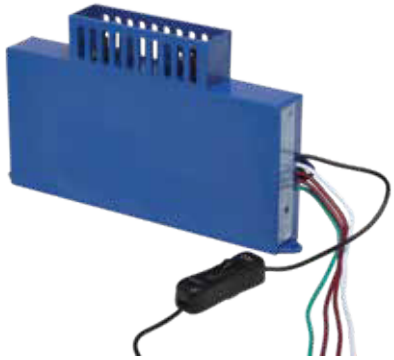
GPS-FC24-AC™



2,400 CFM Auto-Cleaning Needlepoint Bipolar Ionization System

Product Description

The GPS-FC24-AC is an auto-cleaning, needlepoint bipolar ionization system designed to handle up to 2,400 CFM. The unit is designed for multiple mounting options including fan inlet, interior duct wall or interior duct floor. The composite and carbon fiber construction allows the product to be mounted in corrosive environments.

Standard Features

Universal voltage input, in-line On/Off switch, programmable auto-cleaning cycle, plasma on indication light, alarm contacts, magnets for ease of installation and replaceable carbon fiber brush emitters.*

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

Benefits

- **P**article Reduction and Smoke Control
- **O**dors Neutralized by destroying VOCs
- **P**athogens Killed (Bacteria, Viruses, Mold), Helps to Control Allergens/ Asthma*, Prevents Dirty Sock Syndrome
- **E**nergy 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	24VAC to 240VAC
Amps	0.17-0.017A operating/0.33-0.03A cleaning cycle
Power	4 Watts operating / 8 Watts cleaning cycle
Frequency	50/60HZ
Total Ion Output	> 300 Million ions/cc/sec
Airflow Capacity	0 to 2,400 CFM or up to 6 tons
Temperature/Humidity	-20°F to 200°F / 0 - 100% RH
Unit Dimensions/Weight	7.9"L x 1.1"W x 5.0"H / 1.25 lbs
Electrical Listings	UL, cUL, CE
Alarm Contact Rating	250VAC / 1A
Compliance & Certifications	UL 867, OSHPD Seismic (OSP), IAQP

Commercial Applications

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

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GPS-FC24-AC

Installation Operation & Maintenance Manual

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Thank you for purchasing a GPS-FC24-AC from Global Plasma Solutions. The GPS-FC24-AC is an autocleaning air purifier that can be mounted in mini split ceiling cassettes, wall mounted ducted air handlers, and other HVAC equipment that requires a compact design. The included magnets allow for installation without cutting or drilling. The GPS-FC24-AC requires no maintenance or periodic replacement parts.

HARDWARE PROVIDED BY GPS

Before you start, confirm the contents of your shipment. Each GPS-FC24-AC will consist of the following

1. GPS-FC24-AC with in line power switch.
2. Rare earth magnets (2).
3. Machine screws and nuts (2 each) for mounting magnets.

HARDWARE BY OTHERS

1. Electrical wiring, junction box, or receptacle to provide power to the GPS-FC24-AC.
2. Self-tapping screws (optional) if not using magnet mount.
3. Zip ties.

INSTALLATION LOCATION

GPS recommends mounting the GPS-FC24-AC after the prefilter and before the cooling coil, on the blower housing on the side opposite the motor. In ductless mini-split ceiling cassette applications, it is suggested to mount the unit to the fan inlet. The emitter brushes should be no closer than two inches from any wiring or metal objects.

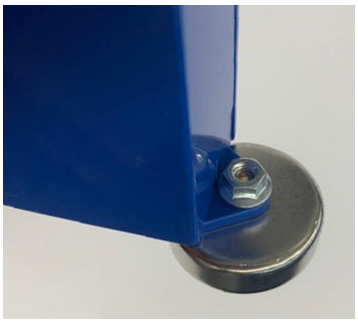
CAUTION:

- This product shall not be installed behind a suspended floor or ceiling nor in a structural wall, ceiling or floor.
- This unit is designed for mounting to duct of metallic construction only. Installation must be such that the structural integrity of the ducting is not compromised.

MECHANICAL INSTALLATION

1. Ensure power to the HVAC equipment and the circuit the GPS-FC24-AC will be connected to has been turned off.
2. Find an appropriate location. Verify the carbon fiber emitters have a 2” clearance from wires or other metal objects.
3. Mount the magnets to the GPS-FC24-AC using included hardware. See FIGURE 1.
4. When mounting in a ceiling cassette use zip ties to secure GPS-FC24-AC to fan inlet screen or grid. NOTE: if mounting in a ceiling cassette that has a self cleaning filter, the unit must be mounted behind the screen and self cleaning system, but before the fan inlet.
5. Install the GPS-FC24-AC so that airflow is passing by both emitters at the same time (like a football through goalposts). Make sure the unit is positioned so it obstructs as little airflow as possible.

