

The Leaders in INDOOR AIR QUALITY (IAQ)



Through our patented technology, NEEDLEPOINT BIPOLAR IONIZATION, also known as NPBI, our products purify indoor air by eliminating airborne Particulates, Odors and Pathogens. All this while saving you Energy consumption and lowering your carbon footprint by reducing outdoor air intake.

GPS delivers clean indoor air that is safe and healthy – producing neither ozone nor other harmful by-products

3rd Party Testing Summary*

SENSITIVITY TESTING	SIMULATION TESTING
<p>A petri dish containing a pathogen is placed underneath a laboratory hood, then monitored to assess the pathogen's reactivity to NPBI over time. This controlled environment allows for comparison across different types of pathogens.</p>	<p>Counts of airborne pathogens are taken before and after aerosolizing them into a sealed, unoccupied laboratory environmental room installed with NPBI technology. The larger space more closely resembles a real-world environment.</p>
<p>Norovirus[†]</p> <p>TIME IN CHAMBER 30 MINUTES</p> <p>RATE OF REDUCTION 93.5%</p> <p><small>† Surrogate for Norovirus, actual strain tested was Feline Calicivirus, ATCC VR-782, Strain F-9</small></p> <p>ATS LABS EXCELLENCE IN MICROBIOLOGICAL TESTING</p>	<p>Tuberculosis</p> <p>TIME IN CHAMBER 60 MINUTES</p> <p>RATE OF REDUCTION 69.0%</p> <p>EMSL</p>
<p>Human Coronavirus^{††}</p> <p>TIME IN CHAMBER 60 MINUTES</p> <p>RATE OF REDUCTION 90.0%</p> <p><small>†† Surrogate for Human Coronavirus SARS-CoV-2, actual strain tested was Human Coronavirus 229E</small></p> <p>ALG LAB GROUP</p>	<p>MRSA</p> <p>TIME IN CHAMBER 30 MINUTES</p> <p>RATE OF REDUCTION 96.2%</p> <p>EMSL</p>
<p>Legionella</p> <p>TIME IN CHAMBER 30 MINUTES</p> <p>RATE OF REDUCTION 99.7%</p> <p>EMSL</p>	<p>Staphylococcus</p> <p>TIME IN CHAMBER 30 MINUTES</p> <p>RATE OF REDUCTION 96.2%</p> <p>EMSL</p>
<p>Clostridium Difficile</p> <p>TIME IN CHAMBER 30 MINUTES</p> <p>RATE OF REDUCTION 86.8%</p> <p>EMSL</p>	<p>E.coli</p> <p>TIME IN CHAMBER 15 MINUTES</p> <p>RATE OF REDUCTION 99.6%</p> <p>EMSL</p>

250K+ SATISFIED INSTALLATIONS



GPS FACT:
GPS can be installed in any system in any building.

ENCON Heating & AC
Building Efficiency and Sustainability

A Service Logic Company



OSHPD
OSP COMPLIANT



*Global Plasma Solutions (GPS) uses multiple data points to formulate performance validation statements. GPS technology is used in a wide range of applications across diverse environmental conditions. Since locations will vary, clients should evaluate their individual application and environmental conditions when making an assessment regarding the technology's potential benefits.

% of VIRUS CONTROLLED BASED ON TECHNOLOGY

MERV Rating	Filter Only	Filter + UVX***	Filter + Ionization *, **
6	6.2%	10%	34%
7	7%	12%	61%
8	11%	19%	84%
10	12%	35%	89%
13	46%	84%	97%
15	71%	97%	99%
16	76%	98.80%	99.90%
17 (HEPA)	99.9%	99.99%	99.99%

* Ionization increases the filter efficiency 4-5 MERV levels

** Does not take into account ionization kills in the space and on surfaces

*** UVC does not effectively kill airborne pathogens in high RH conditions²

ASHRAE Technical Paper on Airborne Infectious Diseases

<https://www.ashrae.org/File%20Library/About/Position%20Documents/Airborne-Infectious-Diseases.pdf>

Swine H1NI Influenza A: Transmission of Viruses in Indoor Air: HVAC System Protection Options

<https://elib.tips/edoc/swine-h1ni-influenza-a.html>

GPS added the third column to demonstrate estimated efficacy due to particle agglomeration as tested by Blue Heaven Labs and the National Research Council of Canada on GPS' NPBI technology.

