



STATEMENT OF QUALIFICATIONS

Facility Services Solutions



WWW.LIFESAFETYSERVICES.COM



888-675-4519

UVC DISINFECTANT LIGHTING SOLUTIONS

DEEP FACILITY CLEANING

ELECTROSTATIC DISINFECTANT CLEANING

DAMPER INSPECTION & REPAIR

DOOR INSPECTION & REPAIR

DUCT CLEANING

PHOTOLUMINESCENT PATH MARKERS & EXIT SIGNS

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Over 25,000 Projects Completed

COMPANY OVERVIEW

LSS Life Safety Services® (LSS) has been serving customers for over 15 years. We are experts in 360-degree facility safety. We offer a comprehensive line of services to ensure your facilities are functioning properly and efficiently. We offer UVC Disinfectant Lighting Solutions, Electrostatic Disinfectant Cleaning, Deep Facility Cleaning Services, and Duct Cleaning all to help control the spread of harmful viruses, bacteria, mold, and other potentially harmful contaminants.

We also provide a full-lineup of Fire & Life Safety services including Fire/Smoke Damper Inspections & Repair, Fire/Smoke Door Inspections & Repair, Fire Door Labeling Services, and Photoluminescent Path Marking & Egress Systems.

LSS provides our clients with one of the most qualified staff in facility safety. Our teams have extensive training both formal and on-the-job. By performing work throughout the country in all types of commercial facilities, our project managers and technicians are knowledgeable of different types of, building maintenance systems, and of large commercial HVAC Systems that service facilities. We also provide our clients with the benefit of project managers who have managed projects in virtually all types of commercial buildings; hospitals, high-rise buildings, casinos, manufacturing plants, hotels, vessels, laboratories, and schools. Additionally, our staff has completed OSHA Safety Training, Infection Control training, drug screening and background checks.

GEOGRAPHIC REACH

LSS services all of North America. Providing this broad of a geographic reach allows our clients numerous benefits:

- National Accounts with buildings throughout the country have one Point-of-Contact for all of their facilities, regardless of the location. Additionally, national accounts enjoy the benefits of uniformity in inspection procedures, reporting methods, and quality control methods.
- There are some geographic differences with codes and the types of products installed. As a national service provider, LSS is familiar with all makes and models of UVC Products, Facility Cleaning Options Dampers, Doors and Photoluminescent products and how they perform.
- Servicing a wide geographic area allows LSS to have higher volume, which in turn generates economies of scale that result in competitive prices for our clients.



LSS Life Safety Services®, LLC, (LSS), Telephone: 888.675.4519, info@LifeSafetyServices.com

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Safety



“Establishment of a safe environment is the shared responsibility between a contractor and its employees at all levels of an organization.”

Education and training are an important part of any job. For us, it's the most important thing we can do for our employees and our clients. LSS Life Safety Services® is constantly educating our technicians on safety practices and procedures, not only for OSHA and NFPA Standards compliance, but to protect our workers and yours from illness and injury.

Lockout/tagout, proper equipment, fall protection, antistatic, intrinsically safe and grounding aren't just safety buzzwords. For LSS Life Safety Services, it's a part of our day-to-day routine when working with Fire and Life Safety Systems. We also have an OSHA certified trainer on staff, which further demonstrates our ability and commitment to work safely.

Some of us spend as many waking hours at work as we do at home. Our coworkers tend to become like family to us. We're going to do what it takes to keep our LSS family safe. And that means doing the same for you.

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Training & Certifications

The cornerstone of LSS' quality and growth are our inspection and repair technicians. LSS' technician goes through extensive classroom and on-the-job training. Classroom training cover items such as:

- Customer Service Skills
- NFPA Codes
- Reading of Blueprints
- Inspection and repair procedures for dampers and doors
- Definition of types and models of dampers and actuators
- Installation of actuators
- Locating fire and smoke dampers
- Fire Door Inspections
- Infection Control Procedures
- 10-Hour OSHA Safety Course
- Inventorying of dampers and doors and pose-project customer reports for AHJ
- Types of commercial HVAC systems (e.g. dual duct, high pressure, etc.)
- Plotting of dampers and doors
- Alarm systems as they relate to dampers

On-the-job-training reinforces all of the classroom items in real life circumstances. Each technician must complete an OTJ Training form demonstrating that they have performed a specific task(s) a specified number of times, contingent upon its difficulty. That task(s) must be signed off by the technician's supervisor.

Firestop:

- FM 4991 Approved - FM Approved Firestop Contractor
- FM 4991 - Designated Responsible Individual (DRI)
- Manufacturer Certified Training: 3M, HILTI, STI (FIT Levels I & II)

Dampers:

- Belimo Factory Trained Inspectors On-Staff
- Greenheck Factory Trained Inspectors On-Staff
- Ruskin Factory Trained Inspectors On-Staff

Fire Doors:

- Door & Hardware Institute (DHI): Certified Door Inspectors On-Staff
- International Fire Door Inspectors Association (IFDIA): Certified Door Inspectors On-Staff
- ANAB Approved/Certified: Field label verification services (Doors, Frames, Glass)

Other Certifications:

- Indoor Air Quality Association (IAQA): Certified Mold Remediator
- Indoor Air Quality Association (IAQA): Certified Air Environmentalist
- National Air Duct Cleaners Association (NADCA): Air Systems Cleaning Specialist
- Lean Six Sigma
- ISO Certified

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Certifications & Memberships

Our staff has completed OSHA Safety training, manufactures training, and hold multiple industry-specific certifications and memberships, including:

- American Hospital Association (AHA) –Certified Healthcare Facility Manager
- American Hospital Association (AHA) –Certified Healthcare Emergency Professional
- Door and Hardware Institute – DHI Associate
- Firestop Contractors International - FCIA
- FM 4991 – Designated Responsible Individual (DRI)
- FM 4991 – FM Approved Firestop Contractor
- Indoor Air Quality Association (IAQA) –Certified Indoor Environmentalist
- Indoor Air Quality Association (IAQA) –Certified Mold Remediator
- International Fire Door Inspectors Association (IFDIA) –Certified Door Inspector
- Lean Six Sigma
- Manufacturer Training: 3M, HILTI, STI (FIT Levels I & II) Firestopping
- National Air Duct Cleaners' Association (NADCA) Air Systems Cleaning Specialist
- National Institute for Certification in Engineering Technologies (NICET) – Fire Alarm Systems
- OSHA Safety – 10 Hours and 30 Hours
- OSHA - HAZWOPER Certified (Hazardous Waste Operations and Emergency Response Standard)

To remain an industry leader LSS provides employees with continual updates on industry trends, codes changes, and all relevant information and training necessary to remain the leader in their trade.