FIGURE 1



WIRING

1. Confirm the power is off prior to wiring. Follow all local and national electrical and building codes.
2. The GPS-FC24-AC will self-adjust to voltages from 24VAC to 240VAC. Connect the power wires as follows:

Black	24 - 240VAC
White	Neutral or L2
Green	Ground
Browns	Dry Contacts/BAS Alarm

3. Wire in BAS terminals (optional) The GPS-FC24-AC is equipped with a set of dry contacts that are normally open and close when the GPS-FC24-AC is on and has no faults. The contacts are rated up to 250VAC and 1A.

OPERATION

CAUTION! NEVER TOUCH BRUSHES WHILE OPERATING, SHOCK MAY OCCUR

Once powered and the inline switch is in the on position, the unit initiates an internal check of all systems. If the auto cleaning wiper blade is not in the "home" position, it will move to the home position in series with the airflow.

CLEANING CYCLE

The GPS-FC24-AC comes with a preset cleaning cycle designed to clean the brushes every three days. The cleaning process may be activated by pushing the clean button located on the side of the unit. To change the cycle frequency, press the cleaning cycle button once. While cleaning is in progress press and hold the cleaning cycle button for 5 seconds. The LED will start flashing. Pressing the cleaning cycle button again will change the days between cleaning. The number of flashes indicates the cleaning interval in days (3 flashes=3 days, 5 flashes=5 days).

TROUBLESHOOTING

1. Unit will not power up, LED not illuminated:
    a. Confirm proper voltage is applied to the correct terminal(s).
    b. Try an alternate power source. If using 24v try using 120v or vice versa.
2. Wiper sticks or stops on emitters:
    a. Adjust height of emitters: loosen screw at base of emitter gently push or pull emitter to a height where wiper just contacts emitter. Hold the emitter in place and tighten screw. Verify correct height after tightening screw.
3. Wiper does not clean/ contact emitters:
    a. Adjust height of emitters: loosen screw at base of emitter gently push or pull emitter to a height where wiper just contacts emitter. Hold the emitter in place and tighten screw. Verify correct height after tightening screw.
    b. If the emitter is worn to the point where there is no adjustment, replacement emitters can be purchased from GPS. Remove the screw and the emitter base, unplug the emitter from the connector. Plug the new emitter in, reinstall base, adjust emitter height and tighten screw.
4. If unit does not operate properly after verifying the above instructions, please contact GPS for additional assistance.

GPS-DM48-AC™

Duct Mounted Auto-Cleaning Needlepoint Bipolar Ionization System

Product Description

The GPS-DM48-AC is the world's first auto-cleaning needlepoint bipolar ionization system designed for indoor or outdoor duct mounting.

Standard Features

Universal voltage input, integral display, programmable cleaning cycle, integral alarm contacts, 3/4 quick turn duct adapter, 6' of watertight flexible conduit, carbon fiber brushes.*

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

Benefits

- **P**article Reduction and Smoke Control
- **O**dors Neutralized by destroying VOCs
- **P**athogens Killed (Bacteria, Viruses, Mold), Helps to Control Allergens/ Asthma*, Prevents Dirty Sock Syndrome
- **E**nergy 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	24VAC to 240VAC
Power	12 Watts
Frequency	50/60HZ
Total Ion Output	>400M ions/cc/sec
Airflow Capacity	4,800 CFM or up to 12 tons
Temperature/Humidity	-20° - 140°F / 0 - 100% RH
Unit Dimensions/Weight	3.75" Dia. x 7"L / 2.31 lbs
Electric Approvals	UL, cUL, CE
Alarm Contact Rating	250VAC / 1 A
Compliance & Certifications	UL 867, OSHPD Seismic (OSP), IAQP

Installation

- Designed for use on ducts
- Weathertight seals for external duct mounting

Commercial Applications

- Schools and Universities
- Arenas and Stadiums
- Transportation Hubs
- Office Buildings
- Manufacturing
- Food Service
- Animal Care
- Institutional
- Senior Care
- Healthcare
- Hospitality
- Child Care
- Worship
- Theatre

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GPS-DM48-AC

Installation Operation & Maintenance Manual

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www.globalplasmasolutions.com

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Thank you for purchasing a GPS-DM48-AC™ from Global Plasma Solutions. The GPS-DM48-AC is the first auto-cleaning duct mount air purifier with a weatherproof housing that can be mounted indoors or out. The GPS-DM48-AC requires no maintenance or periodic replacement of parts.

