

Germ Killer™ UVC 400 - Ambient Air Sanitizer

MADE IN THE USA



SINCE 1983

Model: GK-UVC400

The **Germ Killer™ UV-C 400 Air Sanitizer** combines powerful airflow and effective UV-C light to aid in sanitizing air. This system may help reduce disease transmission in public places such as *hospitals, open workplaces, doctors' offices, dental offices, schools, nursing homes, disease testing centers, and more.* Also, the **Germ Killer** can be used as an aid to reduce airborne pathogens in medical or biological laboratories. The system's UV lamps emit the most effective wavelength of UV-C light – 254 nm – to help inactivate the DNA or RNA of microorganisms reducing the reproduction of viruses, bacteria, and fungi.



Germ Killer™ UVC 400
Air Sanitizer

The **Germ Killer** offers an enhanced design with improved safety and efficiency features. To improve safety, this system was optimized with design features to help reduce UV-C light leaks and minimize exposure to UV-C light which can cause eye or skin damage. The **Germ Killer** meets NIOSH and UL safety recommendations for ozone and UV-C maximum escaping irradiance and has passed 3rd party lab testing.

To improve efficiency, the **Germ Killer** features dual pre-filters to capture most of the large particles in order to help prevent particle build-up on the bulbs and surfaces that could affect the system's effectiveness. Also, the disinfection area has proprietary reflective surfaces to increase the irradiance of the UV-C light to improve efficacy. Furthermore, the **Germ Killer** has a UV light sensor to aid in providing a sufficient UV-C light dose. The sensor displays this information through two LED lights - green light indicates an ample UV light dose while red indicates an issue such as a particle build-up, bulb burnout, or other bulb issues.

The **Germ Killer** offers an adjustable airflow allowing the operator to select 300, 375, or 450 CFM. This system can be mounted in a variety of ways including from the ceiling, or on the wall, a table, or a cart.

Applications



Doctor's Offices



Waiting Rooms



Dental Offices



Conference Rooms



Classrooms

Other Applications

- Forensic Labs
- Medical/Biology Labs
- Nursing Homes
- Disease Testing Centers
- Open Workplaces
- Stores
- Other Populated Areas



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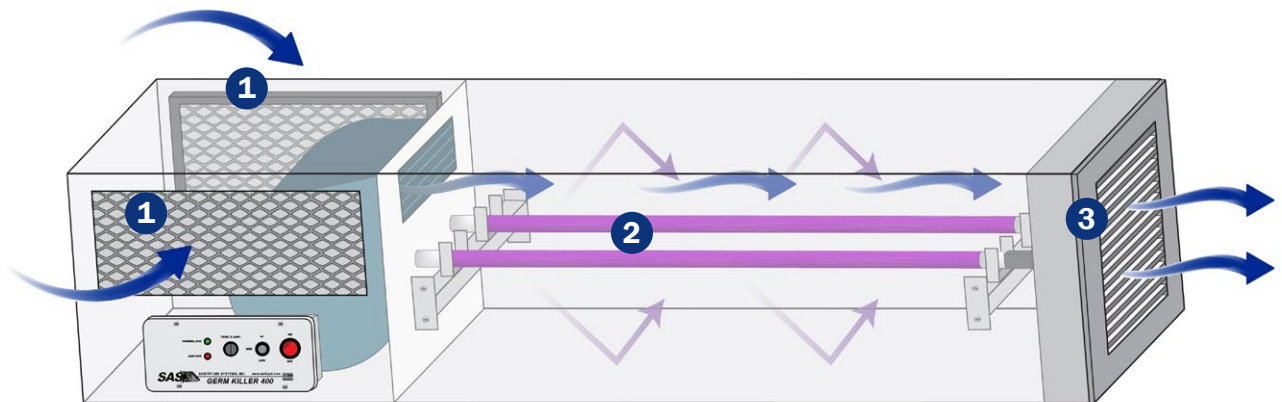
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Product Features and Benefits



- **Includes:** (2) UV-C high-wattage lamps, (2) washable pre-filters, adjustable airflow control, and UV-C light sensor with LED lights
- Two high-intensity UV-C light bulbs help deactivate microorganisms by damaging the DNA/RNA to reduce the reproduction of bacteria, viruses, and fungi
- Dual inlets feature electrostatic cleanable pre-filters to remove most of the large particles aiding in reducing particle build-up on the bulbs and reflective surfaces in order to help prevent a reduction in effectiveness
- UV-C light cabinet with light leak reduction design features
- Passed 3rd party lab testing for UV-C and ozone readings
- A safety interlock helps prevent the unit from working if the lid or filters are not in place
- Reflective surfaces in the disinfection area increase irradiance of the UV-C light and help improve efficacy
- A light sensor and LED lights indicate if the unit is supplying sufficient UV-C light to improve efficiency and reduce particle build-up on the light bulbs

How does the Germ Killer™ UVC 400 work?



