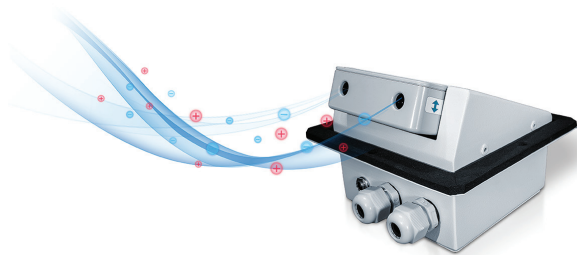




EAGLE X PRO

# EXP D6 SERIES Duct Mounted



USER'S MANUAL

# Congratulations

Thank you for choosing Eagle X Pro to clean and improve your indoor air quality.

We are committed to product quality and safety. Our friendly customer service team is available for any questions or concerns, please do not hesitate to contact us!

Our goal is to provide the highest possible quality of indoor air across the globe.  
We cannot achieve this goal without you, thank you for your purchase.

**Phone**

833-324-5397

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**Web**

[www.eaglexpro.com](http://www.eaglexpro.com)

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# Introduction

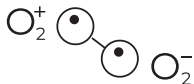
The Eagle X Pro (EXP) Duct Mounted D6 Series is a patented air purification device based upon bipolar ionization (BPI) technology, specifically developed to bring the health and quality of nature's air to indoor environments. In natural habitats, solar and thermal energies create positive and negative Oxygen ions that clean and renew outdoor air by removing harmful pollutants, such as viruses, bacteria, fungi, and mold spores. The Duct Mounted D6 Series generates these same positive and negative Oxygen ions - just like those found in nature - that purify and freshen indoor air by neutralizing the harmful pollutants.

The Duct Mounted D6 Series is designed for installation in HVAC systems for commercial and residential applications. This compact, easy to install, maintenance free unit is suitable for use in hospitals, schools, restaurants, hotels, commercial buildings, residential spaces and more.

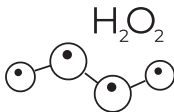
EXP technology was tested and found effective in neutralizing harmful pollutants such as viruses (SARS-COV-2, Influenza), bacteria, mold spores, fungi, odors, CO<sub>2</sub>, dust and smoke. While generating the highest density of Oxygen ions compared to any other technology on the market, our Duct Mounted D6 Series technology maintains undetectable levels of ozone (<0.001 ppm) - well below federal requirements and regulation (**UL 867 and UL 2998 certified**).

# Technology Overview

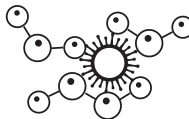
## Science Behind The Technology



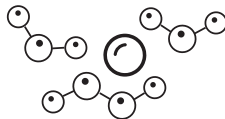
EXP Technology uses a corona discharge system to generate Oxygen ions  $O_2^+$  and  $O_2^-$  at a high density.



These  $O_2^+$  and  $O_2^-$  ions have high chemical activity and when reacting with water ( $H_2O$ ) molecules in the air, hydroperoxide  $H_2O_2$  is formed.



Once airborne, these hydroperoxides ( $H_2O_2$ ) then cluster around harmful pollutants.



A chemical reaction occurs and the hydroperoxides ( $H_2O_2$ ) break down the protein structure of the pollutants, rendering them harmless.

# Testing Data

Substance	Substance Name	Testing Organization	Removal
Bacteria	Escherichia Coli	EMSL Analytical, USA	99%
	Escherichia Coli ATCC	Istanbul University, Turkey	91%
	Staphylococcus Aureus	EMSL Analytical, USA	91%
	Pseudomonas Aeruginosa	Istanbul University, Turkey	99%
	Staphylococcus Aureus (MRSA)	EMSL Analytical, USA	99%
Fungus	Aspergillus Niger	EMSL Analytical, USA	97%
	Dichobotrys Abundans	Prof. Joe F. Boatman, USA	90%
	Penicillium	Prof. Joe F. Boatman, USA	95%
Mold	Cladosporium Cladosporioides	EMSL Analytical	97%
Spores	Bacillus Subtilis Var Niger	Istanbul University, Turkey	89%
Viruses	Influenza H1N1	Kitasato Research Center, Japan	99%
	Influenza H5N1	Kitasato University, Thailand	99%
	SARS-COV-2 (COVID-19)	University of Patras, Greece	99%

