PROLITEC

PERFECTLY SCENTED ENVIRONMENTS

AirQ 1280

AIRQ
BY PROLITEC

Original Instructions

Rev. 2019-07-01

Contents

IMPORTANT SAFETY INSTRUCTIONS

The most up-to-date version of this manual is available for download at airqmanuals.com

IMPORTANT SAFETY INSTRUCTIONS – SAVE THESE INSTRUCTIONS

Appliance Precautions

1.   WARNING – When using electric products, basic precautions should always be followed, including the following:

• Read all the instructions before using the product.

• Children should be supervised not to play with the appliance.

• Do not put fingers or hands into the product.

• The appliance must be operated in an upright or vertical position.

• The appliance should not be used with the door in the open position. The door is opened only to perform a cartridge or program change.

• Never put your nose to the output of the AirQ 1280. Within 12 inches of the output, the fragrance is highly concentrated. The improper inhalation of high concentrations of fragrance may cause irritation including watery eyes, headache, cough and upper respiratory discomfort.

• This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

2.   INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

• The appliance is built to be plugged into an 110VAC or 220VAC power outlet. Must be used only with the approved and included power supply. The UL and CE compliant power supply converts power to 15VDC to power the appliance. The appliance must only be supplied at Safety Extra Low Voltage (SELV).

• If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.

• Unplug before cleaning.

• To reduce the risk of electric shock, the appliance should only be plugged into a properly grounded outlet box. If there is any doubt as to whether an outlet box is properly grounded, a qualified electrician should be consulted.

Fragrance Cartridge Precautions

- Use only AirQ by Prolitec fragrance cartridges.

- Read the Consumer Product Safety Information Sheet and the Material Safety Data Sheet provided with each shipment of Cartridges. Insure that these information sheets are available for review by employees.

- Use latex gloves to handle a Cartridge to avoid the liquid getting on hands. The AirQ fragrances are formulated so as to not be harmful in contact with the skin, but the concentrated nature of the fragrances may make the scent difficult to remove from hands and skin.

- Wash your hands after all contact with Cartridges or fragrance.

- While AirQ Air Treatment Agents do not contain ingredients deemed harmful to the skin, if there is skin contact, wash with soap and water. If there is contact with the eyes, irrigate the eye with fresh water for 5 minutes. If there is any eye irritation, consult a physician immediately.

FCC Statement - Class B Digital Device

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, this equipment may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

About AirQ 1280

Welcome to a whole new world of air treatment from Prolitec, the technology leader in air care with scent. The AirQ 1280 appliance is the most advanced commercial air-treatment system on the market today. It is the world's first fully adjustable commercial air-treatment system engineered to serve indoor spaces.

AirQ 1280 is a patented, computer-controlled, always-on system capable of maintaining a constant, uniform and controlled level of scent or odor neutralizer.

The AirQ 1280 converts fragrances and odor control formulations ("Agents") into ultra-fine droplets for controlled distribution as an aerosol or vapor directly into a room or via the airflow of the HVAC system, either through the central fan unit (CFU) or at suitable locations in the branched ductwork. It is designed for permanent installation on a wall in the area to be treated or integrated with the CFU.

The AirQ 1280 is managed by an on-board computer that is fully adjustable, enabling intensity settings to match space sizes from 1,800 to 150,000 cubic feet (50-4,200 cubic meters) per appliance. The AirQ 1280 is programmable, capable of executing 21 distinct start and stop times, repeatable daily or weekly. Utilizing up to 21 programs and the full range of 50 intensity settings allows you to optimize the fragrance levels depending on peak and non-peak occupancy in the space. This new feature can save you money on fragrance AND service visits. Multiple appliances can work together on the same or multiple CFUs to treat the air in the same spaces served by the HVAC. Multiple appliances can work together in the same space.

Typical AirQ 1280 applications include air treatment to enhance or improve indoor air quality including odor cancelling, and ambient scenting in public spaces such as casinos, malls, hotels, theaters, ballrooms, convention centers, hospitals, retirement and assisted living facilities, schools and restrooms. A single AirQ 1280 can do both odor control and ambient scenting at the same time.

The AirQ 1280 with Prolitec odor control formulations and fragrances will cancel a wide range of offensive odors and replace them with pleasant scents available from the Prolitec fragrance catalog or custom developed to meet client requirements.

