Blue Heaven Technologies
2820 S. English Station Road - Louisville, KY 40299
Phone: (502) 357-0132

TEST NO. 22-253-1A

Test Report - Ozone Emissions - Low Flow Rate

CSA Group - C22.2 No.187-20 - Section 7.5

Electrostatic In Duct Type Air Cleaners for Residential Use

Test Unit Description

Customer: AIRPHX
Manufacturer: AIRPHX
Model No.: IN-DUCT UNT 2.0
Serial Number: NA
Unit Modified for Zero Ozone

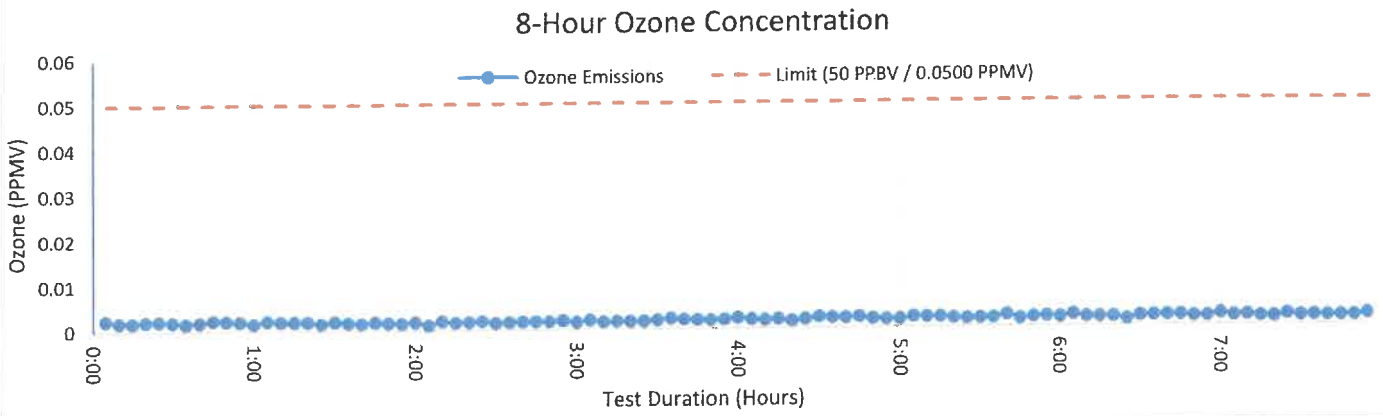
NOTES: Unit is in duct Air Cleaner intended for use in HVAC ductwork. Device has single setting and 115 VAC input power.
Run in Start: 6/11/2022 19:00 Run in End: 6/11/2022 19:30
> 30 Minutes

The unit was tested at two flow rates. Low: 375 CFM and High: 2,000 CFM. This report details performance at low flow.

8-Hour Ozone Emissions Test Results

Test Date: 6/11/2022 - 6/12/2022 Start Time: 6/11/2022 19:50 End Time: 6/12/2022 3:50

		Maximum Allowed	PASS / FAIL
Average 8-Hr Background Concentration:	0.00050 PPM		
Average 8-Hr Downstream Concentration:	0.00240 PPM		
Average 8 Hour Time Weighted Average (TWA) Ozone Concentration:	**0.002 PPM**	0.050 PPM	PASS
Maximum Ozone Reading over 8-Hour Testing:	**0.002 PPM**	0.050 PPM	PASS



Test Equipment Information

	Model	Serial Number	Range
Upstream Ozone Analyzer:	2B Technologies Model: 205	2331DB	0.0000 - 0.1500 PPMV
Downstream Ozone Analyzer:	2B Technologies Model: 205	2332DB	0.0000 - 0.1500 PPMV
Temperature:	EE21-FT2B51-HC01/E01-T83	123501000187	-40 - 140 °F
Humidity:	EE21-FT2B51-HC01/E01-T83	123501000187	0 - 100% RH
Data Recorder:	Yokogawa DX230-1-2	12AA29144	30 Channel Recorder
Watt Transducer:	Ohio Semitronics, Inc. AGH-002E	20100694	0-1000 Watts

Test Conditions

Unit was tested in a complete ASHRAE 52.2 Test Duct. Flow Rate was maintained at 375 CFM over the 8-hour test period. Test unit installed entirely inside the 24" X 24" test duct and duct sealed to be leak-free. All unit emissions were contained inside the test duct. Unit installed in test duct with correct flow orientation.

