

*Installation, Operations and Maintenance Manual*

# NuShield-CX



NOTICE: This product is to be used only as directed. Read entire manual before use. Do not use unless properly installed.



### *Safety Instructions:*



**CAUTION:** *This product is suitable for mounting to duct of metallic construction only. Installation must be such that the structural integrity of the ducting is not compromised.*



**CAUTION:** *High Voltage.*



**WARNING:** *Risk Of Electric Shock. Can Cause Injury Or Death: Disconnect All Remote Electric Power Supplies Before Servicing. To Avoid Risk of Fire and Shock, Use Only Flexible conduit.*

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For technical product queries, please reach out to [info@nucalgon.com](mailto:info@nucalgon.com)

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### *Hardware Provided by Nu-Calgon*

Before you start, confirm the contents of your shipment. Each NuShield-CX will consist of the following:

1. NuShield-CX with weather tight housing and foam sealing 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 NuShield-CX.
2. Sealant to make duct watertight after installation, if required.
3. 4-inch hole saw or snips.

### *Installation Location*



**WARNING:** *MAKE SURE POWER IS DISCONNECTED TO THE HVAC EQUIPMENT BEFORE INSTALLATION*

Nu-Calgon recommends mounting the NuShield-CX downstream of the last filter in the HVAC system. 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.

**NOTE:** *Use Temperature - Maximum Ambient temperature in which unit shall be used: 140 degree F/ 60°C*

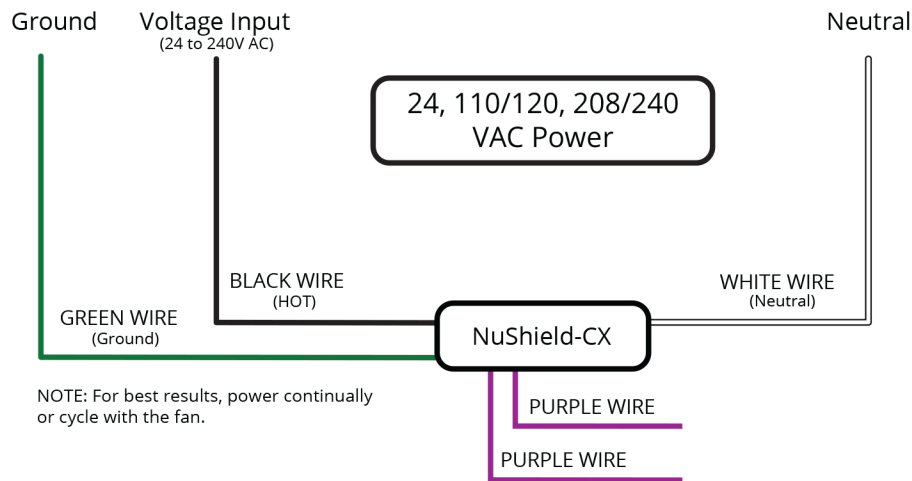
### *Mechanical Installation*

1. Ensure power to the HVAC equipment and the NuShield-CX has been disconnected.
2. Find an appropriate location. Verify the 8-inch depth clearance for the NuShield-CX.
3. Cut a 4-inch round hole in the duct.
4. Install the NuShield-CX so that airflow is passing by both emitters at the same time in line with the airflow indicator on the product. 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. Nu-Calgon recommends the NuShield-CX be powered constantly but it may be switched with the system or blower.
3. The NuShield-CX will self-adjust to voltages from 24VAC to 240VAC. Output and performance will not be affected by choice of input voltage. Connect the power wires as follows:
  - Black = 24 - 240VAC
  - White = Neutral or L2
  - Green = Green
  - Purple = Dry Contacts/BAS terminals
4. Wire in BAS terminals (optional). The NuShield-CX is equipped with dry contacts that are normally open and close when the NuShield-CX 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. If the auto cleaning wiper blade is not in the "home" position, it will move to the home position in series with the airflow and a green LED on the NuShield-CX will illuminate.

## Cleaning Cycle

The NuShield-CX comes with a factory preset cleaning cycle designed to clean the emitters once per day.



## *Troubleshooting*

1. Unit will not power up, no display
  - 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.
  
3. If unit does not operate properly after verifying the above instructions
  - a. Contact Nu-Calgon for additional assistance.

**Note:** The health aspects associated with the use of this product and its ability to aid in disinfection of environmental air have not been investigated by UL LLC.



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Pat: [www.gpspatents.com](http://www.gpspatents.com)  
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**Meets California ozone emissions  
limit: CARB certified**



### *3 Year Limited Warranty:*

The NuShield-CX offers a limited warranty for three years that covers any defects in material or workmanship under normal use. If you make a claim during the warranty period, you must provide proof of purchase and proof of proper installation by a licensed contractor for the warranty to be valid. The NuShield warranty does not cover labor, return shipping charges, damage from improper installation or improper voltage usage. The NuShield warranty begins on the date that the unit was purchased. Installation of your NuShield by any person other than a licensed contractor will void the warranty. Contact your local Nu-Calgon account manager or [info@nucalgon.com](mailto:info@nucalgon.com) with further questions.

