

PCA Ionization System BGSE-150-BPIM

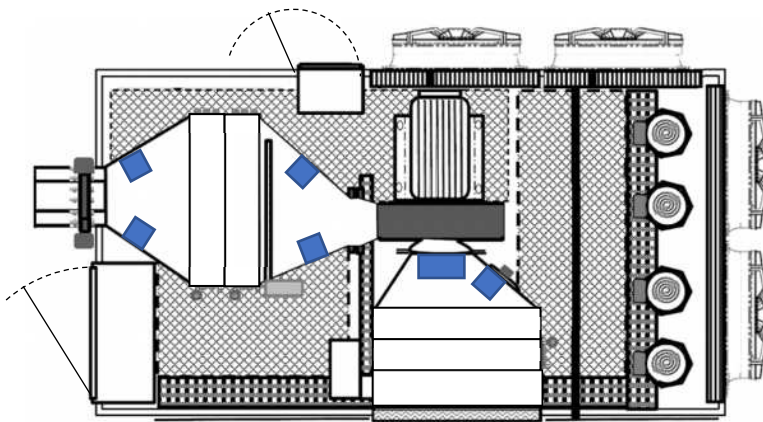


Airflow Sanitizing Bipolar Ion Generator

- ✦ **Kills Pathogens** (viruses, bacteria, mold)
- ✦ **Destroys Odors** caused by VOCs (fuel and chemicals)
- ✦ **Reduces Particulates** suspended in the airstream

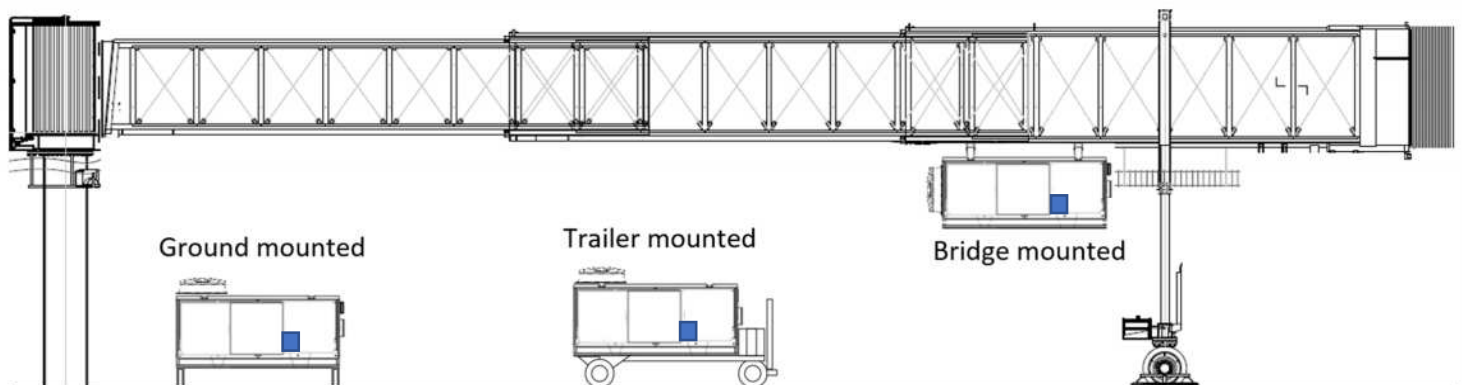
Kills the
COVID-19 Virus
See Page 3

Multiple installation locations
and airflow options



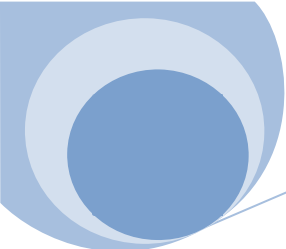
Suitable for new equipment and field retrofits – all makes, all models, fixed or mobile!
For Central System AHUs or PoU DX Units

Easy installation ✦ No control interface required ✦ Multiple Voltages



Exclusive Worldwide Distributor

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BGSE-150-BPIM Bi-Polar Ionization System

Product Description

The BGSE-150-BPIM is an autocleaning, zero-maintenance, needlepoint bipolar ionization system designed to handle up to 150 tons of airflow. The **generated ions kill microbes and destroy odors in the airstream and the conditioned space.**

Features

All-composite and carbon fiber construction, universal voltage input, in-line On/Off switch, programmable auto-cleaning cycle, plasma on indication light, alarm contacts, mounting magnets and replaceable carbon fiber brush emitters*.

*Life cycle testing shows no mechanical degradation of the carbon fiber brushes due to repeated cleaning cycles

Options

Ion detector for one-time or real-time confirmation of delivered free ions, and BAS communication of system status.

Benefits



Kills Pathogens (Viruses, Bacteria, Mold), Helps to Control Allergens/Asthma



Neutralizes Odors by destroying VOCs



Reduces Particles and Smoke*

*These statements are based on numerous customer testimonials and have not been evaluated by the FDA.