INDEPENDENT LABORATORY TEST RESULTS

Pathogens



Reducing the Spread of Disease

GPS clears the air of particles faster

Particulate matter includes pollutants, dust, allergens, mold, bacteria – and viruses. GPS' technology constantly generates a high concentration of positively and negatively charged ions. These ions travel through the air continuously seeking out and attaching to particles. Larger by virtue of combination, these particles are removed from the air more rapidly.

GPS Inactivates Pathogens

When ions come into contact with pathogens, their microbicidal effects reduce the infectivity of the virus.

GPS is Safe

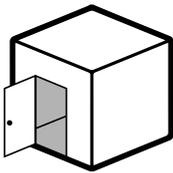
Our needlepoint bipolar ionization is OZONE free and safe to use across commercial, industrial and residential buildings. Traditional bipolar ionization systems produce harmful ozone as a byproduct.

Performance Validation*



SENSITIVITY TESTING

A petri dish containing a pathogen is placed underneath a laboratory hood, then monitored to assess the pathogen's reactivity to NPBI™ over time. This controlled environment allows for comparison across different types of pathogens.



SIMULATION TESTING

Counts of airborne pathogens are taken before and after aerosolizing them into a sealed, unoccupied laboratory environmental room installed with NPBI™ technology. The larger space more closely resembles a real-world environment.

*Global Plasma Solutions (GPS) uses multiple data points to formulate performance validation statements. GPS technology is used in a wide range of applications across diverse environmental conditions. Since locations will vary, clients should evaluate their individual application and environmental conditions when making an assessment regarding the technology's potential benefits.

SARS-CoV-2

Laboratory Name: Innovative Bioanalysis

Cap Lic No: 9501843

Date: 5/27/2020

Pathogen Tested: SARS-CoV-2

INNOVATIVE
BIOANALYSIS
creating solutions | getting results



SENSITIVITY TEST

Objective:

Aviation Clean Air commissioned testing on Global Plasma Solutions' GPS-DM48-AC model to assess its ability to neutralize SARS-CoV-2 in high-ion concentration specialty applications.

Methodology:

Single RE22 control chambers were set on a stainless steel table with pressure verification seals. The chambers had an internal working dimension of 16.5"W x 9"H x 12"D for a total cubic footage of 1.031. Under initial observation it was determined to seal the unit completely with no intake or exhaust port. Testing and control were conducted in an average ambient temperature of 72.6 degrees Fahrenheit.

A singular fan unit was set up at a 45-degree angle and affixed to the testing chamber. The initial control fan speed was measured at an average of 870 Ft/m. Under the original control section, the primary fan was set 10 inches away from ion production unit A and the average air flow speed past the ion producing nodes was 250Ft/m.

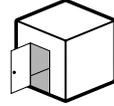
Experimental Results:

SARS-CoV-2 was exposed to needlepoint bipolar ionization for a period of 10, 15, and 30 minutes. Based on viral titrations it was determined that at 10 minutes 84.2% of the viral particles became inactive, at 15 minutes 92.6% of the viral particles became inactive, and at 30 minutes 99.4% of the viral particles became inactive.



Norovirus

Laboratory Name: ATS Labs
Project No: A14991
Date: 5/28/2013
Pathogen Tested: Feline Calicivirus



SIMULATION TEST

Objective:

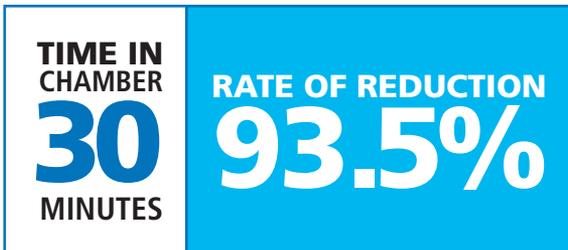
The testing was conducted on the GPS-2400-1 model for its ability to inactivate Feline Calicivirus bacteria in the air.