The AirQ 1280 works by generating ultra fine, ultra-light droplets approximately 1 micrometer (µm) in diameter. By comparison, a droplet from a typical pressurized aerosol spray can is 50 microns (50000 nanometers) in diameter or 50 times larger than an AirQ 1280 droplet. In terms of weight and volume of liquid, the comparison is even more dramatic. A 50-micron aerosol droplet is 125,000 times heavier than a 1 µm AirQ droplet.1 (See also Table 1 below.) This tiny AirQ droplet offers many performance benefits over a conventional aerosol including: completely uniform distribution of the treatment agent; 50 times more exposed surface area; and the absence of any liquid deposits on surfaces such as the interior surfaces in an HVAC system.

AirQ 1280 is simple to install and program for specific room size, airflow conditions, and desired scent intensity. Minimal maintenance is required beyond the periodic change of the disposable fragrance cartridge, inspection and annual replacement of three O-rings, and a simple wipe down or dusting of exterior surfaces. Once installed in the right location, AirQ 1280 will outperform any other system, providing completely uniform scent distribution.

The AirQ 1280's advanced technology creates a scent effect with a smaller quantity of fragrance ingredients than any other method. The chemicals employed in making AirQ 1280 fragrances are fully compliant with the most restrictive air-quality and inhalation standards. AirQ 1280 generates no

harmful VOCs and uses no ethanol or propellants. Quite simply, used as directed, AirQ 1280 is the greenest, most eco- friendly way to introduce scent into an interior space with no negative impact on indoor air quality. This is not an accident. The scientists and engineers at Prolitec are committed to the highest ecological and human safety standards.

This user guide is easy to read. It is also important to read. AirQ 1280 is a high-performance appliance that, installed and used correctly, will meet the most demanding requirements.

Table 1. Prolitec AirQ Technology vs. Aerosol Spray Can Technology		
Parameter	Prolitec AirQ Technology	Aerosol Spray Can
Droplet Diameter, µm	1	50
Volume per Droplet, µm3	0.52	65,450
Surface Area per Droplet, µm2	3	7,854
Relative Volume per Droplet	1	125,000
Relative Weight per Droplet	1	125,000
Number of Droplets per Equivalent Volume	125,000	1
Surface Area/Volume, µm-1	6.00	0.12
Relative Surface Area per Volume	50	1
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Unpacking

Remove AirQ 1280 from the container. The following items should be included:

1. AirQ 1280 Appliance

2. HVAC kit

3. Plume kit

4. AC Cord

5. Mounting Hardware

MOVING AND STORAGE INSTRUCTIONS

1. Remove the cartridge.

2. Unplug the appliance.

3. Disconnect the appliance from the tubing, bulkhead, etc.

4. Store at -4°F (-20°C) to 158°F (70°C), 5% to 95% humidity.

Cartridge Life & Room Size Table

Estimating Cartridge Life

Estimating how long a cartridge will last and the number of days between services is critical to performing an installation that can be serviced efficiently. This includes determining the number of AirQ 1280s needed for a space. Please refer to AirQ's 'S4 Tool,' available at Prolitec CSP Tools. The chart below can be used as a rough guideline for sizing.

Room-Size Table

Output Level Range	Normal Off-Cycle (NOC) Room Volume Range		Short Off-Cycle (SOC) Room Volume Range		Very Short Off-Cycle (VSOC) Room Volume Range	
	CFT	CM	CFT	CM	CFT	CM
1-5	1800-8100	51-229	6000-25000	170-708	21400-66700	606-1888
6-10	10000-17400	283-492	30000-47100	849-1333	75000-97100	2123-2748
11-15	19300-27700	546-784	51100-66300	1446-1876	101100-114000	2861-3226
16-20	30000-39700	849-1124	70000-83600	1981-2366	116700-125100	3303-3540
21-25	42300-53400	1197-1511	86800-98900	2456-2799	126900-132800	3591-3758
26-30	56300-68600	1593-1941	101600-112800	2875-3170	134000-138300	3792-3914
31-35	71800-812800	2032-2425	114400-123500	3238-3495	139200-142400	3939-4030
36-40	89400-104800	2530-2966	125600-133600	3554-3781	143100-145500	4050-4118
41-45	108900-126200	3082-3571	135400-142300	3832-4027	146100-148000	4135-4188
46-50	130700-150000	3699-4245	143900-150000	4072-4245	148400-150000	4200-4245

These settings are suggested as a starting point. Start on the lower end of the range and adjust after one hour. Fragrance type, room size, number of fresh air changes per hour, temperature, humidity and user preference will determine the final setting. Best practice is to use AirQ's 'S4 Tool' at AirQ Tools.