# Installation

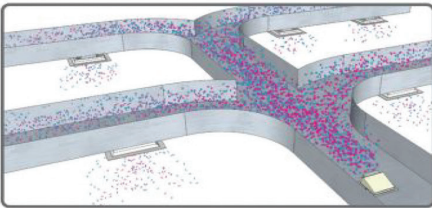
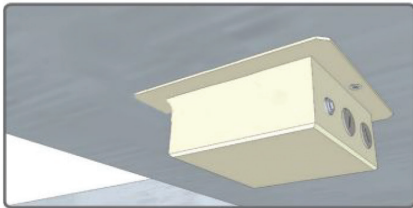
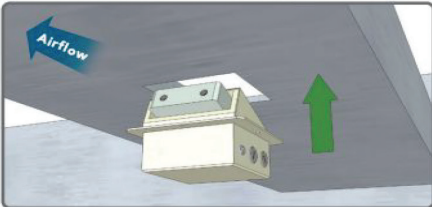
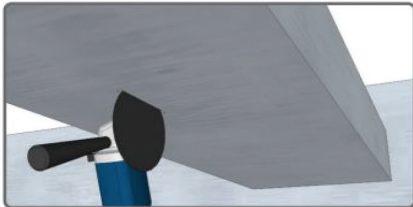
**CAUTION:** Unit should only be installed by a licensed HVAC professional.

**CAUTION:** To reduce the risk of fire, this unit should not be installed downstream of a humidifier or exposed to other sources of moisture.

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

1. Identify a mounting location in the duct to allow for maximum airflow over the recessed needlepoints on the unit while also making sure the installation location is DOWNSTREAM of any coils or filters and not at risk of moisture from any in-line humidifiers.
2. (Optional) To make use of the bus port with the addition of a data cable, use a screwdriver to remove the access panel on the bottom of the device and thread the data cable through the right opening cable entrance and connect to the connector inside the device. Replace the access panel back onto the device and tightly screw in the screws.
3. Cut a 4 1/8" x 4 1/8" opening in the duct using a grinder or metal scissors. Keep straight edges to ensure an air-tight fit along the edges of the Duct Mounted D6 unit.
4. Mount the unit in the opening using 4 metal screws, with the recessed needlepoints pointed DOWNSTREAM of airflow.
5. After mounting, connect the unit to the power source.
6. Flip the power switch to the 'on' position. Verify the LED indicator is "Green" to ensure the unit is properly powered.

