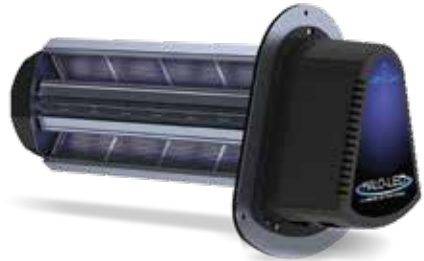




## Most Advanced Air Purification Technology



# NATURAL H<sub>2</sub>O<sub>2</sub> 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 H<sub>2</sub>O to natural and safe H<sub>2</sub>O<sub>2</sub> 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.

On the other hand, 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.

In contrast, H<sub>2</sub>O<sub>2</sub> molecules are always surrounding, protecting anyone in the room and cleaning any surfaces indoor.



# BENEFITS OF H<sub>2</sub>O<sub>2</sub> MOLECULES



**NATURAL AND SAFE**  
These molecules are SAFE for humans, animals and plants.

- › Abundant outdoor in atmosphere when sun light is presence and turns H<sub>2</sub>O to H<sub>2</sub>O<sub>2</sub> temporarily.
- › H<sub>2</sub>O<sub>2</sub> molecules cyclically turn back to H<sub>2</sub>O 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 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.



**CLEAN SMOKES**  
Reduce smoke in the air:

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

## 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
- SARS-CoV-2 – Virus**  
Testing Summary: 99+% Airborne Inactivation of SARS-CoV-2 (Virus causing COVID-19)
- Avian Influenza/Bird Flu – Virus**  
Tested by Kansas State University  
Inactivation Rate 99+%
- 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+%
- 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+%
- Salmonella – Bacteria**  
Tested by Kansas State University  
Inactivation Rate 99+%
- Staph / Staphylococcus Aureus – 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+%
- Mold – Yeast – Bacteria**  
Tested by California Microbiology Center  
Mold: 97-98% reduction  
Yeast: 90+% reduction  
Bacteria: 99% reduction
- 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 Metharcylne (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)
- 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 Federal Safety Standards

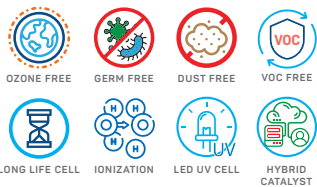
# PRODUCTS



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

## HALO-LED™

- › REME-LED™ technology: H<sub>2</sub>O<sub>2</sub> molecules + Bi-Polar Ionization
- › Certified Ozone Free
- › Maintenance: replace UV-C light up to 5 years and washable catalyst
- › Installation: ducting



## GUARDIAN AIR QR+

- › PHI-CELL® technology: H<sub>2</sub>O<sub>2</sub> molecules
- › Maintenance: replace UV-C light up to 2 years
- › Installation: ducting

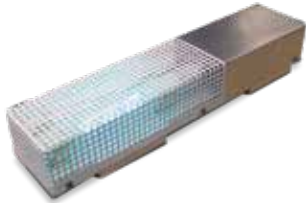


Model	QRP-5	QRP-9	QRP-14
Air Flow	300 – 1,200 CFM	1,000 – 6,500 CFM	10,000 – 18,000 CFM
Electricity	0.47 Amps, 11 Watts	0.6 Amps, 14 Watts	0.7 Amps, 17 Watts
Dimension	13cm Probe/14cm Dia. Plate	23cm Probe/14cm Dia. Plate	36cm Probe / 14cm Dia. Plate
Weight	1.4 kg	1.4 kg	1.8 kg
Power Supply	120/208/240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



## PACKAGE PHI UNIT

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



## PTAC UNIT

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



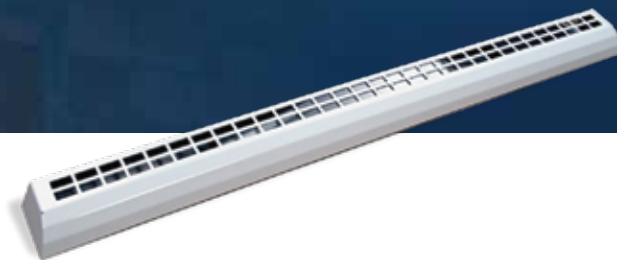


# PROJECT REFERENCES



## 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: H<sub>2</sub>O<sub>2</sub> molecules
- › Maintenance: replace UV-C light up to 2 years
- › Installation: split wall mount, convertible



# PROJECT REFERENCES



Pondok Indah Hospitals



Rachaa BBQ Restaurant



Pakubuwono Signature Apartment



The Langham Residence



Monsieur Spoon Restaurant



Bank Indonesia





Sequis Tower



Menara Astra

And the industry leaders have embraced our technology



....and many more



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