Background Checks

LSS Life Safety Services® works with a consumer reporting agency for background checks and drug testing services.

It is LSS' policy that applicants are required to sign a consumer disclosure and authorization form which gives LSS permission to perform a background check. A decision regarding employment is not finalized until satisfactory results of the background check are received. The Life Safety Services® background check for all employees entails the following: A Criminal and Misdemeanor check, Social Security verification, Motor Vehicle Record review, a check of the National Sex Offender Registry and the Widescreen Plus National Criminal Search, and any other checks required by customers.

In addition, LSS' policy includes the following for Pre-Employment, Annual and Random Drug Testing:

Following an offer of employment, all Operations field applicants are required to pass a test for controlled substances and drugs before beginning employment. All related offers of employment are conditional upon the results of said test. If the applicant tests positive for controlled substances or if the applicant tests positive for prescribed drugs which he or she has consumed illegally (i.e. without a prescription), the conditional offer of employment will be withdrawn.

Additionally, all Operations field personnel will be required to complete an annual drug test and are subject to random drug and alcohol testing due to the Company's customer requirements. For the random testing, employees will be chosen through an unbiased selection process.

Quality Assurance Program

LSS maintains a high level of quality control for our services. By utilizing multiple methods LSS has been able to achieve high quality, competitively priced services to our clients. LSS' Quality Control Policy utilizes the following components:

- Utilization of the post project inspection and repair reports. Management reviews every post project report to ensure quality of the report and the inspection. The reports allow insight into the detail of the inspection, regarding location description, proper analysis of failed dampers, and the technician's ability to access a damper or door, properly determine the deficiency in a fire rated barrier or smoke partition and the corresponding selection of an approved UL Firestop System. This data allows LSS to immediately address issues for our clients as well as immediately address any quality issues with our staff so that they are rectified without delay and quality is maintained.
- Random unannounced on-site Quality-Control Inspections performed by a QC Manager.
- A post-project customer survey is sent out on every project. The survey details the performance of LSS' office staff, field technicians, and post project report. The survey's purpose is threefold; first if there is a problem with any project that LSS was unaware of it can be addressed immediately. Secondly, trends can be tracked for each sales associate, project manager, and technician to determine areas for praise and areas for improvement. Thirdly, statistics are generated to determine overall company performance to determine areas where additional training is needed to maintain the highest level of quality.
- Daily Communication with LSS' clients. Project managers communicate with the client's point of contact prior to the commencement of all projects to understand the client's expectations so they are exceeded on the project. After the initial meeting, the Project Manager will meet with the point of contact daily during the project to ensure that quality standards are being met and that LSS is being proactive in addressing any issues that might exist.

Environmental Compliance, Quality & Sustainability

At LSS Life Safety Services®, environmental considerations are a critical part of our core operation. Many of the solutions that we provide for our customers' convenience also play a part in minimizing waste and reducing our impact on the environment.

We are committed to compliance with relevant environmental regulations, requirements, rules and legislation, and we continually seek opportunities to improve our environmental performance including, but not limited to, energy, water, paper and fuel consumption, and vehicle miles traveled.

The following are examples of measures taken by management and employees to reduce waste, prevent pollution, and conserve water and energy:

Recycling

The LSS corporate office provides recycling bins and resources for staff.

Transportation

LSS manages a fleet of Hybrid vehicles for technician transportation as a way to reduce our carbon footprint resulting from fuel consumption and vehicle miles traveled. Vehicles are maintained according to manufacturer specification to keep emissions, fuel costs, and replacement to a minimum.

Technology

LSS takes pride in its comprehensive reporting ability, but for large projects, this can mean thousands of pages. LSS Site Surveyor® is an important part of our customer offering, allowing digital reports that can be downloaded, viewed, and stored electronically. This allows us to save paper, energy, and emissions generated during shipping customer reports, and adds the convenience of accessing online reports anytime, anywhere.

In addition, field employees are supplied with smartphones and use applications designed to reduce paperwork.

Services

In addition to environmentally conscious efforts in the company's day-to-day business operation, LSS helps facilities conserve energy with photoluminescent egress path marking, and increase energy efficiency with air duct cleaning.

LSS Site Surveyor

In 2011 LSS released proprietary passive fire protection inspection software, LSS Site Surveyor®. This customer inspection software offers the client ability to support sustainability by eliminating paper inspection records. Additionally, the software produces the most comprehensive web-based inspection reports in the business. LSS Site Surveyor® is available for all of our inspection, repair and installation services.



LSS Site Surveyor® allows you to access inspection reports instantly from the web via your own customer portal.



Grant user rights and access levels to different members of your team.



Download and export inspection results in numerous formats, such as PDF and Excel.



Click through "before" and "after" pictures of every inspection and installation performed by LSS, which provides visual proof that the service was performed.



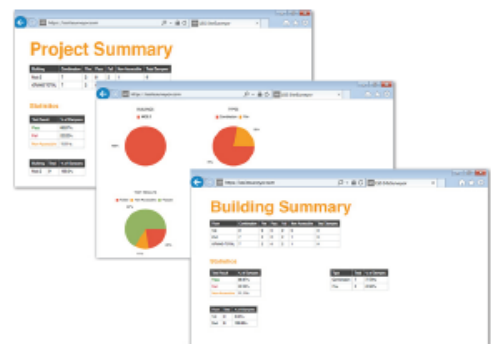
Filter inspection results by any combination: location, building, department/area, floor, damper, door, penetration type, inspection results, reason for failure, etc.



Store AutoCAD files on a cloud-based portal, ensuring you can find your drawings when you need them.



Go paperless! Reduce paper filing cabinet space and support sustainability efforts by housing and assessing all inspection and installation records in the cloud.





Sell Sheets

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GERMICIDAL UVC LIGHT DISINFECTION FOR COILS



Our system is designed to save energy and maintenance costs associated with commercial HVAC Systems. Mold (biofilm) on coils of only 0.002 can reduce efficiency by 37%. Ultraviolet germicidal irradiation (UVGI) is the most cost-effective and practical solution. Our tubular rack system offers ease and flexible installation. It includes an advanced multi-voltage water-resistant power supply. The system also improves indoor air quality by sterilizing airborne bacteria, viruses and allergens.