Methodology:

The middle support bracket was attached to the bar containing one GPS-2400-1 Cold Plasma Generator at each end of the bar. The generators were placed with the carbon fiber brushes pointing down, in the back of a hood with the hood sash closed. Minimum Essential Medium (MEM) was supplemented with 5% heat-inactivated fetal bovine serum, 100 units/mL penicillin, 10 ~g/mL gentamicin, and 2.5 ~g/mL amphotericin B.

Experimental Results:

A 93.5% average reduction in viral titer was demonstrated following a 30 minutes of exposure time, as compared to the average titer of the dried virus control. The average log reduction in viral titer was 1.19 log.





Human Coronavirus

Laboratory Name: ALG Labs

Project No: A29381

Date: 4/14/2020

Pathogen Tested: Human Coronavirus,
ATCC VR-740, Strain 229E



SENSITIVITY TEST

Objective:

Testing was conducted on GPS' technology to assess its ability to inactivate Human Coronavirus on a glass surface.

Methodology:

A glass carrier with the pathogen was placed 1" from the carbon fiber brushes of the GPS technology. The petri dish carriers were exposed to GPS' needlepoint bipolar ionization device for 1 minutes, 5 minutes, 15 minutes, 30 minutes and 60 minutes at room temperature and relative humidity. Following the exposure time, the carrier was removed and an aliquot of test medium was added to the petri dish.

Experimental Results:

A 90.0% average reduction in viral titer was demonstrated following a 60 minutes of exposure time, as compared to the average titer of the dried virus control. The reduction in viral titer was 1.00 log.



Use of this data is not permitted without written authorization from Global Plasma Solutions, Inc.

Legionella

Laboratory Name: EMSL Analytical, Inc.

EMSL No: 151508127

Date: 10/14/2015

Pathogen Tested: Legionella pneumophila



SENSITIVITY TEST

Objective:

Testing was conducted on the GPS-2400 model to assess its ability to inactivate bacteria on a solid surface.

Methodology:

Legionella pneumophila (L. pneumophila) was inoculated onto buffered charcoal yeast extract agar (BCYE) and incubated at 35°C for 48 hours. Colonies were harvested, suspended in phosphate buffer water, and vortexed for 1 minute to ensure homogenization. This suspension was then used to inoculate the test carriers.

Experimental Results:

The GPS-2400 system demonstrated the strongest efficacy after 30 minutes of exposure by inactivating 99.71% of the L. pneumophila bacteria.



Clostridium Difficile

Laboratory Name: EMSL Analytical, Inc.

EMSL No: 371208933

Date: 6/26/2011

Pathogen Tested: Clostridium difficile ATCC 70057



SENSITIVITY TEST

Objective:

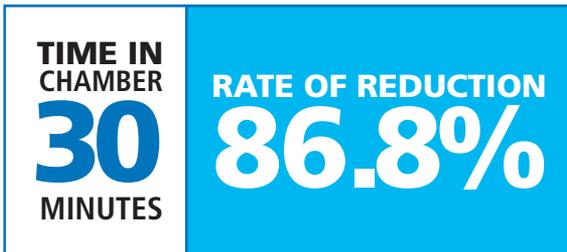
Objective: Testing was conducted on the GPS-iBAR-36 model to evaluate its effectiveness in disinfecting solid surfaces contaminated with C. Difficile.

Methodology:

The GPS-iBAR-36, needlepoint bipolar ionization system, was first set up facing down with 5 cm of clearance from the surface. The test carriers in their respective Petri-dishes were then placed under the GPS-IBAR-36 and the system was turned on. The control was not exposing to the ionizer and instead placed directly into 10 mL of PBS. Serial dilutions were then created for each carrier by taking 1mL out and placing it into the 9 mL of PBS. For each dilution 100µL was plated onto a TSAB plate. The inoculated plates were then incubated in anaerobic conditions at 37°C for 48 – 72 h. The colonies were counted and recorded.

