

BETTER
AIR *through*
SCIENCE



We literally live and breathe INDOOR AIR.

And we are constantly striving to solve indoor air challenges.

WE HAVE ONE MISSION AT GPS®:
TO HELP DELIVER CLEANER INDOOR AIR.

How will we achieve this? By working harder to do better.

The GPS Advantage

The process.

Our patented NPBI™ (needlepoint bipolar ionization) technology actively treats the air in the space instead of passively treating it within the air handling unit (AHU) and ductwork, to help deliver cleaner indoor air without producing harmful levels of ozone or other byproducts. By using your existing system as the delivery method, NPBI works with your HVAC to provide the added benefits of reducing airborne particles in indoor spaces.

Our research.

GPS is committed to science. We're continuously investing in research and development, intellectual property and testing modeled after real-world applications.

Dynamic delivery.

We use a targeted, strategic approach to finding the right combination of products to optimize the ionization of each client's space.

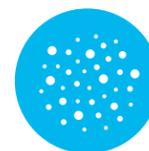
WHAT IS OZONE?

Ozone, or O₃, in the upper atmosphere is formed naturally and protects Earth from harmful UV radiation. Ground-level ozone is primarily human-caused and is harmful to breathe. GPS NPBI technology is certified to UL 2998, UL's ozone free standard. Compliance with this standard is recommended by the EPA, CDC, and ASHRAE for consumers that desire this technology.



An Innovative Process to Help Clean the Air

The air around us is filled with particles such as dust, dander, smoke, odors and even certain viruses and bacteria. Our patented NPBI technology helps reduce these airborne particles by introducing ions into the space via the airflow in your ventilation system. Our technology helps improve indoor air without producing harmful levels of ozone or other byproducts.



TARGETS PARTICLES



REDUCES CERTAIN VIRUSES AND BACTERIA



TACKLES ODORS



DISCLAIMER: Global Plasma Solutions (GPS) technology has demonstrated a reduction of certain viruses and bacteria like SARS-CoV-2, Influenza A & B, RSV, E. coli, and others in laboratory settings. Please see www.globalplasmasolutions.com/third-party-testing for more information. 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. The GPS products have not been evaluated by the FDA as medical devices and, therefore, are not intended to treat, cure, or prevent infections or diseases caused by certain viruses or bacteria. The use of this technology is not intended to take the place of reasonable precautions to prevent the transmission of disease. It is important to comply with all applicable public health laws and guidelines issued by federal, state, and local governments and health authorities as well as official guidance published by the Centers for Disease Control and Prevention (CDC), including but not limited to social distancing, hand hygiene, cough etiquette, and the use of face masks.

How we harness the POWER OF IONS

Providing innovative solutions for cleaner indoor air is what drives us. That's why we use our patented NPBI™ technology to produce positive and negative ions, delivering them to the space via the ventilation system. Within the airstream, ions attach to particles, where they combine to form larger particles that are more easily filtered from the air. We help deliver cleaner air without introducing harmful levels of ozone or other byproducts.

THE GPS® SCIENTIFIC COMMITMENT

Our dedication to clean air means we work in-house and with partners and leading third-party laboratories to test GPS' NPBI technology. We take multiple factors into consideration including but not limited to chamber size, temperature, humidity, ion density, and airflow.

Testing Approach

GPS works with third-party laboratories to continually strive for best-in-class indoor air testing. Testing is conducted in large chambers that are designed to emulate realistic applications. To learn more about testing and experiment design, please request test reports at globalplasmasolutions.com/third-party-testing.

1. IN-AIR TESTING

GPS products are designed to work with air handling systems to deliver the benefits of ionization. These tests measure the reduction of certain airborne viruses and bacteria by aerosolizing a test specimen into a large biosafety test chamber (BSL2 or BSL3) and suspending it in the air using mixing fans. Measurements of the specimen are taken at regular intervals and compared to a control without the introduction of ionization.

