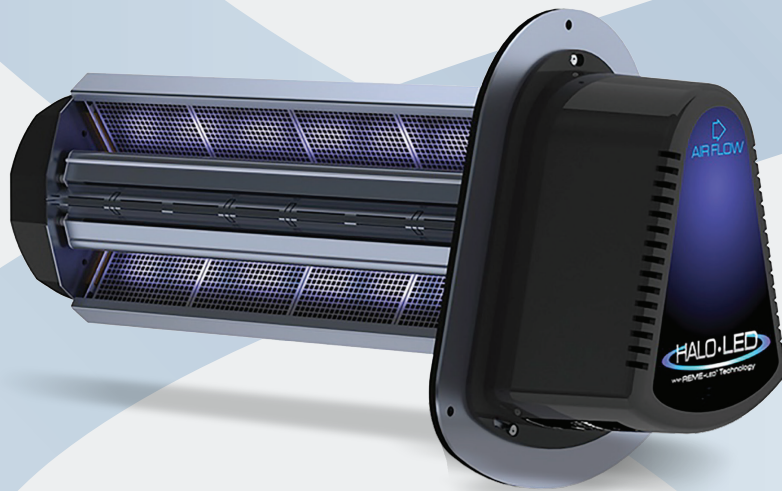




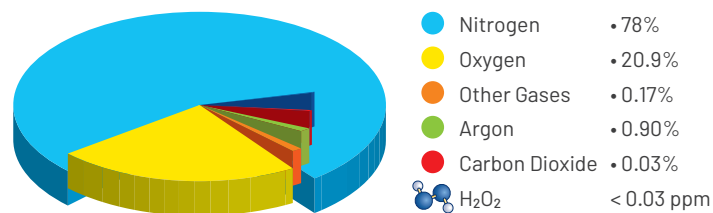
Most Advanced Air Purification Technology



NATURAL H₂O₂ MOLECULES BASED TECHNOLOGY

RGF Environmental Group, Inc. manufactures the most advanced Air Purification system with PHI-Cell® technology in USA. This technology converts a small amount of water molecules H₂O to natural and safe H₂O₂ molecules that act as the cleaning agents. These molecules fill the room and clean everything that they touch, both in the air and all surfaces.

COMPOSITION OF AIR IN NATURE



HEPA cleans only air that passes through the equipment:

- › Ineffective when sick person(s) or offending source(s) is in the room.
- › Ineffective when germs/offending source(s) are on/from surfaces.

In this situation, people are exposed before HEPA has a chance to clean.

HEPA

VS

H₂O₂



In contrast, H₂O₂ molecules are always surrounding, protecting anyone in the room and cleaning any surfaces indoor.



BENEFITS OF H₂O₂ MOLECULES



NATURAL AND SAFE

These molecules are SAFE for humans, animals and plants.

- › Abundant outdoor in atmosphere when sun light is presence and turns H₂O to H₂O₂ temporarily.
- › H₂O₂ molecules cyclically turn back to H₂O molecules.



CLEAN GERMS

Deactivate Virus/Bacteria/Molds in air and surfaces:

- › Prevent spreads of pathogens even when the sick person is in the room.
- › Protects people from pneumonia, skin and metabolic diseases.
- › Disinfect all surfaces in the room including furniture, door handles, floors, etc.
- › Reduce the growth of molds thus protecting valuable leather goods, bags, shoes, paintings, consumables, etc.



CLEAN VOC'S

Neutralize VOC's including Formaldehyde and Ethylene:

- › VOC's sources: furniture, fresh paints, cleaning agents.
- › VOC long exposure may cause cancer, abortions, infertility, respiratory/kidney/liver diseases.



CLEAN SMOKES

Reduce smoke in the air:

- › Help reduce smoke caused by cigarettes, cooking, and other burning processes.



CLEAN ODORS

Neutralize odors in air and surfaces:

- › Removes all kinds of odors from cigarettes, cooking, human body, chemicals, food, pets, organic waste, human and animal waste, etc.
- › Also removes odors from surfaces such as furniture, carpets, kitchen, etc.

APPLICATIONS

› HOSPITALS

Prevent the spread of pathogens and increase patients' recovery time.

› RESTAURANTS

Prevent contamination from food handling and reduce smoke and odors.

› RESIDENTIALS

Protect valuable items such as leather goods and paintings, etc.

› HOTELS

Removes unpleasant odors in public areas and rooms.

› ELEVATORS

Continuously disinfect surfaces from contaminations and prevent the spread of pathogens in the air.