Experimental Results:

In conclusion, the GPS-IBAR-36 demonstrated the ability to disinfect C. difficile on a solid surface with an observed percent reduction of 86.87% in 30 minutes.



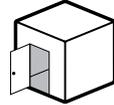
Tuberculosis

Laboratory Name: EMSL Analytical, Inc.

EMSL No: 371106420

Date: 7/15/2011

Pathogen Tested: Mycobacterium terrae ATCC 15755



SIMULATION TEST

Objective:

Testing was conducted on the GPS-iBAR-36 model to determine its ability to inactivate the bacteria in the air.

Methodology:

M. terrae first was inoculated on Tryptic Soy agar + 5% sheep blood (TSAB) and incubated at 35°C for 5 days under carbon dioxide conditions. A sterile inoculation loop was then used to collect colonies and place them into 5 mL of normal saline solution. Once testing was ready to begin, 60 psi of compressed air was pumped through the nebulizer, creating the release of 10.8 mL/h of aerosolized solution. This was run for 28 minutes, allowing for a total of 5 mL of solution being aerosolized into the test chamber.

Experimental Results:

After correcting for the natural rate of decay it was observed that there was a 0.38 log reduction after 30 minutes of exposure and a 0.51 log reduction after 60 minutes of exposure. In conclusion, the GPS-iBAR-36 was observed to reduce M. Terrae by 69.09%



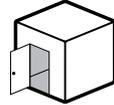
MRSA

Laboratory Name: EMSL Analytical, Inc.

EMSL No: 371106420

Date: 6/13/2011

Pathogen Tested: Methicillin Resistant Staphylococcus aureus (MRSA) ATCC 33591



SIMULATION TEST

Objective:

Testing was conducted on the GPS-iBAR-36 model to determine its ability to inactivate the bacteria in the air.

Methodology:

The nebulizer was connected to an air compressor with 1/4 inch plastic tubing and to the environmental test chamber through one of the testing openings created. The fan was turned on to create an air flow in the chamber but the ionizers were not turned on until after the initial sampling. Once testing was ready to begin, 60 psi of compressed air was pumped through the nebulizer creating the release of 10.8 mL/h of aerosolized solution. This was run for 28 minutes, allowing for a total of 5 mL of solution to be aerosolized into the test chamber.

Experimental Results:

In conclusion, the GPS-iBAR-36 demonstrated the ability to disinfect MRSA from the air with a 96.24% reduction after 30 minutes of exposure.



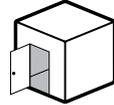
E. Coli

Laboratory Name: EMSL Analytical, Inc.

EMSL No: 371106420

Date: 7/21/2011

Pathogen Tested: Escherichia coli ATCC 8739



SIMULATION TEST

Objective:

Testing was conducted on the GPS-iBAR-36 model to determine its ability to inactivate the bacteria in the air.

Methodology:

The nebulizer was connected to an air compressor with 1/4 inch plastic tubing and to the environmental test chamber through one of the testing openings created. The fan was turned on to create an air flow in the chamber but the ionizers were not turned on until after the initial sampling. Once testing was ready to begin, 60 psi of compressed air was pumped through the nebulizer creating the release of 10.8 mL/h of aerosolized solution. This was run for 28 minutes allowing for a total of 5 mL of solution to be aerosolized into the test chamber.

Experimental Results:

In conclusion, the GPS-IBAR-36 demonstrated the ability to disinfect E. coli from the air with a 99.54% reduction after 30 minutes of exposure and a 99.23% reduction after 60 minutes of exposure.

Furthermore, these results demonstrate that the needlepoint bipolar ionization system tested does not require direct line of sight to produce inactivation rates comparable to those of ultraviolet light. The needlepoint bipolar ionization system's inactivation rates are indicative of those in the entire space.



