMITTERS -

Our Ultra High Frequency UVC Emitters installed in AC systems provide a proven and cost-effective tool to reduce your AC units energy consumption and operating costs while drastically improving your indoor air quality. Installed at the indoor coil and drain pan in an AC system, UVC eliminates surface biofilm — a complex matrix of mould, bacteria, viruses, and debris which is a major contributor to general sickness. The most serious cause of poor IAQ are mould and fungi that grow in the coil and drain pan forming a complex biofilm that produces and releases infectious micro-organisms such as MRSA, pseudomonas and aspergillus.



The "C" wavelength targets the DNA of microorganisms, causing cell death or making replication impossible. The UVC energy kills or inactivates microbes, eradicating surface biofilm.

BEFORE



SYNERGY
AIR CONDITIONING

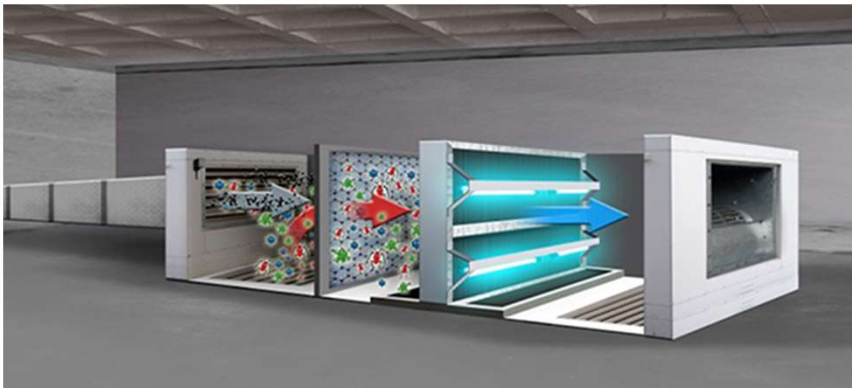
AFTER



SYNERGY
AIR CONDITIONING



SYNERGY
AIR CONDITIONING



THE SCIENCE -

- UVC Exposure
- UVC exposure inactivates microbial organisms such as bacteria and viruses by altering the structure and the molecular bonds of their DNA (Deoxyribonucleic acid). DNA is a “blueprint” these organisms use to develop, function and reproduce. By destroying the organism’s ability to reproduce, it becomes harmless since it cannot colonize. After UVC exposure, the organism dies off leaving no offspring, and the population of the microorganism diminishes rapidly.
- Specifically designed and engineered UVC technology for HVAC and R
- Highest industry performance in cold moving air
- Australian Independent Certified Measurement and Verification
- Multiple successful Government audited trials
- Australian Electrical Safety Certification
- UL Certified for the HVAC Environment
- Destroys DNA and RNA of microorganisms
- Real results against large quantities of airborne microorganisms

YOUR QUESTIONS ANSWERED

- **Can installing these UVC emitters save energy ?** These UVC Emitters devices degrade organic build-up in coils, keeping coils continuously clean. This lowers HVAC energy costs by improving heat transfer and increasing and sustaining net cooling capacity.
- **Does it replace filters ?** No, these UVC fixtures are an air conditioning component that is used in addition to other system parts. These include the coil, fan, dampers, filters, etc. All are designed to do some form of work within the air conditioner.
- **Can UVC be installed in small units ?** Yes, unit ventilators, heat pumps, ducted, Hi Wall split system and fan coil units, etc. are often the most inefficient HVAC systems. Our US manufacturers Steril-Aire offer a variety of Emitter lengths as well as special unit ventilator and fan coil retrofit kits that allow easy installation of UVC, to make these systems cleaner and more efficient.
- **How will the customer know it is working ?** A visible reduction of mould will be seen in a noticeably short period of time. Air through Coil resistance will fall and can drop as much as 30% in 30 days or less (depending on coil cleanliness and water activity). The system's airflow will usually increase as a result. Drain pans and drain pan water become significantly cleaner. All line-of-site surfaces, i.e. insulation, will start to look like new. Most of the space odour will disappear and the air will seem fresher.
- **Is UVC harmful ?** UVC is only harmful under prolonged direct exposure - which is not generally an issue since the devices are installed inside air conditioning equipment or are otherwise shielded to prevent exposure. Use of safety goggles and gloves is recommended by the qualified technician as a precaution during installation and inspections to protect the eyes and skin.

REDUCE ODOUR WITHIN YOUR SYSTEM

WHAT CAUSES THAT SMELLY SOCK ODOUR? In order to find a permanent solution to the what's otherwise known as Dirty Sock Syndrome, it was first necessary to understand how the odour was generated. The cause of the problem all along is the simple growth of mould and bacteria on the coil. Reverse cycle AC systems were particularly susceptible because, unlike conventional cooling only systems, their heating cycles were not hot enough to kill the microbes that thrived on their wet coils during the cooling season. Instead, the temperature was just warm enough to slowly “cook off” their organic odours, producing that gym sock odour.

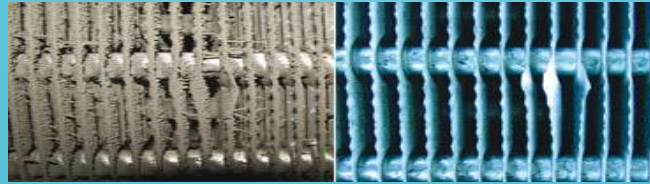
Adding to the problem were the water and organic debris in the drain pan, which formed a fertile garden of microorganisms. The slow warming of this contaminated water released a plethora of spores and toxins into the air that served the conditioned space.

Why the problem appeared during the heating season was linked to the “reverse cycle mode” operation for defrosting the outdoor coil. This process generated moisture on the indoor coil, giving dormant microorganisms and residual organic matter new life, and providing a simple but effective odour release and carrier mechanism. In today’s high-efficiency units, the old problem is exacerbated. Larger coils and more closely spaced fins create an expanded surface area to retain even more organic material. In addition, they retain more moisture, stay wet longer, and their drain pans hold more water and organic debris. All of these factors contribute to a longer and more productive cycle of microbial activity. This greater activity equates to more spores, toxins, and odours for a longer period of time.



Germicidal UVC lights attack mould and bacteria growing in coil and drain pan areas, killing the organisms that cause Dirty Sock Syndrome.

HERE'S SOMETHING YOU DON'T SEE EVERYDAY



WE SEE THIS ALL
TOO OFTEN





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