› SMOKING ROOM

Reduce/eliminate smoke and odors.

› OFFICE BUILDINGS

Increase the indoor air quality index to attract/retain tenants.

› SUPERMARKET

Remove unpleasant odors from the meat/seafood sections and prevent contamination from food handling.

› PHARMACEUTICALS

Help continuously disinfect clean rooms and other areas thus reducing risks of contamination.

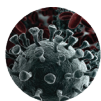
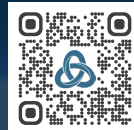
› FOOD PROCESSING

Help increase levels of food sanitation thus preventing contamination and reducing unpleasant odors.

› WAREHOUSES

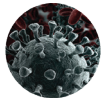
Reduce the rate of mold growth and other potential contamination of pathogens.

TEST RESULTS



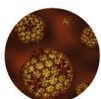
MS2 Bacteriophage – Virus

Testing Summary: 99+% Airborne Inactivation of MS2 Bacteriophage



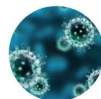
Avian Influenza/Bird Flu – Virus

Tested by Kansas State University
Inactivation Rate 99+%



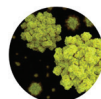
SARS-CoV-2 – Virus

Testing Summary: 99+% Airborne Inactivation of SARS-CoV-2 (Virus causing COVID-19)



H1N1/Swine Flu – Virus

Tested by Kansas State University
Inactivation Rate 99+%



Norovirus/Norwalk Virus

Tested by Midwest Research Institute
Inactivation Rate 99+%



Bacillus Globigii – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



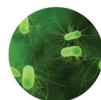
Bacillus Cereus/B. Cereus – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



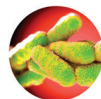
C. Diff./Clostridium Difficile – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



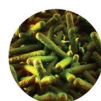
E. coli/Pathogenic Escheria Coli – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



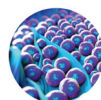
Legionella – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



Listeria Monocytogenes – Bacteria

Tested by Kansas State University,
Streis Labs, KAG/Eco Labs
Inactivation Rate 99+%



Salmonella – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



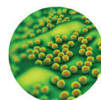
Staph / Staphylococcus Aureus – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



Methicillin Resistant Staphylococcus Aureus (MRSA) – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



Pseudomonas Sp. – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



Streptococcus Pneumoniae – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



Streptococcus sp/Strep – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



Tuberculosis – Bacteria

Tested by Kansas State University
Inactivation Rate 99+%



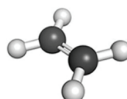
Stachybotrys Chartarum – Fungus/mold

Tested by Kansas State University
Inactivation Rate 99+%



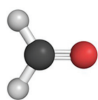
Ethylene / C₂H₄ – VOC

Testing Summary: Ethylene levels were reduced 85+% within 12 hours



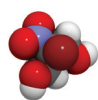
Formaldehyde / CH₂O – VOC

Testing Summary: Formaldehyde levels less than 0.05ppm in 4 hours



Chemical Compounds – VOC

Tested by GC/MS Nelap Accredited Independent Lab
Hydrogen Sulfide (Rotten Eggs) – 80% reduction
Methyl Mercaptan (Rotten Cabbage) – 100% reduction
Carbon Disulfide (Vegetable Sulfide) – 30% reduction
Butyl Acetate (Sweet Banana) – 100% reduction
Methyl Methacrylate (Plastic) – 100% reduction



Odors – Perfume, Pet Odors, Cleaning Chemicals

Tested by C&W Engineering (Independent PE Firm)
Cleaning Chemicals – 55% reduction in 24 hours
Pet Odors – 72% reduction in 24 hours
Perfume Odors – 63+% reduction in 24 hours



Smoke Odors

Tested by C&W Engineering (Independent Firm)
Smoke Odors – 70% reduction



Suspended Particle

Tested by Kansas State University,
Performance Analytical Labs
12 hours ISO Class 4 (10,000 – 0.1um)
24 hours ISO Class 3 (1,000 – 0.1um)



Mold – Yeast – Bacteria

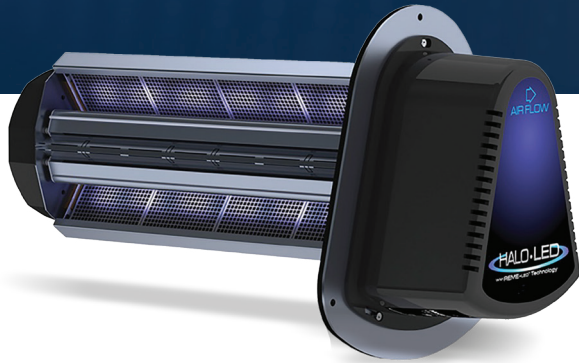
Tested by California Microbiology Center
Mold: 97-98% reduction
Yeast: 90+% reduction
Bacteria: 99% reduction