2. SURFACE TESTING

GPS products are designed to work with air handling systems to deliver the benefits of ionization. These tests measure the reduction of certain viruses and bacteria on surfaces by applying a specimen to glass slides, petri dishes or coupons and placing them on a table within a large biosafety test chamber (BSL2 or BSL3). Measurements of the specimen are taken at regular intervals and compared to a control without the introduction of ionization.

| In-Air Testing | | | | |
|----------------|----------------------------|-----------------|------------|------------------------|
| Specimen | Avg. Ion Density (ions/cc) | % Net Reduction | | Testing Agency |
| | | 30 minutes | 60 minutes | |
| SARS-CoV-2 | -10,000 | 40.78% | 90.87% | Innovative BioAnalysis |
| | -18,000 | 65.38% | 98.33% | |
| Influenza A | - 22,000 | 43.41% | 84.53% | Innovative BioAnalysis |
| Influenza B | - 22,000 | 32.71% | 83.93% | Innovative BioAnalysis |
| RSV | - 22,000 | 49.52% | 94.71% | Innovative BioAnalysis |

| Surface Testing | | | | |
|-----------------------|----------------------------|-----------------|------------|------------------------|
| Specimen | Avg. Ion Density (ions/cc) | % Net Reduction | | Testing Agency |
| | | 30 minutes | 60 minutes | |
| SARS-CoV-2 | -9,700 | 55.50% | 62.85% | Innovative BioAnalysis |
| | -10,250 | 55.94% | 70.71% | |
| | -20,600 | 97.90% | 99.97% | |
| | -23,600 | 98.49% | 99.98% | |
| Staphylococcus Aureus | -14,000 | 36.61% | 91.55% | Innovative BioAnalysis |
| E. coli | -14,000 | 31.46% | 86.36% | Innovative BioAnalysis |
| MRSA | -14,000 | 41.91% | 87.87% | Innovative BioAnalysis |

The GPS NPBI technology was tested by Innovative BioAnalysis in a 20 foot wide by 8 foot high by 8 foot deep chamber with a temperature range between 69 degrees and 75 degrees Fahrenheit and a relative humidity range between 42% and 52%. The technology was used in conjunction with an air handling unit designed to create and sustain achievable ion density levels that have been observed in real-world applications. Mixing fans were used to disperse the ions and suspend the test specimen within the chamber. Significant variations in temperature, humidity or other environmental factors may impact performance. Testing the reduction rate of any virus or bacteria with GPS NPBI technology is an ongoing process, and additional testing will continue in the future. Tests conducted in the same manner with attention to all experimental variables should come within a margin of error of the results stated above.

WHAT IS AN ION?

An ion is a molecule that is positively or negatively charged, meaning it must either gain or relinquish electrons in order to become neutral.

CLEANER AIR, INSPIRED BY NATURE

Naturally occurring ions are everywhere outdoors, and they are constantly working to clean the air. Ions are created with energy from rushing water, crashing waves and even sunlight. NPBI technology generates ions without producing harmful levels of ozone or other byproducts, so you can freshen the air indoors.