HARDWARE PROVIDED BY GPS

Before you start, confirm the contents of your shipment. Each GPS-DM48-AC will consist of the following:

1. GPS-DM48-AC with weather tight clear cover and black mounting flange (preinstalled).
2. Weathertight conduit (preinstalled on unit).
3. Self-tapping sheet screws (4).
4. Expanding anchors with screws (4).

HARDWARE REQUIRED BY OTHERS

1. Electrical wiring, junction box, or receptacle to provide power to the GPS-DM48-AC.
2. Sealant to make duct watertight after installation, if required.
3. 4-inch hole saw or snips.

INSTALLATION LOCATION

GPS recommends mounting the GPS-DM48-AC after a prefilter and before the cooling coil. Alternate mounting locations are on the supply air duct or the return air duct after the filter. The duct must have a depth greater than 8 inches for the unit to operate properly. The weatherproof housing will allow mounting indoors or out.

CAUTION:

- This unit should not be installed behind a suspended floor, ceiling or in a structural wall, ceiling, or floor.
- This unit is designed for mounting to duct of metallic construction only. Installation must be such that the structural integrity of the ducting is not compromised.

MECHANICAL INSTALLATION

1. Ensure power to the HVAC equipment and the GPS-DM48-AC has been disconnected.
2. Find an appropriate location. Verify the 8-inch depth clearance for the GPS-DM48-AC.
3. Cut a 4-inch round hole in the duct.
4. Install the GPS-DM48-AC so that airflow is passing by both emitters at the same time (like a football through goalposts). The conduit and connection grommet should be pointed down or to the side. Secure to the duct with provided screws.

WIRING

1. Confirm the power is off prior to wiring. Follow all local and national electrical and building codes.
2. The GPS-DM48-AC will self-adjust to voltages from 24VAC to 240VAC. Connect the power wires as follows :

Black	24 - 240VAC
White	Neutral or L2
Green	Ground
Brown	Dry Contacts/BAS terminals

3. Wire in BAS terminals (optional). The GPS-DM48-AC is equipped with dry contacts that are normally open and close when the GPS-DM48-AC is on and has no faults. The contacts are rated up to 250VAC and 1A.

OPERATION

CAUTION! NEVER TOUCH BRUSHES WHILE OPERATING - SHOCK MAY OCCUR

Once powered, the unit initiates an internal check of all systems. After initializing the display will blink between "ON", "GPS", and the number of days the unit has been powered. If there is a fault, "FALT" will be displayed.

CLEANING CYCLE

The GPS-DM48-AC comes with a factory preset cleaning cycle designed to clean the emitters every 5 days. The cleaning process can be activated by pressing the test button labeled "Cleaning Cycle Test" below the display. See FIGURE 1. During the cleaning process "CLEA" will be displayed. To access the test button, remove the clear faceplate by using a Phillips head screwdriver to remove the mounting screws. Take care with the screws and gasket.