This Is Cost Effective Solution For:

- Healthcare/Hospitals
- Schools/Universities
- Commercial Office Buildings
- Hospitality & Public Use Facilities

System Benefits:

- 99.9% surface disinfection
- Sterilizes mold, bacteria, and viruses
- Disinfects coil & drain pan
- Improves HVAC efficiency
- Improves indoor air quality
- Reduces odor



Germicidal lights are simple, effective ways to curb bacterial and viral growths. These specialized lamps produce an ultraviolet (UV) light that disrupts growth and deactivates existing growths, aiding in the disinfection of surfaces, water and more. Using one in your facility can help improve everything from air quality to the health and well-being of you and your occupants. By treating the air circulating in your heating and cooling system, UVC germicidal lamps can kill mold and destroy airborne viruses and bacteria that, ultimately, lead to colds, flus and other illnesses. This can keep you and your family or staff healthy. Many experts recommend adding in an air purifier to filter even more germs and bacteria from your indoor air.

UVC LIGHT DISINFECTION FOR ICE MACHINES



UVC Light Disinfection for Ice Machines, counter top ice, and water dispensers are prone to both mold and bacterial contamination. The cool, moist interior of the machines is a perfect breeding-ground for mold. Even worse, it only takes one pair of unwashed hands for dangerous bacteria such as E. coli to contaminate the ice. Conventional cleaning methods are expensive and labor intensive and are only done periodically.

UVC lights make ice machine maintenance safer, easier and more cost-effective. Germicidal UVC light systems work continuously to kill germs, bacteria, mold, and E. coli before they become established, reducing the need for frequent cleanings. The UVC lighting is designed to produce just the right amount of UVC light; enough to kill germs inside the ice machine without damaging plastic materials inside.

Features:

- Installs in tight spaces and fits all types of ice machines
- Weather resistant remote mountable UV lamps with magnetic mounting shield
- 110-277 VAC electronic power supply with flexible mounting options

Benefits:

- 90% microbes killed after 10 minutes – 99.9% after 24 hours
- Saves money on ice machine maintenance
- Works continuously to keep ice machines clean
- Kills mold, bacteria, and viruses where they lurk
- Reduces health risks from dirty ice
- Clearer, cleaner ice



UVC STERILWAND



Safer, Healthier Rooms Start With A UVC Wand

The UVC Wand packages UVC technology in a versatile, hand-held device designed to deactivate surface mold, bacteria, viruses and yeast. This wand is ideal for food processing, healthcare, commercial and institutional environments.

Approved by the USDA and FDA for surface decontamination, UVC has long been known for its ability to control naturally occurring microbes. SterilWand is suitable for a variety of specialized uses for surface decontamination and mold remediation:

- Food preparation, processing and packaging areas to reduce pathogens such as Coliform, Salmonella, E. coli, Staphylococcus, Listeria
- Laboratories and cleanrooms to prevent cross-contamination
- Hard to reach and high-touch surfaces such as keyboards, doorknobs, bedrails
- Libraries, to eradicate mold on book surfaces

Benefits Of Sterilwand

- Highest performance: Delivers the highest output germicidal UV
- Scientifically proven results: Uses the proven power of germicidal UV energy as an effective inactivation method for pathogens
- Safe and ozone-free: Uses no chemicals; produces no ozone or other toxic contaminants
- Easy to Use: Flexibility to quickly bring the power of UVC where and when you need it
- Manages Risk: Improved environmental hygiene means improved clinical outcomes, reduced cross-contamination and enhanced food safety



UVC LIGHT DISINFECTION FOR PTAC AND FAN COIL UNITS



UVC Light infection in hospitality settings allows you to realize all the benefits of germicidal lighting in limited space applications such as PTACs and Fan Coil Units. The installation features a low-profile lamp with a metal shield and mounting magnet providing optimum exposure in tight spaces. The benefits are numerous including reduction of bacteria, viruses, mold and odors in hospitality settings such as hotel rooms, apartments, condominiums, and senior housing facilities.

Features:

- Installs in tight spaces such as PTACs and Fan Coil Units
- Weather resistant remote mountable UV lamps with magnetic mounting shield
- 18-32 or 110-277 VAC power supply with flexible mounting options

Benefits:

- Kills airborne mold, bacteria, and viruses
- Provides a healthier indoor environment
- Kills mold, bacteria, and viruses where they lurk
- Reduces system maintenance
- Reduces odors



Clorox[®] Total 360[®] System

Get Superior Coverage with Trusted Solutions...For Healthier Facilities

Illness-causing germs can quickly spread on surfaces. Manual cleaning methods and traditional disinfecting tools aren't designed to effectively reach all desired areas, leaving facilities and tenants at risk.

The Clorox[®] Total 360[®] System pairs an electrostatic sprayer with a portfolio of Clorox disinfectants and sanitizers to ensure all surfaces — even those hard-to-reach, difficult-to-clean areas — are properly treated. The superior surface coverage helps keep facilities healthier, while also saving time and money.



Clorox[®] Total 360[®] System...

TAKES LESS TIME

Up to **75% faster***

COVERS MORE

Treat up to **18,000 sq ft/per hour**

REDUCES COST

Uses **65% less solution***



A New Way to Fight the High Cost and Impact of Illnesses

- ▶ **\$1,685** — Average annual cost of illness to employees¹
- ▶ **\$400,000** — Cost to major university to combat a single Norovirus outbreak²
- ▶ **\$14,000** — The direct cost of hospitalization alone due to a MRSA infection³

Clorox[®] Total 360[®] Electrostatic Sprayer



1 Unit
UPC: 60025

- ▶ Ideal for large spaces. Treats up to 300 square feet per minute
- ▶ Ergonomically designed sprayer with lightweight handle
- ▶ Reduces trigger fatigue with always-on sprayer button
- ▶ Use in schools, athletic facilities, offices, airports, hotels, public restrooms, daycare centers, institutional kitchens