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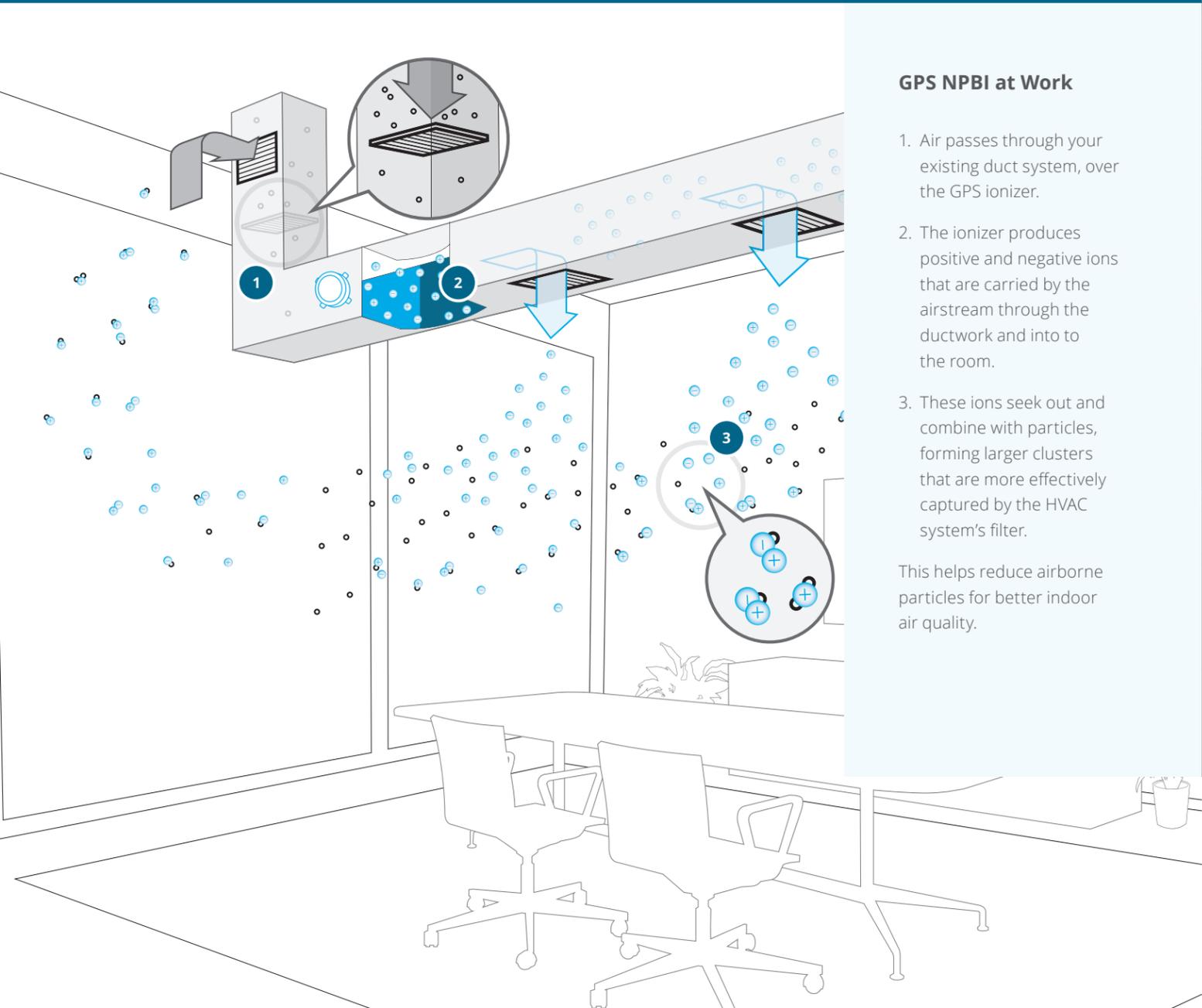
The GPS DIFFERENCE

GPS® patented NPBI™ technology works in conjunction with existing HVAC systems to actively target and reduce airborne particles, including certain odors, viruses and bacteria in indoor spaces.

Science is the foundation of our process. This means continuous testing to emulate realistic environments, which is why we've invested millions in testing and R&D over the last year.

- The four types of wide-range testing conducted include reduction of certain viruses and bacteria, particle reduction, product compliance and ion density.
- Our scientific advisory board includes experts in fields such as microbiology, physics, chemistry and data science. These experts play a critical role in informing GPS technology and product development, as well as directing company research.

- 100% of products comply with UL 867 or are UL 2998 certified to have zero ozone emissions.
- Testing facilities in Charlotte, NC and Oak Ridge, TN provide provide GPS with tremendous testing capabilities.