Independent Laboratory Testing Results Summary



PATHOGEN	TIME IN CHAMBER	RATE OF REDUCTION	TESTING LAB
SARS-CoV-2	30 MINUTES	99.4%	INNOVATIVE BIOANALYSIS creating solutions getting results
Norovirus*	30 MINUTES	93.5%	ATS LABS EXCELLENCE IN ANTIMICROBIAL TESTING
Human Coronavirus**	60 MINUTES	90.0%	ALG ANALYTICAL LAB GROUP
Legionella	30 MINUTES	99.7%	EMSL
Clostridium Difficile	30 MINUTES	86.8%	EMSL
Tuberculosis	60 MINUTES	69.0%	EMSL
MRSA	30 MINUTES	96.2%	EMSL
Staphylococcus	30 MINUTES	96.2%	EMSL
E. Coli	15 MINUTES	99.6%	EMSL

* Surrogate for Norovirus, actual strain tested was Feline Calicivirus, ATCC VR-782, Strain F-9

** Surrogate for Human Coronavirus SARS-CoV-2, actual strain tested was Human Coronavirus 229E

Use of this data is not permitted without written authorization from Global Plasma Solutions, Inc.

GlobalPlasmaSolutions.com

Engineering Air for a Cleaner World™



980-279-5622

GlobalPlasmaSolutions.com

Engineering Air for a Cleaner World™

©2020 Global Plasma Solutions, Inc.

This document and its contents are protected by copyright.

Use of this data is not permitted without written authorization from Global Plasma Solutions, Inc.
GPS®, Global Plasma Solutions® and its logos are trademarks of Global Plasma Solutions, Inc.

Table of Contents

Product Selection & Pricing	2
Technical	2-3
Installation	3-4
Maintenance	4-5
Energy Efficiency	5
Warranty	5
Safety	5

Product Selection & Pricing

How do I select the right product?

A representative will conduct a site survey and customer interview to help determine the right product to fit your needs in terms of coil cleaning, particle reduction, and/ or pathogen control.

Technical

What is Needlepoint Bipolar Ionization and how does it work?

GPS' NPBI technology works to safely clean the air inside industrial, commercial and residential buildings. The patented technology uses an electronic charge to create a plasma field filled with a high concentration of + and - ions. As these ions travel with the air stream they attach to particles, pathogens and gas molecules. The ions help to agglomerate fine sub-micron particles, making them filterable. The ions kill pathogens by robbing them of life-sustaining hydrogen. The ions breakdown harmful VOCs with an Electron Volt Potential under twelve ($eV < 12$) into harmless compounds like O₂, CO₂, N₂, and H₂O. The ions produced travel within the air stream into the occupied spaces, cleaning the air everywhere the ions travel, even in spaces unseen.

What happens to the particulates after they agglomerate?

They are captured by the HVAC system filter. The effective efficiency of a MERV 8 filter is increased to a MERV 13 with the addition of a GPS system. The particles that do not return to the filter become too large to remain airborne and fall out of the breathing zone.

How long do the ions last in the air?

Typically, small ions have a life expectancy of about 20-30 seconds before they touch a surface or particle to discharge.

What is the optimal ion count in the space?

About 2,000 ions/cc/sec.

How does NPBI technology compare to UV technology for improving indoor air quality?

A UV lights' intensity will fade over time reducing its effectiveness. The auto cleaning technology employed by GPS does not have this concern. Some UV lights produce harmful ozone. UV lights require costly bulb replacement at regular intervals. GPS does not require periodic replacement parts.

Does this replace UV technology or work in conjunction with UV technology?

NPBI is an ozone-free alternative to UV light, but it is possible to use NPBI and UV light in combination.

How do I know the product is working?

Check the indicator lights on the DM48, FC48, iRIB and iMOD® Power Supply (not module), call the installer, or purchase one of our sensors.

Does the technology generate line noise or EMF?

GPS' technology does not generate line noise and does not generate electromagnetic forces. GPS' technology is the only ionization technology approved by the FAA for installation on aircraft, since it's passed the stringent DO-160 certification. This certification proves there is no line noise and no EMF (which can be detrimental to aircraft avionics, if produced).

Will one product properly sized and installed, enable me to address both coil cleanliness and assigned space ionization requirements?

Possibly, ionization is not a one size fits all. Distance from the equipment to space and duct design play major roles in this equation. Contact GPS for more information or your application.

Are there byproducts?