Appliance & Controls

Plume Kit

Air Stem

Recyclable Cartridge

Control Display

Control Buttons

Programming USB Port

ScenXus Connector

AC Inlet

USER MAINTENANCE

Changing the Cartridge

1. Unlatch and open the door to access the cartridge: The door should be opened only to perform a cartridge or programming change. When in use, the door must be closed.

2. Press POWER button to turn appliance OFF.

3. Remove air nozzle (located on the side of the cartridge head) by rotating 90 degrees and pulling.

4. Detach plume kit from the cartridge output port (located on the top of the cartridge head). This is done by unscrewing the cap from the cartridge output port and pulling out.

5. Remove cartridge from appliance enclosure.

6. Install new cartridge, place and tighten plume kit firmly on cartridge output port.

7. Insert air nozzle and rotate the handle 90 degrees until secured (by stem retaining tab on cartridge head).

8. Turn appliance ON. Verify that the plume is not escaping inside the enclosure and that all connections are tight. Close the door when complete.
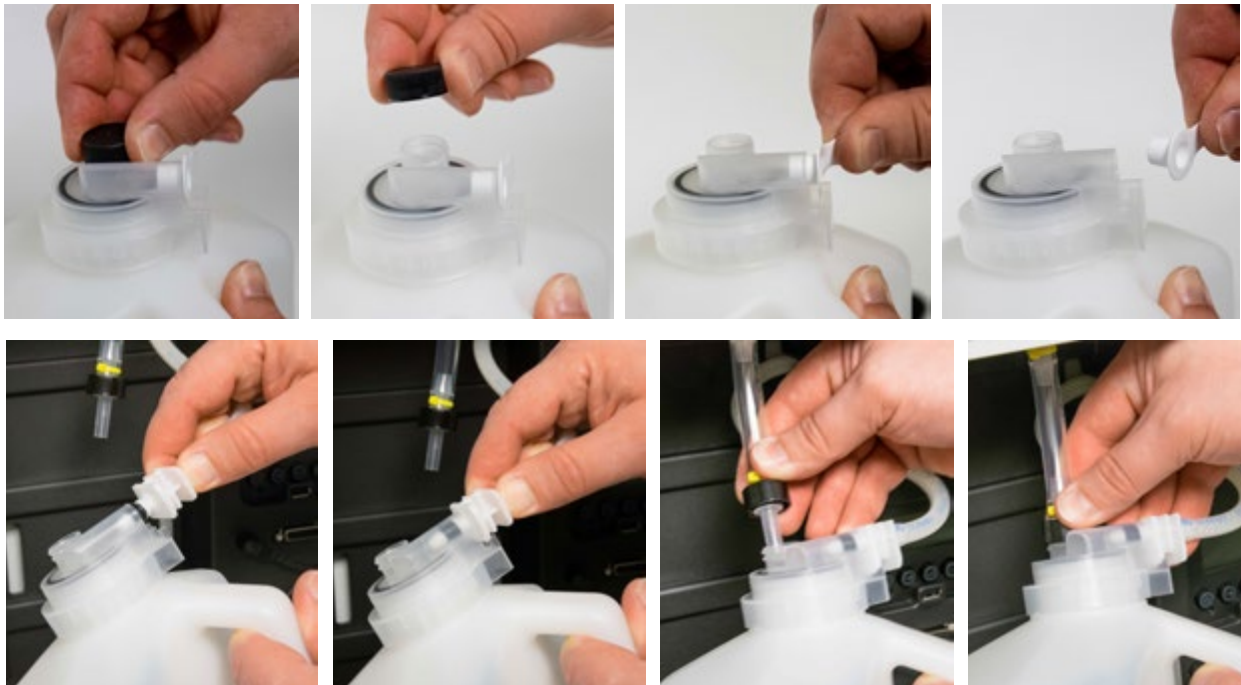
Seal Replacement (each year or as needed)

Replace the air nozzle's seal if worn or damaged. Replace as needed and/or each year for preventative maintenance.