Put GPS

TECHNOLOGY TO WORK

Innovative Technology

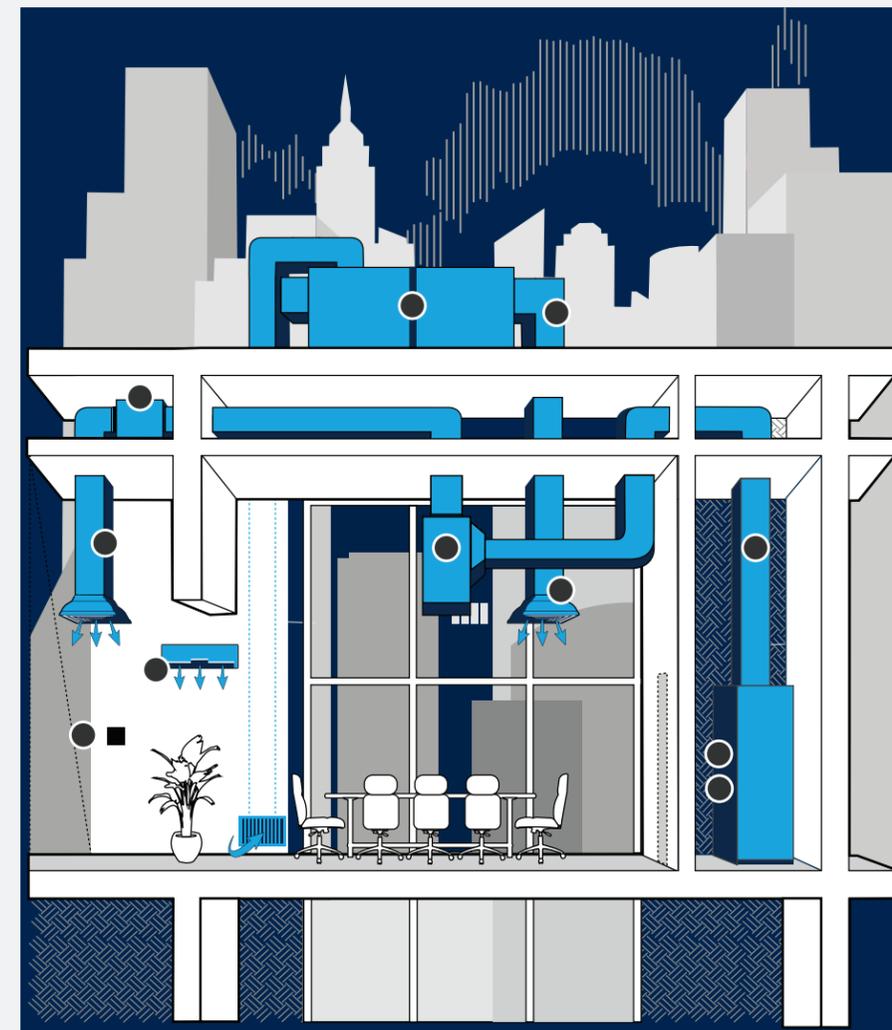
GPS® NPBI™ technology works to improve the air inside industrial, commercial and residential buildings. With our customized strategy, GPS can offer indoor air solutions for just about any indoor space. We're proud to have over **250,000 satisfied installations** across a wide variety of markets.

CERTIFIED ACROSS MULTIPLE INDUSTRY STANDARDS



MARKETS SERVED

- Schools & Universities
- Manufacturing Facilities
- Health Care Settings
- Office Buildings
- Airports
- Food & Beverage Businesses
- Fitness Centers
- Arenas & Stadiums
- Hospitality Venues
- Worship Centers



GPS Customized Solutions

We offer a wide range of products to ensure we can cover just about any specific client need or application. We'll help you determine the right combination of products to optimize the ionization of your space, taking into consideration such factors as the proximity of the ionizer to the space it's treating, the amount of airflow within the HVAC system and the path in which the air is flowing.

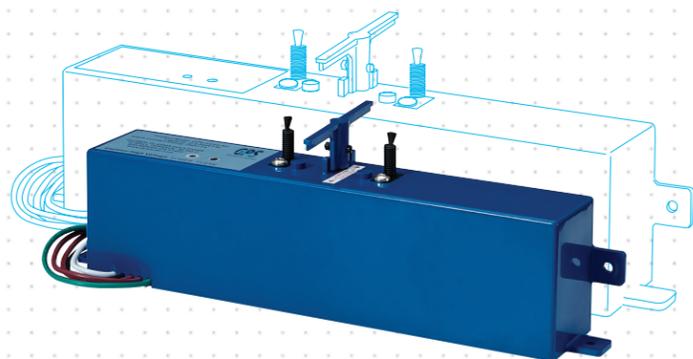
INSTALLATION EXAMPLES

From air handling units to fan-powered boxes, GPS offers products for a variety of system types.