No. Passing through an ionization field causes harmful compounds to break into one or more of four basic elements: oxygen, nitrogen, carbon dioxide or water vapor.

Can you measure how the product is performing?

GPS offers iMeasure™ and iDetect™ sensors to measure product performance.

Does NPBI mitigate the need for carbon filters or HEPA filters?

GPS recommends using filters in conjunction with NPBI.

Do air filters need to be changed more frequently when used with NPBI?

Filter change intervals may be increased in some applications based on run time and how the space is utilized. Most applications can maintain their existing filter change schedule.

Does ionization degrade filters, insulation, wire coatings like UV?

No.

Does ionization have an odor to it?

No, ionization is odorless. Some customers have experienced a change in the way the ionized space smells, due to the removal of odors they had grown accustomed to.

Does NPBI mitigate ALL odors that carbon filters capture?

NPBI will mitigate odors created by compounds with an electron volt potential of 12ev or less.

Can both coil cleanliness and ionization requirements be met with a single product?

The iRIB and iMOD® models and good options for this, as can be the FC48 (based on mounting location).

Installation

Can I install it myself?

GPS recommends installation by a trained professional.

What is the electrical consumption of the product?

The electrical consumption is up to 15 watts, or less per unit.

How long does it take to install?

Typical installations can be completed in 30 to 60 minutes per system.

Does GPS install the product?

No. Please contact a trained professional in your local area for installation.

Where do I install the product?

Our products were designed for flexibility with mounting, offering multiple mounting options including at the fan inlet, interior duct wall or interior duct floor. The best mounting location is after a prefilter and before the cooling coil. If this location is not possible, the device may be mounted after the cooling coil. As a last resort, the device can be mounted before a filter, but the filter will stop the ions and there will be no further benefit downstream of the filter.

Is the product easy to install?

We designed our products to be easy to install across many environments and conditions. Our products offer multiple mounting options including at the fan inlet, interior duct walls or interior duct floor. The all-composite and carbon fiber construction allows the product to be mounted in corrosive environments.

Are any special tools are required for commissioning?

For a typical installation, no special tools are required.

Can it be connected to a BAS system?

Yes. Our products can be used with a building automation system (BAS).

Maintenance

What are the auto-clean settings?

The factory setting is to clean once every three days. The cleaning frequency can be changed to clean between once every day to once every five days.

Will humidity effect the NPBI ion output?

Humidity does not impact the ionization output; however, if water condenses on the needle tips, ions cannot emit and the ion output will be greatly reduced or cease.

Do I have to clean the product unit?

Models FC48-AC and DM48-AC feature an auto-cleaning, maintenance-free system for easy use and ultimate convenience. These models include a programmable auto-cleaning cycle which cleans the carbon fiber brush emitters on your desired schedule. Under most circumstances, the factory auto-clean setting for every three days is sufficient.

How long does the product last?

On average, our products last 7 – 10 years. Accelerated life-cycle testing has shown the emitter brushes and the motor that actuates the arm that cleans them, to last more than 20 years.

Are replacement parts available?

Yes, GPS offers replacement parts.

Are any aftermarket consumables required?

GPS recommends NPBI be used in combination with air filters.

Does product performance deteriorate over time?

Auto-clean models retain the highest levels of performance over time. To avoid degradation in performance, models without auto-clean should be cleaned once a year in most applications and every six months in high load situations.

Does the product keep my HVAC ducts clean, eliminating the need for annual or periodic cleaning?

Customers who have installed GPS technology have greatly reduced or eliminated the need for duct cleaning.

What special tools are required for troubleshooting?

A high voltage probe attached to digital multimeter and a handheld ion counter are needed.

Energy Efficiency

How does this product save energy?

Simply put, by using air cleaning products, it allows facilities to reduce the amount of Outdoor Air (OA) needed to properly ventilate a property, which can require additional equipment with higher energy costs. Outdoor air is required to ventilate a property according to the VRP (Ventilation Rate Procedure) which requires HVAC equipment and HP. By increasing the Indoor Air Quality and minimizing contaminants of concern, a site may be able to reduce the need for Outdoor Air, up to 75% less, which could save on upfront HVAC capital costs and yield less energy consumption. (Reference the Indoor Air Quality Procedure IAQP in ASHRAE 62.1)

Do we earn LEED points with the installation of this product?