Clorox[®] Total 360[®] Disinfectant Cleaner₁



4/128 oz.
Gallon
UPC: 31650

- ▶ Kills 99.9% of bacteria in 5 seconds**
- ▶ 44 organism claims: Kills cold and flu viruses†, MRSA and Norovirus in 2 minutes or less
- ▶ Eliminates odors
- ▶ Sanitizes soft surfaces
- ▶ Inhibits the growth of mold and mildew for up to 7 days

Clorox[®] Anywhere[®] Hard Surface Sanitizing Spray



4/128 oz.
Gallon
UPC: 31651

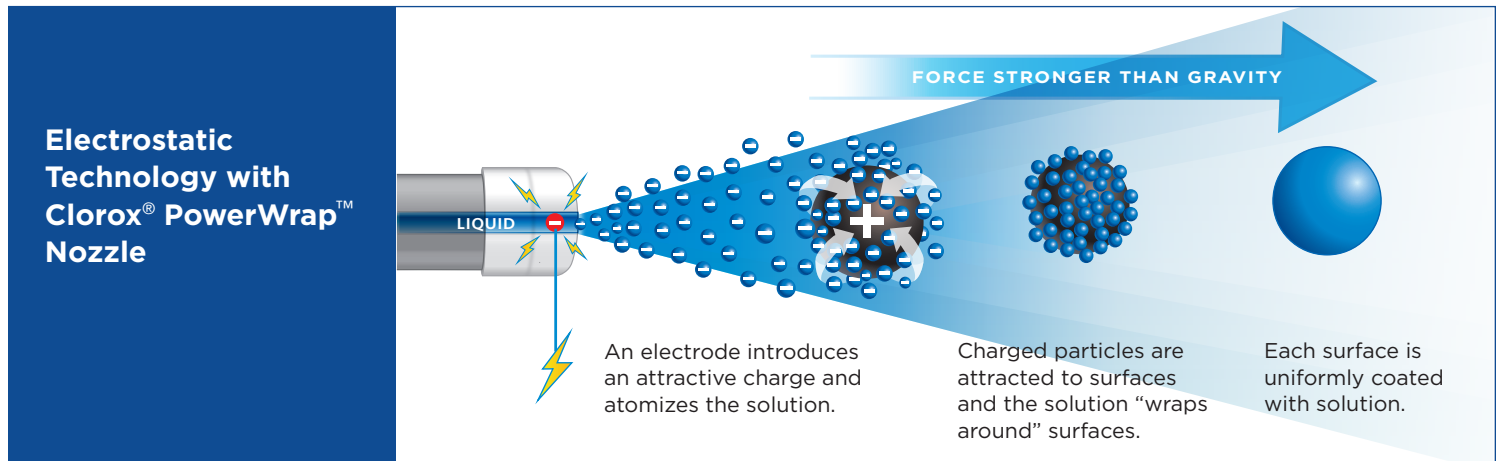
- ▶ Kills 99.9% of bacteria**
- ▶ Sanitizes in 1 minute**
- ▶ Sanitizes food-contact surfaces in 2 minutes**
- ▶ Controls the growth of odor-causing bacteria
- ▶ NSF-listed[§]

1. http://journals.lww.com/joem/Abstract/2003/12000/Lost_Productive_Work_Time_Costs_From_Health.4.aspx 2. <http://www.foodpoisoningnews.com/rochester-norovirus-costs-3000-osu-outbreak-over/> 3. <http://www.hcup-us-ahrq.gov/reports/starbriefs/sb35.jsp> Always use product as directed. * Versus trigger sprayer. † Rhinovirus ** On hard, nonporous surfaces. Sanitization claims valid for all vegetative, non-spore-forming bacteria § Reg. No. 156351

Clorox[®] Total 360[®] Disinfectant Cleaner, claims have been registered by the U.S. EPA. Some claims may not yet be available in all 50 states, so please check with your sales representative.

Clorox® Total 360® System Delivers Superior Results

The Clorox® Total 360® Electrostatic Sprayer, with the patented PowerWrap™ nozzle, is an efficient, reliable and powerful method to ensure all surfaces — front, back and sides — can be properly disinfected and sanitized.



The Clorox® Total 360® System Advantages...

Patented PowerWrap™ Nozzle

The advanced nozzle design provides highly reliable atomization and particle size.

Delivers uniform wraparound coverage on all sides of target.

Powerful Air Compressor

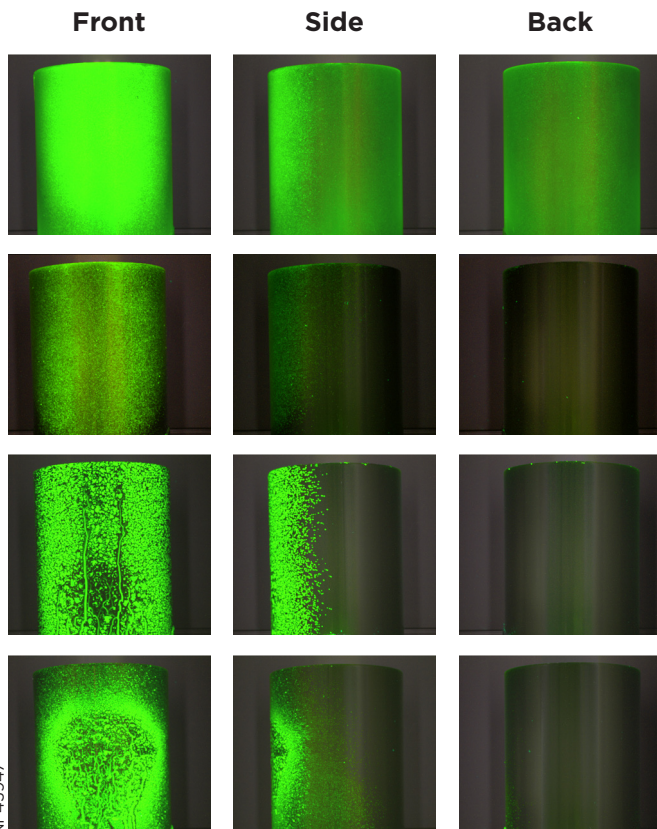
The dynamic air compressor enables fast, efficient delivery of charged particles to targeted surfaces.

Cover more intended surfaces in less time.

Reliable Delivery Method

The corded system ensures safe grounding and consistent electrostatic output.

No variance in performance due to operator handling or battery life.



Exceptional Wraparound Coverage vs. Other Sprayers

Clorox® Total 360® Electrostatic Sprayer delivers more uniform, wraparound coverage to the targeted surfaces than current sprayers on the market today.* Superior surface coverage helps provide better protection from the spread of germs.