If there is any fragrance that leaks during the cartridge installation, clean it carefully with a paper towel and some ethanol or another alcohol.

Air Filter and Check Valve Replacement
(every 6 months or sooner depending on use)

AirQ 1280 is equipped with a filter and a check valve.

The filter (PN 5251) collects fine dust. Replace every 6 months or sooner depending on use. A layer of black dust on top of the filtering media is a sign that the filter should be replaced. To replace it, unscrew the four screws to remove the bracket and exchange the filter after pulling it off the rubber tubing. Note the small triangle showing the normal air flow direction and position filter accordingly as shown below.

The check valve (PN 10200) should be replaced every six months. It is also located behind the bracket. Note the position of the check valve. Replace check valve accordingly as shown below.

Reinstall the bracket and screw the four screws back in place being careful not to strip the threads. The screws should align and go in easily.

Unscrew to remove bracket

Check Valve

Filter

Never touch PCB without ESD protection.
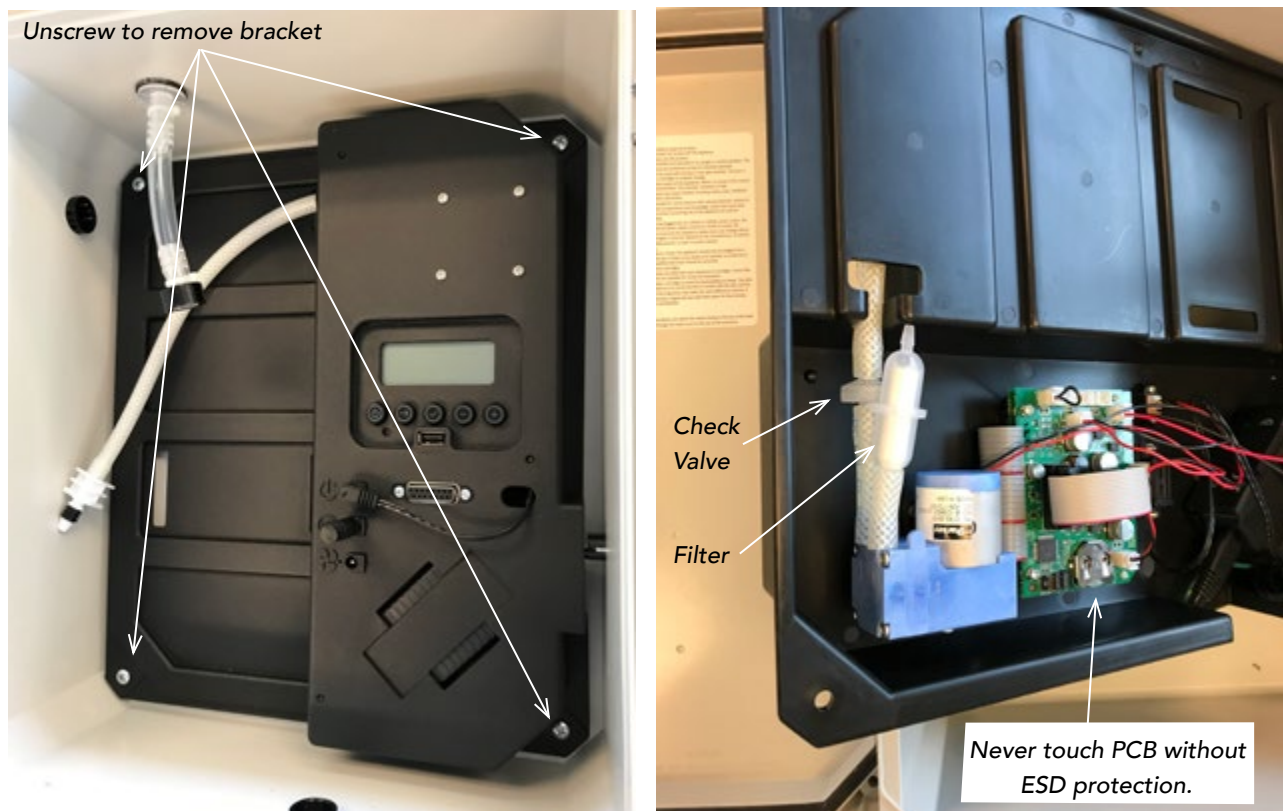
OPERATING INSTRUCTIONS

Unit Programming

1.   Unlock and open the door.

2.   Turn on the power by pressing ⏻ on the control panel.

3.   Set the Clock.

- Press ➔ to cycle through the modes to the options mode. The day of the week will blink.