# Installation





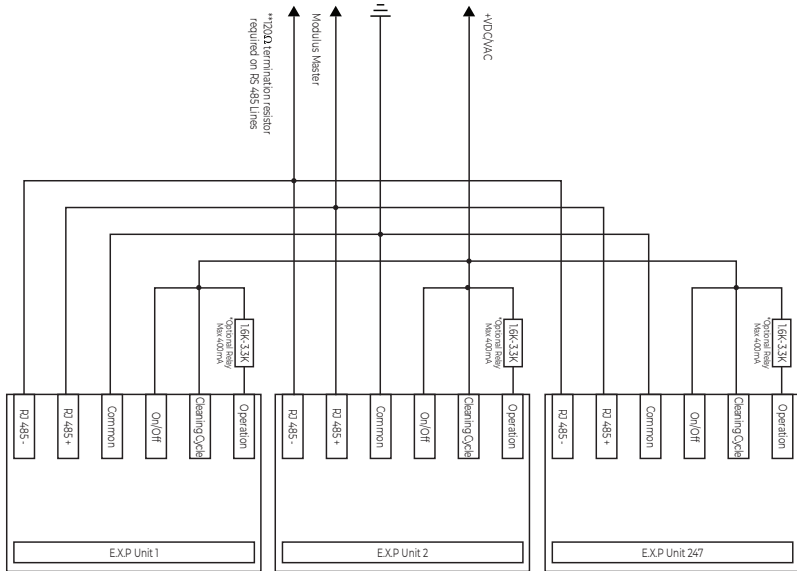
# Installation

**WARNING: Do not connect to power before the installation is complete.**

**Always disconnect power to the unit before handling any of the unit components.**

1. The power source should not be protected by a circuit breaker exceeding 20 amps.
2. Power may be connected to the unit using any of the following methods:
  - Connect 12V DC or 24V AC directly to the power input connection on the Duct Mounted D6 Series where indicated.
  - Connect 100-240V AC or 241-277V AC to 12V DC power supply. A 12V DC 2.1mm pin connector shall be inserted into the 12V DC jack provided on the unit.
  - Connect 120V AC to 12V DC 500mA wall pack plugged into any electrical receptacle. A 12V DC 2.1mm pin connector shall be inserted into the 12V DC jack provided on the unit.

# Diagram to Link Multiple Units Together



# Power and Data Connections

## Power Connector

12V DC / 24VAC

Max. current consumption: 200mA

Min. current of power supply:     24V - 1000mA  
  12V - 1000mA

Ground: Intended for Static Control applications only with separate ESD ground system.  
Use a 1M $\Omega$  resistor in series to the ground terminals in this case.

## Default I/O settings:

Terminal 1 Output: Unit in operation

Terminal 2 Input: Initiating a self-cleaning cycle of the emitters

Terminal 3 Input: Switching the unit On and Off (ON open, OFF closed)

Terminal 4 Common

Terminal 5 Modbus RS485 +

Terminal 6 Modbus RS485 -

# Operation

1. The Duct Mounted D6 Series unit will be activated when power is supplied and the indicator light is illuminated **green** for "Powered".
2. The unit is self-balancing and maintenance free and does not require any type of adjustment.
3. The benefit of the technology is achieved only when the supply fan is running. Therefore, to achieve improved air quality, interlock the unit to run when the supply fan is powered.

## Troubleshooting

IF THE UNIT IS NOT WORKING, CHECK IN THE FOLLOWING ORDER THAT:

1. The unit is on, the supply fan is running and that the **green** LED indicator is illuminated.
2. Check the power input connections to the Duct Mounted D6 Series. Verify all connections are correct and tight. Reconnect any loose wires as necessary.
3. If the Duct Mounted D6 Series unit internal fuse is blown, wait 2 minutes to allow the unit to automatically reset the fuse. Turn on power to the unit. If the fuse blows again, return the unit to the factory for service.
4. The unit should be stored no less than 14°F and not exceed 158°F.

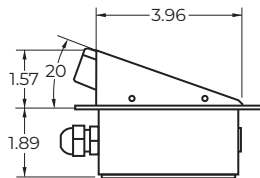
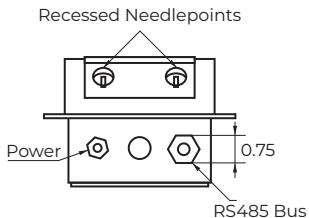
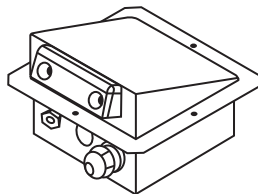
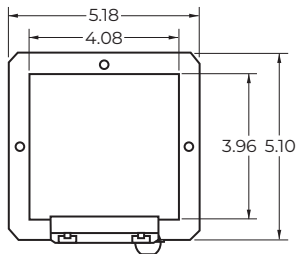
## Technical Specifications