*Results were determined in a single spray study conducted on metal trash cans (7.5 inches in diameter). Testing protocol established by using average of manufacturer suggested spray distances. Cordless electrostatic sprayer disinfection nozzle setting used.



For more information, contact your Clorox sales representative.
Call: 1-800-492-9729
Web: www.cloroxpro.com

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DUCT & HVAC SYSTEMS CLEANING IN HEALTHCARE



INDOOR AIR QUALITY (IAQ)

When the ductwork in a building is dirty it becomes a breeding ground for bacteria, viruses, fungi, and molds, which are then spread throughout the building's air by the HVAC system. In places with occupants with weakened immune systems, such as schools and hospitals, the ductwork causes issues with infection control.

Our duct and HVAC systems cleaning process removes those contaminants and helps to keep particles out of the air.

ENERGY SAVINGS

Hospitals spend 10 times more per building on energy than any other building type. Dirty ductwork loads filters more quickly, increasing stress on the air handler, restricting airflow, and increasing energy costs. With a clean HVAC system, improved airflow and efficiency can lead to significant cost and energy savings.



We've performed hundreds of HVAC systems cleaning projects in all kinds of facilities, and can provide complete system cleaning, or target specific areas such as the return, exhaust, or air handler units.

CALL NOW FOR PRICING OR TO SCHEDULE YOUR HVAC SYSTEMS CLEANING:
888.675.4519

HIGH SURFACE CLEANING



WHY SHOULD YOU HAVE YOUR RAFTERS AND HIGH CEILINGS CLEANED?

- Vibrations in the facility can shake built up dust loose, causing it to contaminate the production below.
- Piles of dust and dirt can become breeding grounds for mites, mold, bacteria, viruses, and other pollutants.
- Some dusts can become a fire hazard when built up on high surface areas.
- OSHA & the NFPA can give violations and fines for having unsafe levels on dust on ceilings and rafters.
- Chunks of this collected debris can enter the ventilation and clog up the HVAC system.
- Can cause odors and break down the surface it's on, causing rust or rot.
- Aesthetic reasons, visible dirt collected on surfaces can make a workplace unattractive.
- To prepare surfaces for painting or other maintenance work.
- Creates poor indoor air quality, which according to the EPA is a leading environmental threat and cause of airborne sickness.