GPS-FC48™-AC

An automatic, self-cleaning, lightweight NPBI™ system that handles up to 4,800 CFM or 12 tons. Designed for multiple mounting options including fan inlet, interior duct walls or floors.

- Universal Voltage Input (24–240 VAC/VDC)
- Programmable Auto-Cleaning Cycle
- Carbon Fiber Brush Emitters
- Integral BAS Alarm Contacts
- UL 2998 Zero Ozone Emissions

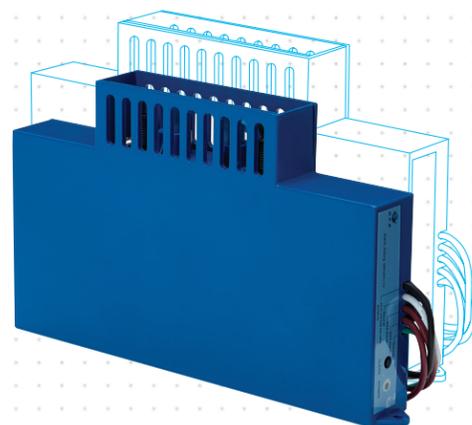


| | |
|-------------------------|---|
| SYSTEM TYPE | Air Handling Units Ducted Split Systems Packaged Rooftop Systems Fan Coil Units VAV/Fan-Powered Box |
| COOLING CAPACITY | Up to 4,800 CFM or 12 tons |
| INSTALL LOCATION | Fan Inlet Supply Airstream Zone Diffuser |

GPS-FC24™-AC

An automatic, self-cleaning, lightweight NPBI system that handles up to 2,400 CFM or 6 tons. Designed for multiple mounting options including fan inlet, interior duct walls or floors.

- Universal Voltage Input (24–240 VAC/VDC)
- Programmable Auto-Cleaning Cycle
- Carbon Fiber Brush Emitters
- Integral BAS Alarm Contacts
- UL 2998 Zero Ozone Emissions



| | |
|-------------------------|--|
| SYSTEM TYPE | Air Handling Units Ducted Split Systems Packaged Rooftop Systems Ductless Mini Splits VRF Cassettes Fan Coil Units VAV/Fan-Powered Box |
| COOLING CAPACITY | Up to 2,400 CFM or 6 tons |
| INSTALL LOCATION | Fan Inlet Supply Airstream Zone Diffuser |

GPS-DM48™-AC

An automatic, self-cleaning, lightweight NPBI system that handles up to 4,800 CFM or 12 tons. Design optimized for mounting into interior duct walls or floors.

- Universal Voltage Input (24–240 VAC)
- Programmable Auto-Cleaning Cycle
- Carbon Fiber Brush Emitters
- Integral BAS Alarm Contacts
- 3/4 Quick-Turn Duct Adapter
- UL 2998 Zero Ozone Emissions

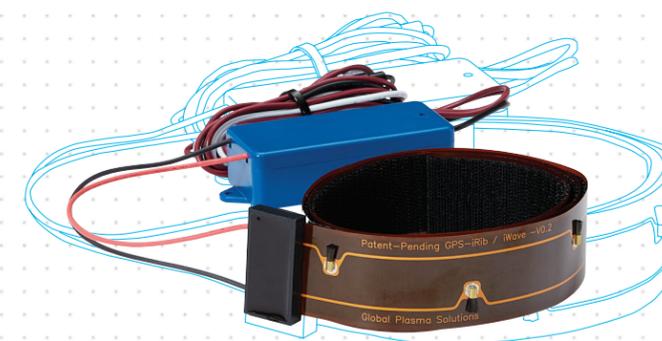


| | |
|-------------------------|---|
| SYSTEM TYPE | Air Handling Units Ducted Split Systems Packaged Rooftop Systems VAV/Fan-Powered Box |
| COOLING CAPACITY | Up to 4,800 CFM or 12 tons |
| INSTALL LOCATION | Duct Supply Airstream |

GPS-iRIB® 18/36

The GPS-iRIB is available in 18- and 36-inch lengths. This mechanism is engineered to deliver the highest level of ionization with the least amount of energy in the most compact size.