Average Test Flow Rate: 378.64 CFM
Average Test Temperature: 71.97 Deg F Average Test Rel. Humidity: 50.89 %

Requester Information

Test Requestor: Terry Woodbridge Phone: 888-420-0396
Company Name: AIRPHX Email: terry@airphx.com
Company Address: 158 Towerview Ct.; Cary, NC 27513 Date Requested: 5/31/2022

Test Operator Information

Test Performed by: Glen Toloczko CAFS Reviewed by: ES EIT Completion Date: 6/15/2022

Blue Heaven Technologies
2820 S. English Station Road - Louisville, KY 40299
Phone: (502) 357-0132

TEST NO. 22-253-1A

Test Report - Ozone Emissions - Low Flow Rate

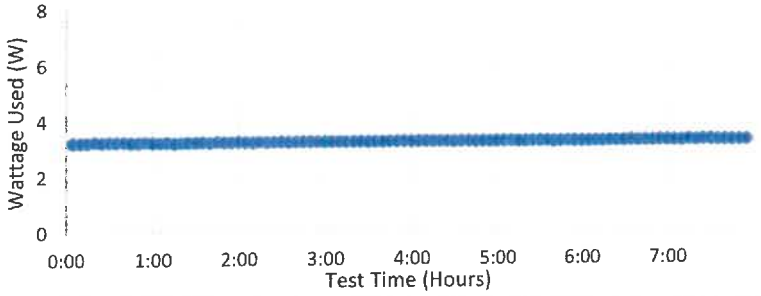
CSA Group - C22.2 No.187-20 - Section 7.5

Electrostatic In Duct Type Air Cleaners for Residential Use

Device Energy Usage

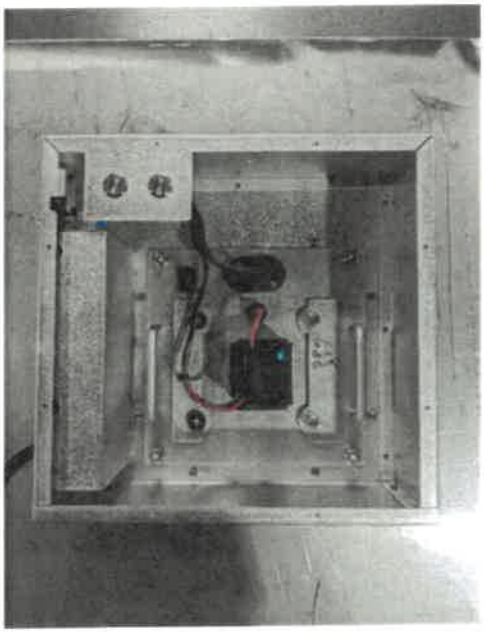
Average Input Wattage	3.245	W
Input Voltage	115	VAC

Unit has single setting.



Photos

Overall Unit View



Requester Information

Test Requestor:	Terry Woodbridge	Phone:	888-420-0396
Company Name:	AIRPHX	Email:	terry@airphx.com
Company Address:	158 Towerview Ct.; Cary, NC 27513	Date Requested:	5/31/2022

Test Operator Information

Test Performed by:	Glen Toloczko CAFS	Completion Date:	6/15/2022

Blue Heaven Technologies
2820 S. English Station Road - Louisville, KY 40299
Phone: (502) 357-0132

TEST NO. 22-253-1B

Test Report - Ozone Emissions - High Flow Rate

CSA Group - C22.2 No.187-20 - Section 7.5

Electrostatic In Duct Type Air Cleaners for Residential Use

Test Unit Description

Customer: AIRPHX
Manufacturer: AIRPHX
Model No.: IN-DUCT UNT 2.0
Serial Number: NA
Unit Modified for Zero Ozone

NOTES: Unit is in duct Air Cleaner intended for use in HVAC ductwork. Device has single setting and 115 VAC input power.

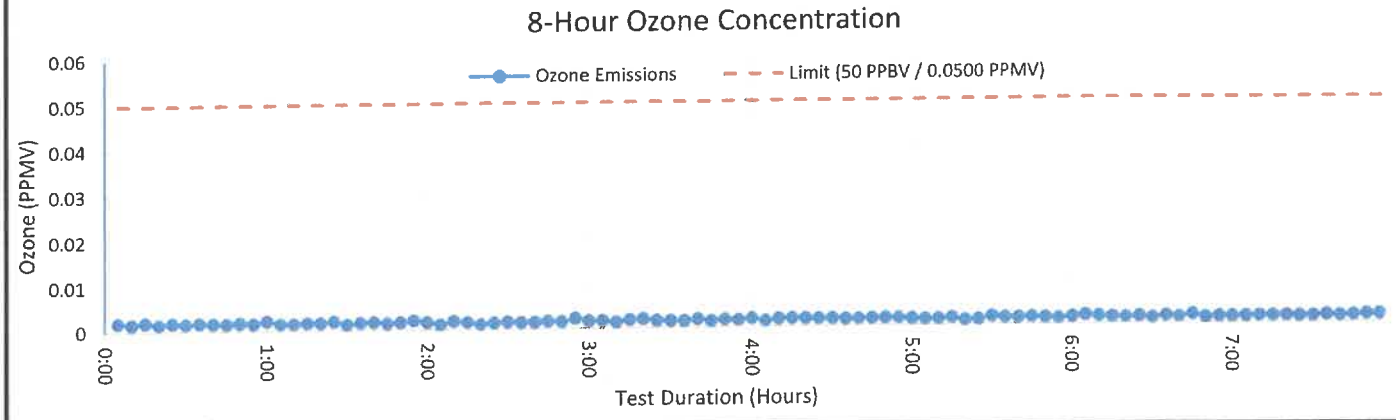
Run in Start: 6/11/2022 19:00 > 30 Minutes
Run in End: 6/11/2022 19:30

The unit was tested at two flow rates. Low: 375 CFM and High: 2,000 CFM. This report details performance at high flow.