Specifications

Input Voltage	24VAC to 240VAC
Amps	0.41A to 0.041A
Power	10 Watts
Frequency	50/60HZ
Total Ion Output	> 400 Million ions/cc/sec
Airflow Capacity	Up to 150 tons of airflow
Temperature/Humidity	-20°F to 200°F / 0-100% RH
Unit Dimensions/Weight	11.1"L x 1.84"W x 3.52"H / 1.32 lbs
Electrical Listings	UL, cUL, CE
Alarm Contact Rating	250VAC/ 1A
Compliance & Certifications	UL 867, OSHPD Seismic (OSP), IAQP



The BGSE-150-BPIM is designed to be maintenance free, thanks to the patent-pending self-cleaning system.

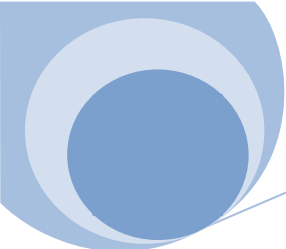
Multiple installation options are possible due to the auto-detecting universal voltage input module, and the magnetic mounting tabs, which allow tool-less mounting and repositioning in the ductwork.

The system is designed for full wash-down capability without damage or deterioration.

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Reducing the Spread of Disease

Through Needlepoint Bipolar Ionization (NPBI) Technology



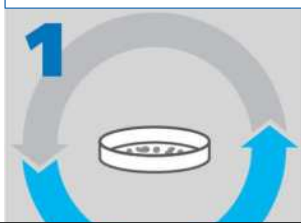
Inactivates Pathogens – When ions come into contact with pathogens, they steal away hydrogen from the pathogens, destroying its DNA and reducing the infectivity of the virus.

Clears the air of particles faster – Particulate matter includes pollutants, dust, allergens, mold, bacteria – and viruses. NPBI technology generates a high concentration of positive and negative ions that travel through the air continuously seeking out and attaching to particles. The agglomerated particles are more easily captured by the ventilation and filtration systems or become too heavy and cannot remain suspended in the air.

Safe – NPBI is safe to use across all commercial, industrial, and residential applications. Traditional bipolar ionization systems produce harmful ozone as a byproduct, but NPBI is OZONE FREE.

Performance Validation

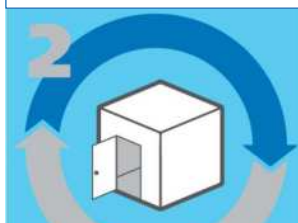
SENSITIVITY TESTING



A petri dish containing a pathogen is placed under a laboratory hood, then monitored to assess the pathogen's reactivity to NPBI over time.

Controlled environment for comparing different pathogens.

SIMULATION TESTING



Counts of airborne pathogens are taken before and after aerosolizing them into a sealed laboratory environmental room installed with NPBI.

Larger space simulates a real-world environment.

FIELD TESTING



Measurements in real applications can be compared in spaces with and without NPBI, or the same space before and after NPBI.

Pathogens occur normally, not introduced specifically for testing.

Pathogen Tested:

SARS-CoV-2, the virus that causes "COVID-19"

Date: 5/27/2020

Laboratory Name:

Innovative Bioanalysis

Cap Lic No: 9501843

**INNOVATIVE
BIOANALYSIS**
creating solutions | getting results

Time	% Inactive
10 minutes	84.2%
15 minutes	92.6%
30 minutes	99.4%

Norovirus*
TIME IN CHAMBER **30 MINUTES**
RATE OF REDUCTION **93.5%**
* Simulated Norovirus, actual virus tested was
Hague California, ATCC 35, T-2, 100, 100, 100

Human Coronavirus
TIME IN CHAMBER **30 MINUTES**
RATE OF REDUCTION **99.4%**
Human Coronavirus SARS-CoV-2

Legionella
TIME IN CHAMBER **30 MINUTES**
RATE OF REDUCTION **99.7%**

Clostridium Difficile
TIME IN CHAMBER **30 MINUTES**
RATE OF REDUCTION **86.8%**

Tuberculosis
TIME IN CHAMBER **60 MINUTES**
RATE OF REDUCTION **69.0%**

MRSA
TIME IN CHAMBER **30 MINUTES**
RATE OF REDUCTION **96.2%**

Staphylococcus
TIME IN CHAMBER **30 MINUTES**
RATE OF REDUCTION **96.2%**

E.coli
TIME IN CHAMBER **15 MINUTES**
RATE OF REDUCTION **99.6%**

Major Medical Center
6 TEST ROOMS VS. 6 CONTROL ROOMS
**GRAM NEGATIVE RODS
REDUCED TO 0**

**ISOLATED
PATHOGENS
64%-99%
LESS PER DAY**

**LOWER
AVERAGE CFU
THROUGHOUT
TEST PERIOD**

**Air Travel
Command Center**
**BEFORE VS. AFTER
1 MONTH**

**PARTICLE
REDUCTION**
0.3µm -- 87.2 %
0.5µm -- 95.4 %
1.0µm -- 95.8 %