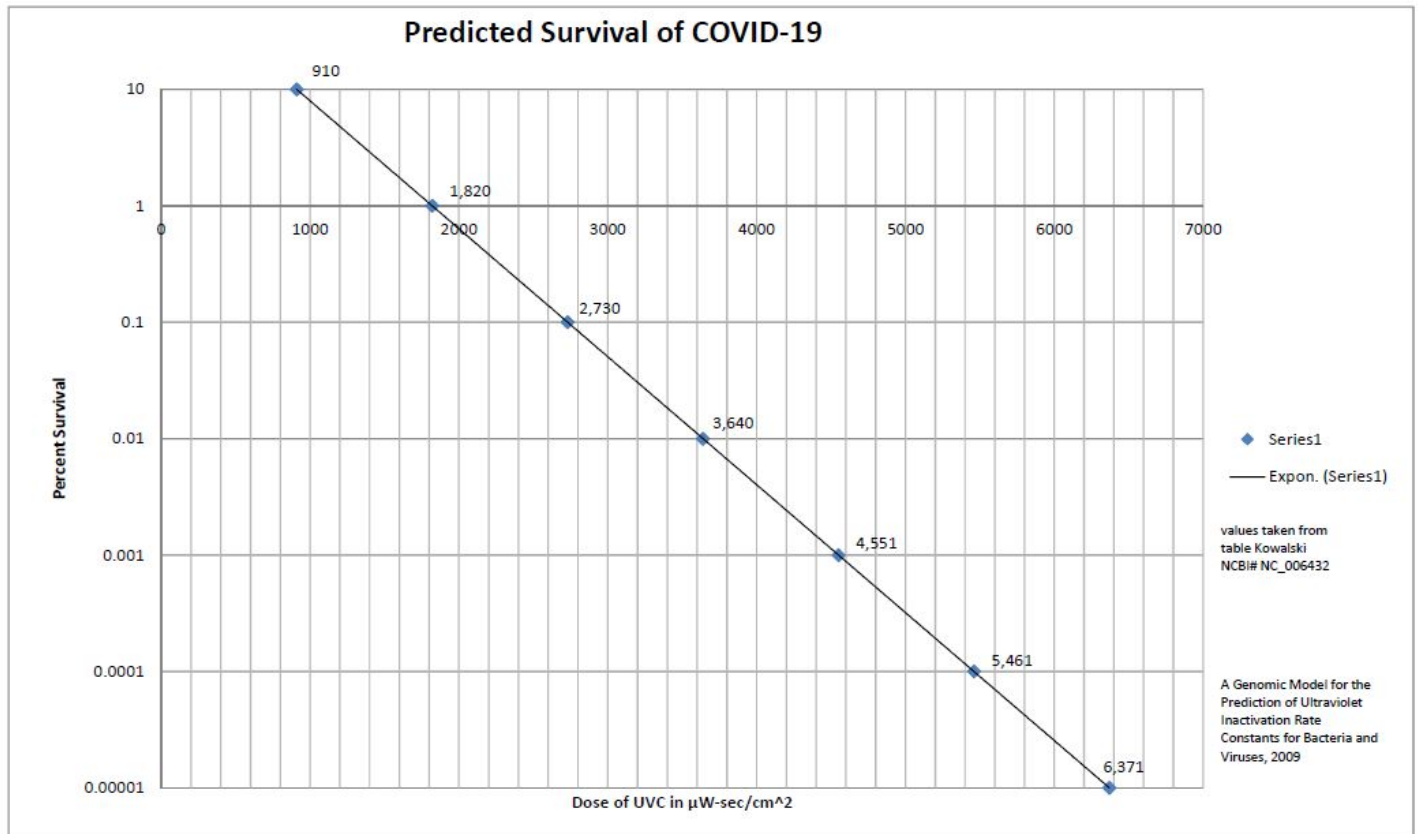
FOR PRICING OR TO SCHEDULE YOUR RAFTER & CEILING CLEANING CALL:
888.675.4519



UVC Information & Resources

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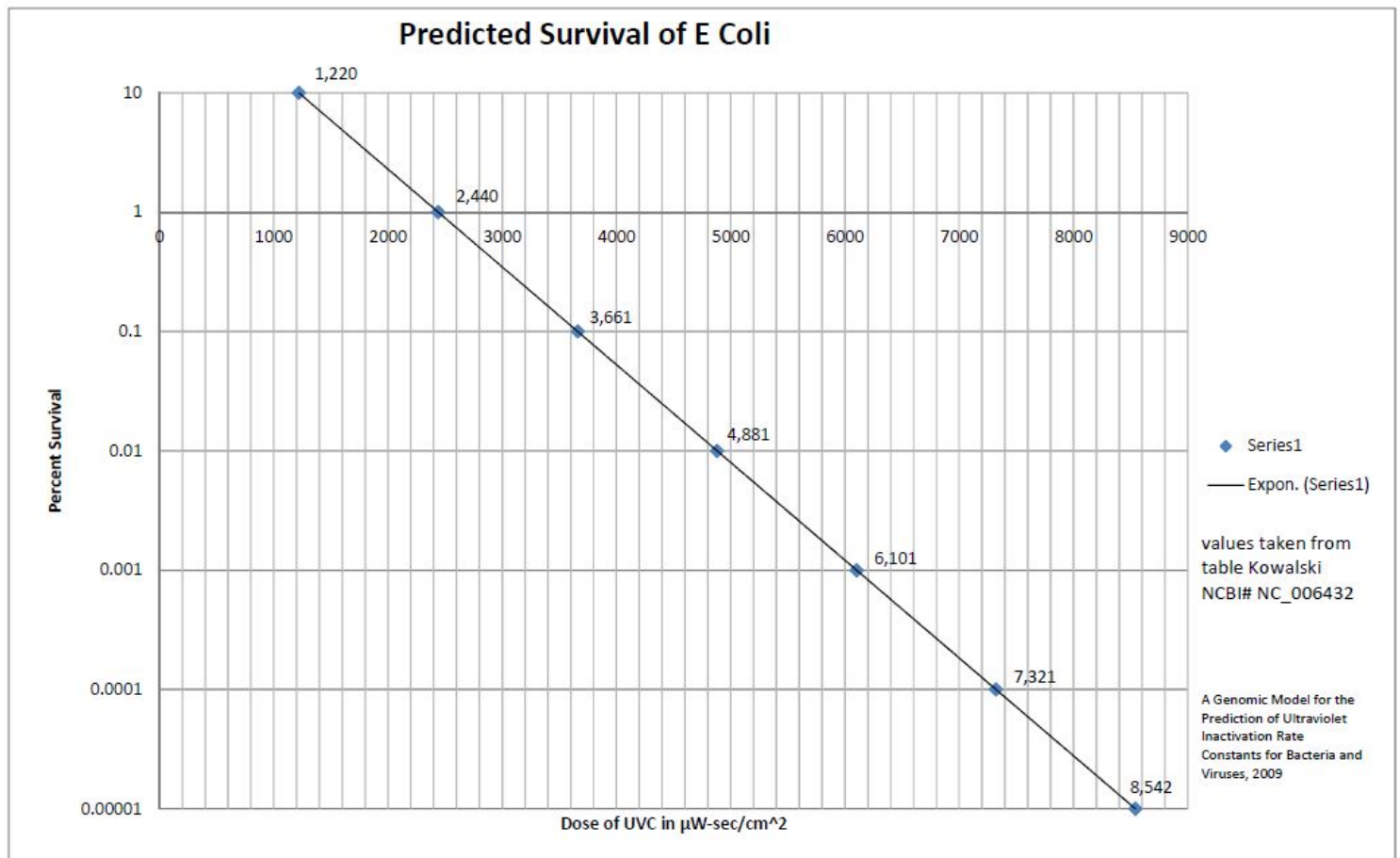
UVC KILL RATE COVID-19



UVC KILL RATE E COLI



LIFE SAFETY SERVICES
YOU'RE SAFE WITH US®



WHITEPAPER: Corona Virus, SARS, Measles, Influenza & other Viruses



January 2020

UVC has been proven to disinfect against Corona Viruses and can provide excellent pandemic protection. The Science of utilizing UVC for disinfection has nearly 150 years of history.

Very high output UVC works by destroying the DNA and RNA of microorganisms and is therefore effective against types of viruses including Flu's, Colds, Corona Virus/SARS, Measles and German Measles.

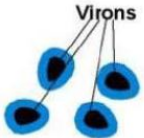
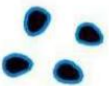

The droplet nuclei for these viruses can remain airborne for hours or days depending on airflow and humidity (Virus micro-organism size is typically 10 – 500 millimicrons – millimicron = That's 1000th of a micron). They can also enter the biofilms growing on cooling coils and potentially mutate unless the coil is treated with UVC. In order to understand how UVC works, it is important to understand the science behind UVC:

The C wavelength of the UV spectrum we use is (UVC – 253.7nm), this targets the DNA of microorganisms, destroying their cells and making replication impossible. Directed at a cooling coil or drain pan, UVC energy destroys surface biofilm, a gluey matrix of microorganisms that grows in the presence of moisture. Biofilm is prevalent in HVAC systems and leads to a host of indoor air quality (IAQ) and HVAC operational problems. UVC also destroys airborne viruses and bacteria that circulate through an HVAC system.

For the most effective microbial control, UV germicidal Emitters are installed on the supply side of the system, downstream from the cooling coil and above the drain pan. This location provides more effective biofilm and microbial control than in-duct UVC installations. By irradiating the contaminants at the source – the cooling coils and drains pans – UVC delivers simultaneous cleaning of surface microorganisms and destruction of airborne microorganisms.