8-Hour Ozone Emissions Test Results

Test Date: 6/12/2022 - 6/13/2022
Start Time: 6/12/2022 17:06
End Time: 6/13/2022 1:06

		Maximum Allowed	PASS / FAIL
Average 8-Hr Background Concentration:	0.00329 PPM		
Average 8-Hr Downstream Concentration:	0.00484 PPM		
Average 8 Hour Time Weighted Average (TWA) Ozone Concentration:	**0.002 PPM**	0.050 PPM	PASS
Maximum Ozone Reading over 8-Hour Testing:	**0.002 PPM**	0.050 PPM	PASS



Test Equipment Information

	Model	Serial Number	Range
Upstream Ozone Analyzer:	2B Technologies Model: 205	2331DB	0.0000 - 0.1500 PPMV
Downstream Ozone Analyzer:	2B Technologies Model: 205	2332DB	0.0000 - 0.1500 PPMV
Temperature:	EE21-FT2B51-HC01/E01-T83	123501000187	-40 - 140 °F
Humidity:	EE21-FT2B51-HC01/E01-T83	123501000187	0 - 100% RH
Data Recorder:	Yokogawa DX230-1-2	12AA29144	30 Channel Recorder
Watt Transducer:	Ohio Semitronics, Inc. AGH-002E	20100694	0-1000 Watts

Test Conditions

Unit was tested in a complete ASHRAE 52.2 Test Duct. Flow Rate was maintained at 2000 CFM over the 8-hour test period. Test unit installed entirely inside the 24" X 24" test duct and duct sealed to be leak-free. All unit emissions were contained inside the test duct. Unit installed in test duct with correct flow orientation.

Average Test Flow Rate: 2,006.71 CFM
Average Test Temperature: 73.41 Deg F
Average Test Rel. Humidity: 54.95 %

Requester Information

Test Requestor: Terry Woodbridge
Company Name: AIRPHX
Company Address: 158 Towerview Ct.; Cary, NC 27513
Phone: 888-420-0396
Email: terry@airphx.com
Date Requested: 5/31/2022

Test Operator Information

Test Performed by: Glen Toloczko CAFS
Reviewed by: ES EIT
Completion Date: 6/15/2022

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2820 S. English Station Road - Louisville, KY 40299
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TEST NO. 22-253-1B

Test Report - Ozone Emissions - High Flow Rate

CSA Group - C22.2 No.187-20 - Section 7.5

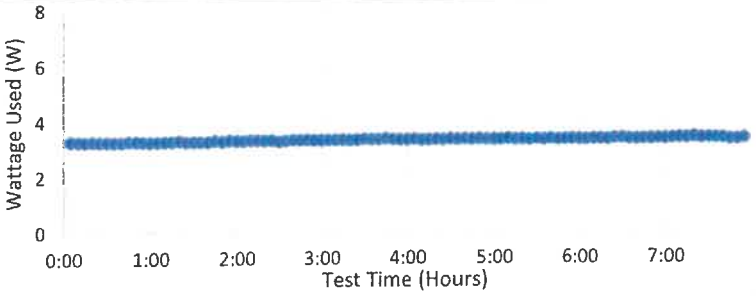
Electrostatic In Duct Type Air Cleaners for Residential Use

Device Energy Usage

Average Input Wattage 3.309 W

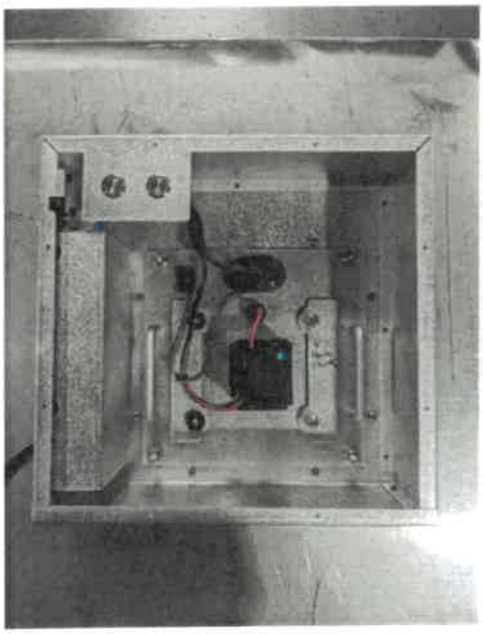
Input Voltage 115 VAC

Unit has single setting.



Photos

Overall Unit View



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