Ozone – EMF-Safety Test

Tested by: ETL, TUV to UL standards, CSA, Kansas State University, and other third parties to ensure compliance with Federal Safety Standards (Tests passed)

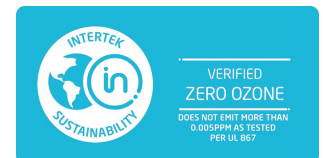
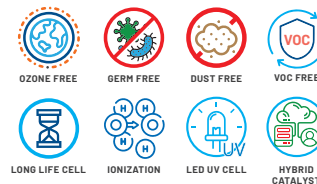
PRODUCTS



HALO-LED™

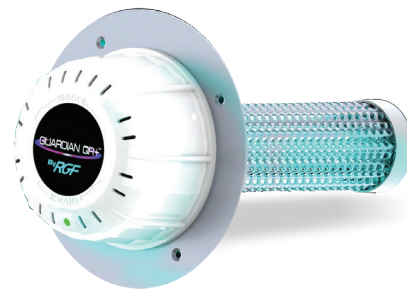
- › REME-LED™ technology: H₂O₂ molecules + Bi-Polar Ionization
- › Certified Ozone Free
- › Maintenance: replace UV-C light up to 5 years and washable catalyst
- › Installation: ducting

Model	HALO-LED™
Air Flow	250 – 6,500 CFM
Electricity	0.7 A, 17 Watts
Dimension	28 cm probe/16.5 cm x 19.5 cm plate
Weight	2.7 kg
Power Supply	120/208/240 VAC 50/60 Hz

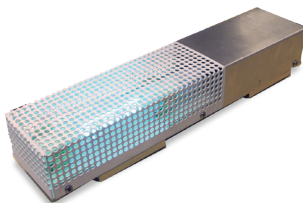


GUARDIAN AIR QRP+

- › PHI-CELL® technology: H₂O₂ molecules
- › Maintenance: replace UV-C light up to 2 years
- › Installation: ducting

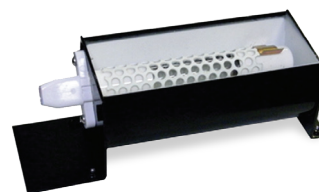


Model	QRP-5	QRP-9	QRP-14
Air Flow	300 – 1,200 CFM	1,000 – 6,500 CFM	10,000 – 18,000 CFM
Electricity	0.47 A, 11 Watts	0.6 A, 14 Watts	0.7 A, 17 Watts
Dimension	13 cm Probe/14 cm Dia. Plate	23 cm Probe/14 cm Dia. Plate	36 cm Probe / 14 cm Dia. Plate
Weight	1.4 kg	1.4 kg	1.8 kg
Power Supply	120/208/240 VAC 50/60 Hz		



PACKAGE PHI UNIT

- › PHI-CELL® technology: H₂O₂ molecules
- › Maintenance: replace UV-C light up to 2 years
- › Installation: ducting, AHU/FCU, cabinet/package, cassette



PTAC UNIT

- › PHI-CELL® technology: H₂O₂ molecules
- › Maintenance: replace UV-C light up to 2 years
- › Installation: AHU/FCU, cabinet/package, cassette, elevator





MICROCON® 600

- › Filters: Pre-Filter, HEPA H13 Filter (optional: carbon and MC-X for airborne radioactive particles)
- › Can integrate with HALO-LED™
- › Maintenance: wash pre-filter every 6 months, replace HEPA filter every 2 years
- › Installation: ducting via By-Pass method, standalone.

MINI-SPLIT

- › PHI-CELL® technology: H₂O₂ molecules
- › Maintenance: replace UV-C light up to 2 years
- › Installation: split wall mount, convertible



PROJECT REFERENCES



Pondok Indah Hospitals



Raa Cha BBQ Restaurant

PROJECT REFERENCES



Pakubuwono Signature Apartment



Monsieur Spoon Restaurant



The Langham Residence



Bank Indonesia



Sequis Tower



Menara Astra

And the industry leaders have embraced our technology



....and many more



PT Clarus Tata Graha ☎ +62 21 3878 2120 📞 +62 852 1000 0880 🌐 clarus.id

📍 Jalan Lapangan Bola No. 9D, Kebon Jeruk, Jakarta Barat 11530 Indonesia