FIGURE 1

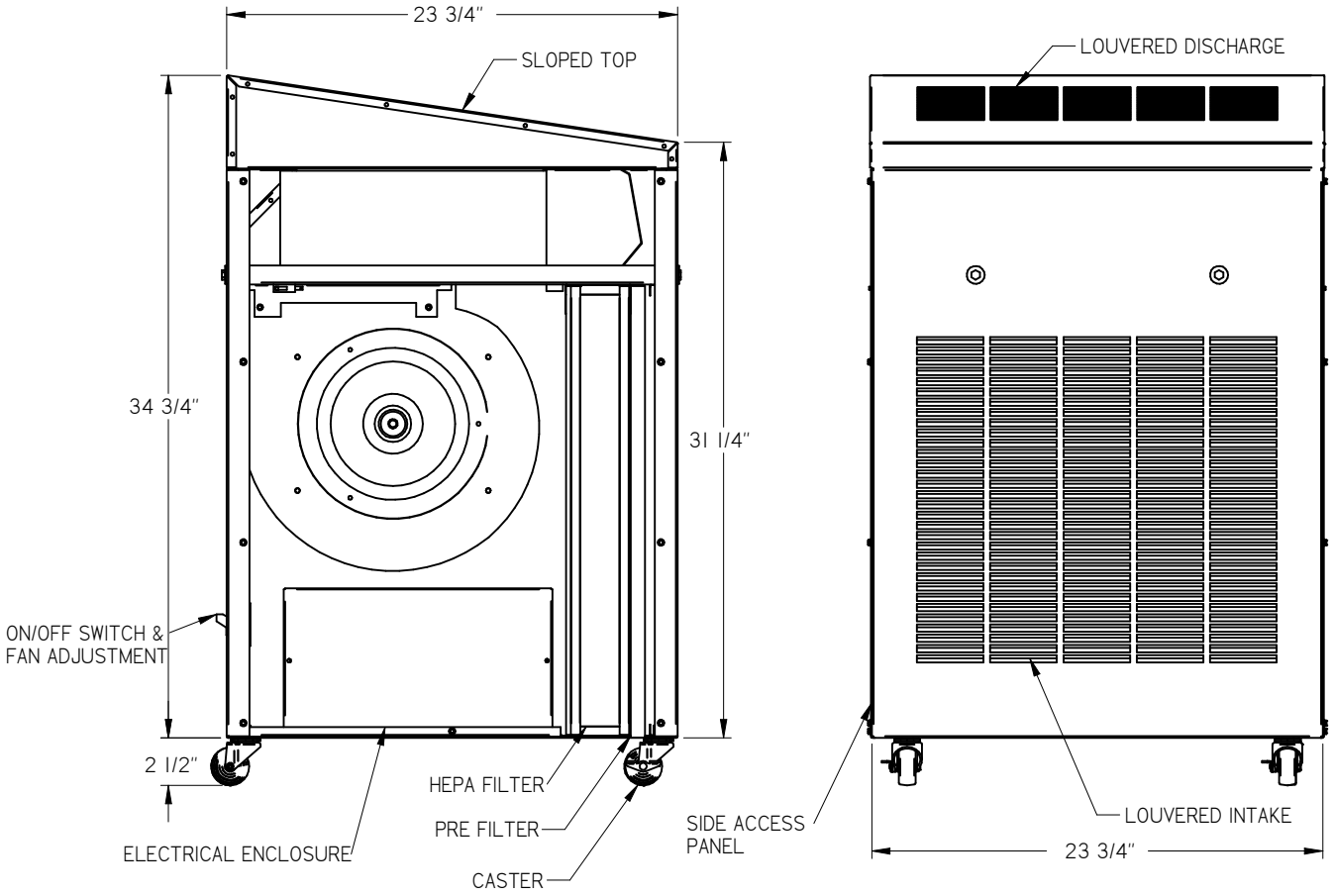
CHANGE CLEANING CYCLE FREQUENCY

Press the test button so the display reads "CLEA." Hold the test button down for 5 seconds until the current cleaning frequency is shown on the display. Repeatedly press the test button until the desired cleaning frequency is shown. The choices are 1, 3, 5, 10, 15 or 20 days. The factory present is sufficient for most applications.

TROUBLESHOOTING

1. Unit will not power up, no display
    a. Confirm proper voltage is applied to the correct terminal(s).
2. Display shows "FALT"
    a. Remove power, wait 1 minute, and reapply power.
    b. If "FALT" is still displayed, try an alternate power source. If using 24v try using 120v or vice versa.
3. Wiper sticks or stops on emitters
    a. Adjust height of emitters: loosen screw at base of emitter and gently push or pull emitter brush to a height where the wiper just contacts emitter brush. Hold the emitter in place and tighten screw. Verify correct height after tightening screw.
4. Wiper does not clean/ contact emitters
    a. Adjust height of emitters: loosen screw at base of emitter and gently push or pull emitter brush to a height where the wiper just contacts emitter brush. Hold the emitter in place and tighten screw. Verify correct height after tightening screw.
    b. If the emitter is worn to the point where there is no adjustment, order replacement emitters from GPS. Remove the screw and the emitter base, unplug the emitter from the connector. Plug the new emitter in, reinstall base, adjust emitter height and tighten screw.
5. If unit does not operate properly after verifying the above instructions
    a. Contact GPS for additional assistance.

Submittal Sheet



NOMINAL AIRFLOW (CFM)		ECM	FULL LOAD AMPS	SOUND (dBA)		UNIT WEIGHT
MIN	MAX	H.P	115V	300	550	
150	600	1/3	4.6 A	46	59	125 lbs

NOTES:
- 18 GAUGE CONSTRUCTION
- WHITE POWDER COAT FINISH, 1000 HR SALT SPRAY RATED
- VARIABLE SPEED EC MOTOR, 60 CYCLE
- 115V POWER CORD
- FAN ON/OFF SWITCH
- EXTERNAL FAN ADJUSTMENT
- CASTERS SHIP LOOSE

OPTIONS:
☐ UV LIGHT STERILIZATION
☐ BIPOLAR IONIZATION

ALL METRIC DIMENSIONS ( ) ARE SOFT CONVERTED. IMPERIAL DIMENSIONS ARE CONVERTED TO METRIC AND ROUNDED TO THE NEAREST MILLIMETER.

PROJECT:		
ENGINEER:	GH	**RAP** ROOM AIR PURIFIER 600 CFM HEPA RECIRCULATION UNIT
CUSTOMER:	**272458**	
SUBMITTAL DATE: / **SPEC. SYMBOL:**	2020/09/01	

Solid Edge