- Fold-to-Length Circuit
- Integral BAS Alarm Contacts
- Velcro® for Easy Installation
- Voltage Input (110–240 VAC)
- UL 2998 Zero Ozone Emissions

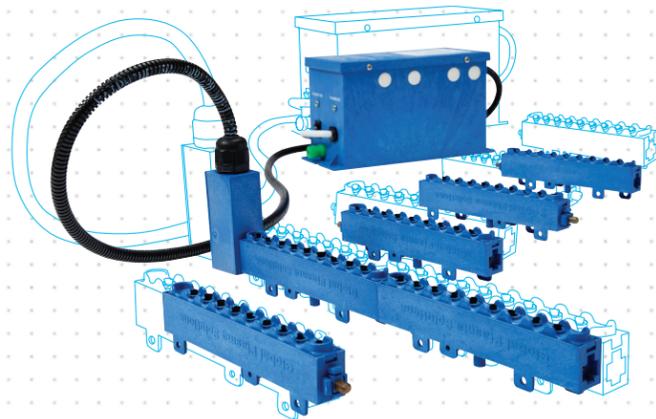


| | |
|-------------------------|---|
| SYSTEM TYPE | Ductless Mini Splits Ducted Modules PTACs |
| COOLING CAPACITY | Up to 3,200 CFM or 8 tons |
| INSTALL LOCATION | Duct Supply Airstream |

GPS-IMOD®

The GPS-iMOD is a modular NPBI™ system that is field-assembled to any length up to 240 inches in 6-inch increments. Designed for mounting in air handling units, the iMOD is ideal for preventing buildup on evaporator coils.

- Universal Voltage Selector Switch
- Six High-Voltage Output Ports
- Integral BAS Alarm Contacts
- Indication Light
- UL 2998 Zero Ozone Emissions



| | |
|-------------------------|--|
| SYSTEM TYPE | Air Handling Units Packaged Rooftop Systems |
| COOLING CAPACITY | 50–250 CFM per inch of bar |
| INSTALL LOCATION | Supply Airstream Between Evaporator Coil & Filter |

GPS-FC-3-BAS

The GPS-FC-3-BAS unit is designed to be mounted inside of fan coils, heat pumps, PTACs, ductless mini splits and air handlers up to 3,200 CFM or 8 tons. Its compact size and simple mounting requirement allow it to be mounted almost anywhere in just a few minutes.

- Carbon Fiber Brush Emitters
- Integral BAS Alarm Contacts
- Powered by 24 VAC
- UL 2998 Zero Ozone Emissions



| | |
|-------------------------|---|
| SYSTEM TYPE | Air Handling Units Ducted Split Systems VAV/Fan-Powered Box |
| COOLING CAPACITY | Up to 3,200 CFM or 8 tons |
| INSTALL LOCATION | Fan Inlet Supply Airstream |



Simple installation in a variety of settings

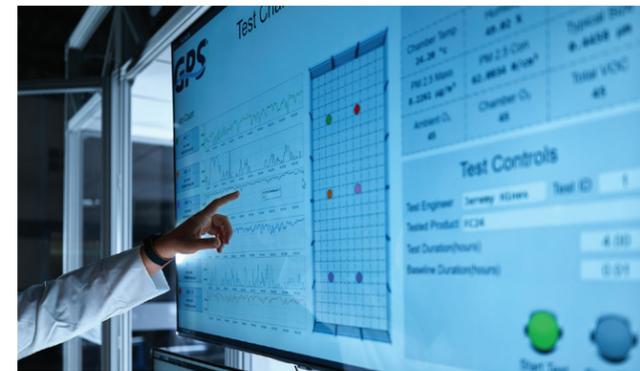
- Our products are designed to be used in a variety of indoor and outdoor applications and can typically take as little as one hour to install.
- Flexible mounting options allow for connections to fan inlets, in the ductwork, in zone diffusers or between evaporator coils and filters.
- Designed with universal voltage input, all GPS® products can operate within a wide range of voltages without adapters or other modifications.