Model	D6 Mount
CFM	2,400 to 3,600 (D6C)
	3,600 to 5,200 (D6i)
	5,200 to 6,800 (D6)
	6,800 to 10,000 (D6Max)
Ion output (Ions/Sec)	D6C - 20B ( $10^9 \times 2$ ); D6i - 50B ( $10^{10} \times 5$ ); D6 - 100B ( $10^{11}$ ); D6MAX - 1T ( $10^{12}$ )
Emitter cleaning	Self-cleaning – maintenance free
Emitter Points	Tungsten
Input voltage	12V DC / 24V AC

# Technical Specifications

Operating environment	Temp. (14°F) – (140°F), Hum. 20-80% non-condensing
Storage environment	Temp. (14°F) – (158°F), Hum. <85% non-condensing
Ozone	< 0.001 ppm
EMI	Below background levels (rec. 3.464 inches distance)
LED indicator	green: power “on”
Connector power	12V DC / 24V AC
Connector output	On/Off; optional I/O; optional I/O; common
Connector interface	RS485 Modbus (up to 247 units)
Enclosure	PC-ABS plastic blend, color grey (black)
Dimensions Mounting	5.18x5.10x3.46 inches
Duct Mount Weight	1.5 Lb
Certifications	UL(867 and 2998), CSA, CE, IEC, FCC, RoHS 2
<b>For Static Control</b>	
Ion Balance	Inherently self-balancing system < $\pm 30V$
Discharge time 1	1000V – 100V @ < 3 sec at 11.82 inches with air flow 39.4 inch/sec
Discharge time 2	1000V – 100V @ < 6 sec at 23.63 inches with air flow 39.4 inch/sec
Discharge voltage 1	< 30 V at 11.82 inches
Discharge voltage 2	< 10 V at 23.63 inches

## Device Dimensions



# Warranty

## **THE DUCT MOUNTED D6 SERIES IS COVERED UP TO 12 MONTHS (1 YEAR) FROM DATE OF PURCHASE.**

### **Warranty Coverage**

The warranty is against any defects in materials and/or workmanship and/or function of the product for the period of 12 months of the purchase date ("Warranty Period"). Within the Warranty Period, in case of a justified claim by client, EXP will, at its own discretion, repair or replace the product or refund the client's purchase price within 60 business days of client is shipping such products.

If shipment to an authorized service facility is required, shipping instructions will be provided by EXP. Do not ship any product without shipping authorization. All shipping charges must be prepaid by the customer.

### **Warranty Limitations:**

Warranty does not apply in case product: (1) Has been involved in an accident or subjected to misuse, improper maintenance or negligence or use which was not according to the instructions given by the manufacturer; (2) Has been altered or repaired in any way that has, in EXP's judgment, adversely affected its performance or reliability; (3) Has been used in an application or for a purpose for which the product was not designed or under stresses or conditions exceeding those specified for the product; (4) Has been damaged after leaving EXP's facility; (5) Has been serviced by unauthorized personnel or if parts in the system were found or exchanged, which were not original parts from EXP; (6) If maintenance was not performed or was not in accordance with the maintenance instructions specified by EXP; (7) In case of fire, lightning or other disasters; (8) If the system has been used in improper conditions;

This warranty is extended only to the original purchaser of this product. EXP will not be held responsible for any consequential damage caused by malfunction of the system or misprint and typographical errors. Users assume sole responsibility for all damage or injury, including death, which may arise during the use of these products in any manner or under any conditions.

EXP disclaims all other liabilities and obligations, including non-contractual liability for personal injury, death, direct or indirect property damage or consequential damages based upon its negligence, strict liability, incidents, all other effects from malfunction of the system or any other ground. Regardless of whether liability is asserted on the basis of breach of warranty, negligence, strict liability, breach of contract or otherwise, EXP shall not be responsible for special, incidental, consequential or punitive damages, including loss of property, loss of profits or revenues, downtime costs and the cost of substitute equipment.



EAGLE X PRO

## EXP D6 SERIES Duct Mounted

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