1. A **strong and quiet fan** pulls airborne microorganisms and ambient air through the **dual electrostatic pre-filters**, capturing most of the medium to large particles. These pre-filters help reduce the amount of larger particles entering the system in order to help prevent a reduction in the overall effectiveness of the system.
2. The air goes through the fan and enters the **UV-C light chamber**. Two UV lamps emit UV-C light to help disinfect the air by aiding in deactivating airborne microorganisms. This chamber has reflective surfaces to help improve the irradiance of the UV light and efficacy.
3. Lastly, the air exits through an innovative patent pending **light-shielding plenum** and **adjustable directional louvers** that help reduce UV-C light leaks while minimally affecting the air pressure.



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Product Specifications



Dimensions are approximate.

Base Unit Dimensions	Length: 53" Width: 17" Height: 12.5"
Cabinet Material	Stainless Steel
Weight	Approx. 88.5 lbs
Air Volume (approximately)	High: up to 450 CFM Medium: 375 CFM Low: 300 CFM
Mounting Configurations	Wall Mount Ceiling Portable on Cart
Electrical	115V/1/60Hz, 2.2 amps 8' grounded power cord with NEMA 5-15P plug
Sound Level (3' from inlet)	High: Approx. 56 dba Low: Approx. 49 dba
Filters	Black Polypropylene Washable Pre-filters
Limited Warranty	Limited one-year warranty from date of shipment on defects due to materials or workmanship for fan, ballast, and electrical. <i>Warranty does not cover lamps.</i>
Patent	Pending



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How effective is the Germ Killer™ UVC 400 at killing certain pathogens?

UVC Dosage by CFM in a Single Pass through the System

CFM	300	375	450
Average Fluence (mJ/cm ²)	10.5	8.4	7

Data derived using sophisticated ray-tracing technology

UVC Dosage Effectiveness by Pathogen (1 Log Reduction = 90% Reduction, 2 Log = 99%, etc)

NOTE: This data is based upon factory calculations, actual results may vary. This information is being provided as a customer service. Customer should independently verify the information at their facility, under their conditions.

Pathogen	Approx. Dose per 1-Log Reduction (mJ/cm ²)	300 CFM		375 CFM		450 CFM	
		# of Log Red.	Estimated % Reduction*	# of Log Red.	Estimated % Reduction*	# of Log Red.	Estimated % Reduction*
SARS-CoV-2 ^A	2.5	4.2	99.9937%	3.4	99.956%	2.8	99.8415%
MRSA - Staph ^B	3.2	3.3	99.9477%	2.6	99.763%	2.2	99.3506%
Salmonella Enteritidis ^C	4	2.6	99.7629%	2.1	99.206%	1.8	98.2217%
Salmonella typhi ATCC 19430 ^D	1.8	5.8	99.9999%	4.7	99.998%	3.9	99.9871%
E. Coli O157:H7 ^E	3.5	3.0	99.9000%	2.4	99.602%	2.0	99.0000%
Influenza A ^F	0.85	12.4	>99.9999%	9.9	>99.9999%	8.2	>99.9999%
Streptococcus Bacteria ^G	6.6	1.6	97.4350%	1.3	94.663%	1.1	91.3025%

- * The data listed assumes a linear relationship between UV-C and log reduction of microorganisms based on testing conducted in UV-C irradiance. Actual results may vary.
- ^ There are many different types of E. Coli. O157:H7 represents the most dangerous type to humans.
- \$ Levels of humidity can affect the dose required. The higher the humidity, the higher the dose. Dose shown is 50% RH.
- A [Rapid and complete inactivation of SARS-CoV-2 by ultraviolet-C irradiation](#) - A. Griffins - 2020
- B [UV inactivation of pathogenic and indicator microorganisms](#) - J C Chang - 1985
- C [UV Irradiation Dosage Table](#) - American Air & Water - 2020
- D [Coliphage MS-2 as a UV water disinfection efficacy test surrogate for bacterial and viral pathogens](#) - Wilson, B.R. - 1992
- E [UV inactivation, liquid-holding recovery, and photoreactivation of Escherichia coli O157...](#) - R. Sommer - 2000
- F [Aerosol Susceptibility of Influenza Virus to UV-C Light](#) - McDevitt - 2012
- G [UV inactivation of pathogenic and indicator microorganisms](#) - J C Chang - 1985



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