Our convenient, self-cleaning feature means no maintenance and optimal performance

- Our programmable, self-cleaning systems are designed for easy use, reliable performance and convenience.
- Many GPS products are auto-cleaning to prevent the buildup that can develop over time and decrease performance. This ensures reliability and hassle-free maintenance.
- Auto-cleaning systems can be set to clean carbon fiber brush emitters daily or every five days, depending on your schedule.
- Our NPBI technology means you won't need replacement parts over the lifetime of the product to promote long-term durability.

In addition to our broad suite of ionization products, GPS® offers state-of-the-art measurement products that can be integrated with a building automation system. Through integration, you can view live IAQ metrics within your system's dashboard and optimize your system as needed.



GPS-iMEASURE

The GPS-iMEASURE is the first commercially available ion detector that can be permanently mounted in the space to measure ion levels in real time and report back to a building management system.

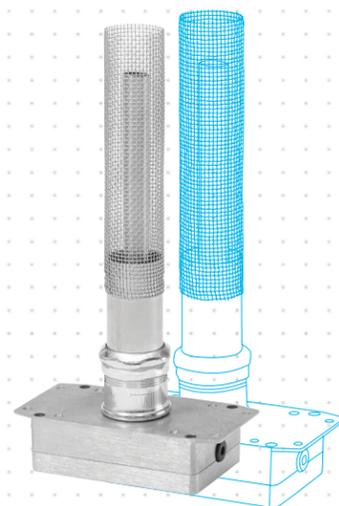
- Monitor Ionization Levels Remotely
- Auto Calibration/Auto Zero
- 0-1 Million Ions/cc
- Output Voltage 0-10 VDC
- Compatible With Any GPS Device



GPS-iMEASURE-D

The GPS-iMEASURE-D ion detector is permanently mounted in the duct downstream of any GPS ionization device. It measures ion levels in real time and reports back to a BAS. It includes three sensitivity levels: 20,000/200,000/2,000,000 ions/cc that can be set based on the application and in-duct location.

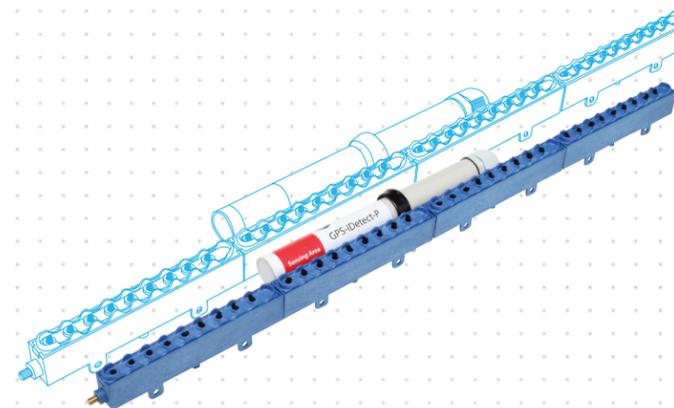
- Monitor In-Duct Ionization Levels
- 20,000-2 Million Ions/cc
- Input Voltage 12-24 VAC/VDC
- Output Voltage 0-10 VDC
- Compatible With Any GPS Device



GPS-iDETECT-P

The GPS-iDETECT-P is a plenum-mounted ionization detector that confirms the output from the GPS-iMOD System. The GPS-iDETECT-P provides the ability to monitor ionization status in a plenum to confirm that the ionization equipment is working properly.

- Universal Voltage Input
- 1,000-200 Million Ions/cc
- 0-100% RH
- Compatible with iMOD



Paired with GPS iMOD, the GPS-iDETECT-P provides the real-time ionization status in a plenum to confirm that ionization equipment is working properly.

GPS-NEMA4-OE

The GPS-NEMA4-OE is a NEMA 4X-rated fiberglass enclosure designed to house one GPS-iMOD power supply. The panel adds a superior finished look to any project while providing the required protection against foreign substances, such as water and dust, when power supplies are mounted in a non-NEMA 1 rated environment.



Pairs with GPS-iMOD to house the power supply and create a superior finished look.



CONTACT US | (980) 279-5622 | info@globalplasma.com | globalplasma.com



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