There are two ways our products help contribute to generating LEED points, in accordance to the U.S. Green Building Council. As a part of the LEED "Indoor Air Quality Assessment", a site must demonstrate that certain contaminants do not exceed specified concentration levels, using baseline IAQ testing protocols. Our products enhance Indoor Air Quality Performance to help achieve the desired levels. And as a part of the LEED "Optimize Energy Performance", a site can also earn points by analyzing efficiency measures focused on load reduction and HVAC-related strategies. Our products can help demonstrate the potential energy savings and cost implications for all affected systems.

Warranty

What is the warranty on GPS products?

Equipment manufactured by Global Plasma Solutions, Inc. is warranted by GPS to be free from defects in workmanship or materials for a period of one year from the date of shipment to the original Customer.

Safety

Is NPBI safe for people and animals?

GPS' NPBI products are completely safe for humans and animals. With over 150,000 installations and many testimonials, GPS products have not only proven to be safe, they make the air cleaner and safer. GPS' technology produces what naturally occurs in nature and since GPS' technology has been certified by UL 2998 as ozone free, there are no health concerns.

Is your product UL certified?

Yes. Our Needlepoint Bipolar Ionization technology has been certified by UL 867 and UL 2998 to be ozone free. Also, RCTA DO-160 for aircraft.

What happens if you touch the brushes?

Touching the emitter brushes will produce a mild to moderate electric shock. It is not recommended.

Will ionization burn your eyes like UV will if you look at it?

No.



3101 Yorkmont Road • Suite 400
Charlotte, NC 28208
980-279-5622

GlobalPlasmaSolutions.com

GPS, GPS-DM48-AC and its logos are trademarks of Global Plasma Solutions, Inc.
©2020 Global Plasma Solutions, Inc.

GP060-VersionA

Engineering Air for a Cleaner World™

GPS-iMOD[®]

Modular Needlepoint Bipolar Ionization Air Purification System

Product Description

The patented GPS-iMOD is a modular needlepoint bipolar ionization system that is field assembled to any length required up to 240 inches in 6-inch increments. The composite and carbon fiber construction allows the GPS-iMOD to be mounted in corrosive environments.

Standard Features

Power Supply: Voltage Selector Switch, Illuminated On/Off Switch, Plasma On Indication Light, Six HV Output Ports, Alarm Contacts, Auxiliary Terminals for connection of an optional GPS-iDETECT-P™ Ion Sensor.
GPS-iMOD Bar: 6" Sections, Nine Brushes per Section, up to 240" Total Length, Magnets for Easy Mounting.

Benefits

-  **Particle Reduction and Smoke Control**
-  **Odors Neutralized by destroying VOCs**
-  **Pathogens Killed (Bacteria, Viruses, Mold), Helps to Control Allergens/ Asthma*, Prevents Dirty Sock Syndrome**
-  **Energy Savings of 30% by Reducing Outdoor Air Intake by up to 75%, reduces pressure loss by keeping coils clean without expensive UV system, and requires No Maintenance!**

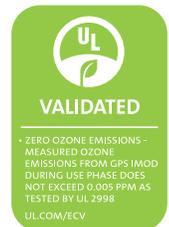
*These statements are based on numerous customer testimonials and have not been evaluated by the FDA

Specifications

Input Voltage	24/120/208-240VAC	Electrical Listings	UL, cUL, CE
Amps	0.5A/0.12A/0.065A	Compliance & Certifications	UL 2998, UL 867, IAQP, OSHPD Seismic (OSP)
Temperature Range	-40°F to 200°F	Power Unit Dimensions	9.0" L x 3.25" W x 4.75" H
Humidity Range	0 - 100% RH	Power Unit Weight	4.63 lbs
Frequency	50/60HZ	Bar Weight	0.24 lbs per 6" section
Output Voltage	5.0kV RMS	Bar Section Dimensions	6.0" L* x 0.75" W x 1.6" H
Output Frequency	50/60Hz		*Length = 6.0" x iMOD Quantity + 1.20"
Ion Output	>140M ions/cc/sec per inch of bar		
Power Entry	UL Listed, Plenum Rated Line Cord with 3 Prong Plug		