Transmission of Corona and Other Viruses in Buildings

Stages of Infectious Droplets & Droplet Nuclei:

	Large Infectious Droplets: Mucus/water encased Viruses are aerosolised by the infector or by toilet water. These quickly fall to the ground after traveling up to 1 Metre (1-3ft)
	Small Infectious Droplets: Mucus/water coating starts to evaporate. These will travel 1 to 2 Metres (3-6 ft) before falling to the ground. These droplets can become Droplet Nuclei
	Infectious Droplet Nuclei: Mucus/water coating has totally evaporated leaving only the VIRON. This is a Droplet Nuclei Droplet Nuclei are so microscopic they can float in the air indefinitely

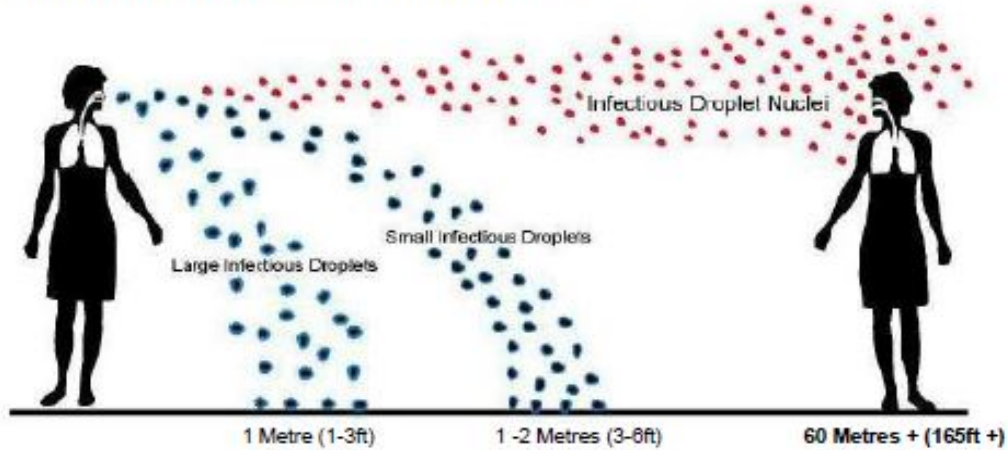
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WHITEPAPER: Corona Virus, SARS, Measles, Influenza & other Viruses



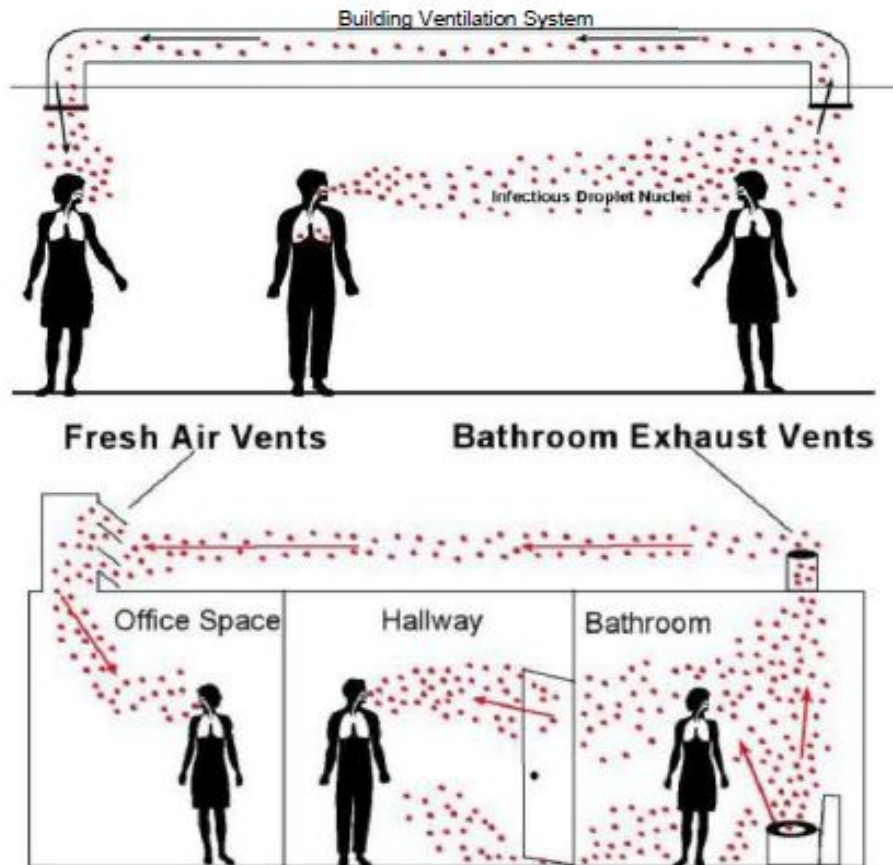
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Infectious Droplet & Droplet Nuclei travel lengths:



Note: Droplet Nuclei Viruses are below 0.3μ (microns) and typically in the millimicrons, they can Penetrate Deeply into the Human Lungs.

Examples of how Occupant Aerosolised Droplet Nuclei travel both within indoor spaces and then throughout a Building:



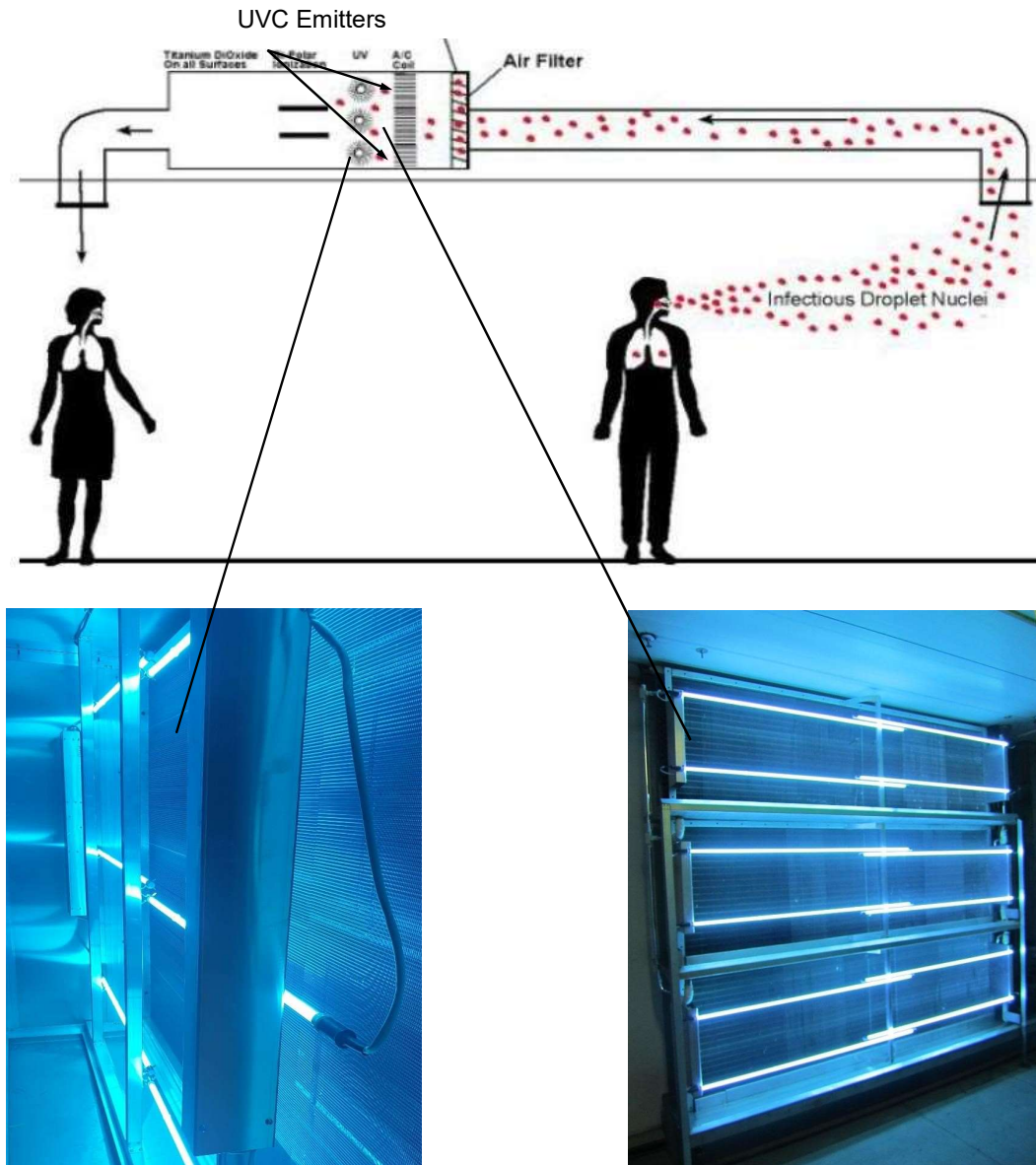
How UVC Emitters inactivate airborne Infectious Droplet Nuclei:

CONTINUED

WHITEPAPER: Corona Virus, SARS, Measles, Influenza & other Viruses



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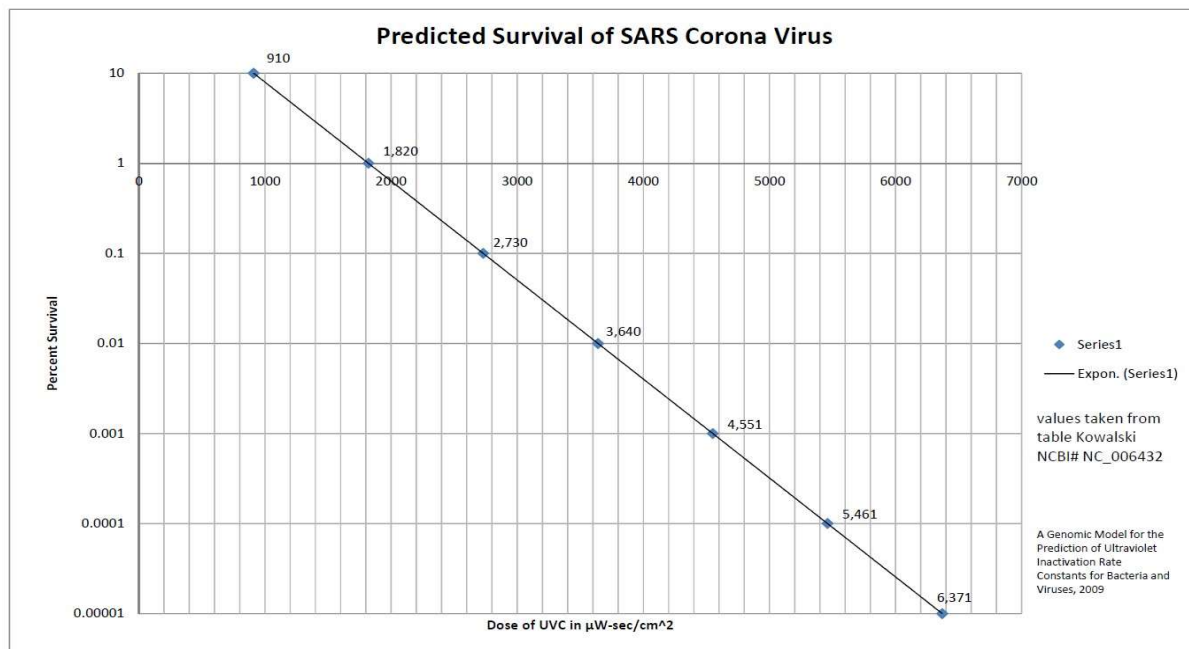
UVC Energy Fields generated in Air Conditioning systems create a barrier that destroys the Droplet Nuclei from Corona Virus, SARS, Measles and Influenza etc.

- Humidity Levels within air-conditioned buildings typically have lower humidity than outside which allows Viruses to Evaporate faster thus creating **More Droplet Nuclei**.
- Lower humidity in buildings allows *Droplet Nuclei* to stay airborne longer as the droplets do not absorb water weight which cause them to fall to the ground.
- Indoor Air currents created by both HVAC systems and People movement assure that *Droplet Nuclei* will remain airborne **Indefinitely**.
- This allows HVAC systems to redistribute *Droplet Nuclei* throughout the building to infect more occupants.

WHITEPAPER: Corona Virus, SARS, Measles, Influenza & Other Viruses



Typical UVC selection performance:



Example Inactivation Rates on a typical AHU selection: μJ

= Intensity ($\mu\text{W}/\text{cm}^2$) x Time

SARS Corona Virus 99.9% Inactivation = $2730 \mu\text{J}/\text{cm}^2$

Coil Face Intensity (avg) = $3538 \mu\text{Watts}/\text{cm}^2$

For 99.9% inactivation using our typical selection on an AHU

Inactivation at coil face = $2730 \mu\text{J}/\text{cm}^2 \div 3538 \mu\text{W}/\text{cm}^2 = 0.77 \text{ seconds}$ UVC energy fields closer to the lamps will result in quicker inactivation

-END-

LENNOX ROOF UNIT WITH UVC EMITTER



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