Commercial Applications

- Schools and Universities
- Arenas and Stadiums
- Office Buildings
- Manufacturing
- Transportation
- Food Service
- Animal Care
- Institutional
- Healthcare
- Hospitality



GPS[®]
 GLOBAL PLASMA
 SOLUTIONS

Engineering Air for a Cleaner World™

Global Plasma Solutions, Inc.
www.GlobalPlasmaSolutions.com

© 2019 Global Plasma Solutions, Inc.

GPS, GPS-iMOD, GPS-iDETECT-P, Global Plasma Solutions and its logos are trademarks of Global Plasma Solutions, Inc.

GPS-iRIB[®]-18/36

Flexible Needlepoint Bipolar Ionization Strip

Product Description

The patented GPS-iRIB 18-inch and 36-inch are made from a flexible heat and cold resistant, inert Kapton material containing a circuit with special carbon fiber ionization needles soldered into the circuit traces. What was a mechanism to transport voltage and signals between solid objects has now been engineered to deliver the highest level of ionization with the least amount of energy in the most compact size.

Standard Features

Comes in 18" or 36" fixed lengths, fold-to-length circuit, local LED power indication with integral control relay for BAS interface, hook and loop tape for easy installation and a wide voltage input range of 110VAC to 240VAC.

Benefits

-  **Particle Reduction and Smoke Control**
-  **Odors Neutralized by destroying VOCs**
-  **Pathogens Killed (Bacteria, Viruses, Mold), Helps to Control Allergens/ Asthma*, Prevents Dirty Sock Syndrome**
-  **Energy Savings of 30% by Reducing Outdoor Air Intake by up to 75%, reduces pressure loss by keeping coils clean without expensive UV system, and requires No Maintenance!**

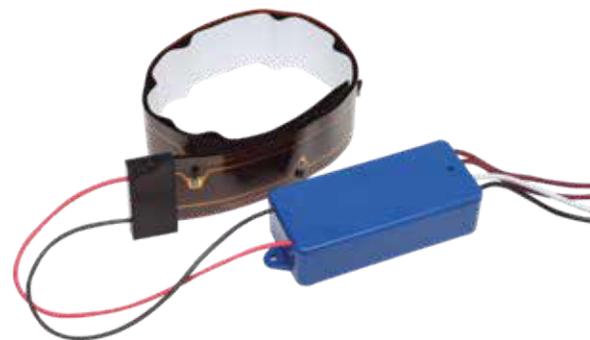
*These statements are based on numerous customer testimonials and have not been evaluated by the FDA

Specifications

Input Voltage	110VAC - 240VAC	Temperature	-40°F to 140°F
Power	5 Watts	Power Unit Dimensions	1"H x 1.75"W x 3.75"L
Frequency	50/60Hz	Dimensions (iRIB-18)	1.5"W x 18"L x 0.05"H
Voltage Output	2KV	Dimensions (iRIB-36)	1.5"W x 36"L x 0.05"H
Ion Output	>35M ions/cc/sec per foot	Weight	0.5 lbs for 18"/ 0.54 lbs for 36"
Airflow Capacity	0 - 3,200 CFM or 8 tons	Electrical Listing	UL, cUL, CE
Alarm Relay Rating	250VAC / 1A	Alarm Contact	Dry Contact with LED Status
Compliance & Certifications	UL 867, IAQP, OSHPD Seismic (OSP)		

Commercial Applications

- Traditional Split Systems
- Ductless Mini Splits
- Heat Pump PTACs
- Ceiling Cassettes
- Ducted Modules
- Air Handlers
- Fan Coils



GPS[®]
GLOBAL PLASMA
SOLUTIONS

Engineering Air for a Cleaner World™

Global Plasma Solutions, Inc.
www.GlobalPlasmaSolutions.com