- Adjust the day forward or backward using ⊕ or ⊖.

- Press ⊘ to set the day of the week and the hour will blink.

- Adjust the hour forward or backward using ⊕ or ⊖.

- Press ⊘ to set the hour and the minute will blink.

- Adjust the minute forward or backward using ⊕ or ⊖.

- Press ⊘ to set the minute and the hour and minute will both blink.

- Change between 24-hour and 12-hour modes using ⊕ or ⊖.

- Press ⊘ to set the time mode and the off-cycle will blink.

- Change between normal (NOC, 7 minutes), short (SOC, 2 minutes), and very short (VSOC, 30 seconds) modes using ⊕ or ⊖.

- Press ⊘ to set the off-cycle and the fan setting will blink.

- Adjust the fan speed up or down using ⊕ or ⊖.

- Press ⊘ to set the fan speed and the day of the week will blink.

4.   **24/7** Mode.

- If you want AirQ 1280 to run continuously — 7 days a week, 24 hours a day — press ➔ until 24/7 is displayed above the time. If not, skip to Step 5.

5.   SET PROGRAM Mode.

- Press ➔ until **SET PROGRAM** is displayed above the time. The program number will blink in the lower right corner of the display

- Adjust the program number forward or backward using ⊕ or ⊖.

- Press ⊘ to set the program number and the status will blink.

- Adjust the status between on ("**ON**") and "off" ("**oF**") using ⊕ or ⊖.

- Press ⊘ to set the status and the intensity will blink.

- Adjust the intensity up or down using ⊕ or ⊖.

- Press ⊘ to set the intensity and the day of the week will blink.

- Adjust the day of the week forward or backward using ⊕ or ⊖.

> HINT: In addition to individual days, you can also set "all days," "week days," or "weekend days."

- Press ⊘ to set the day of the week. **START** will display on the far right side and the hour will blink.

- Adjust the start hour forward or backward using ⊕ or ⊖.

- Press ⊘ to set the start hour and the minute will blink.

- Adjust the start minute forward or backward using ⊕ or ⊖.

- Press ⊘ to set the start minute. **STOP** will display on the far right side and the hour will blink.

- Adjust the stop hour forward or backward using ⊕ or ⊖.

- Press ⊘ to set the stop hour and the minute will blink.

- Adjust the stop minute forward or backward using ⊕ or ⊖.

- Press ⊘ to set the step minute.

The appliance will automatically switch from set program to run program after 30 seconds of inactivity, or you can press ➔ until SET PROGRAM is displayed above the time. You may review the programs by pressing ⊘ while the appliance is in run program mode.

Using the online programming tool

The online programming tool can be found at AirQ Tools (login required). Multiple programs sets can be created, which are unique to the user, and stored in a list. If you don't wish to log in, you can create program sets that won't be stored for later use at airqsd.com.

1. Create a program set using the **CREATE PROGRAM** button.

    - Each program set will require a name.

    - Each program set can contain 21 unique programs, which can be turned on or off within the set.

    - Programs, identified by number 1-21, include a day or days, on/off times, and intensity settings.

- The tool will warn the user of overlapping programs.

- Programs sets need to be saved.

2. Edit an existing program set using the EDIT button to the right of the program name.

3. Copy an existing program set using the COPY button to the right of the program name. This can be especially useful for quickly duplicating a very similar set of programs.

4. Delete an existing program set using the DELETE button to the right of the program name.

5. Export an existing program set using the EXPORT button to the right of the program name.

- A .zip file containing your program set (schedule.txt), the latest firmware (firmware.bin), and the final instruction for use (readme.txt) will download to your computer.

- Insert a USB stick.

- Copy the files needed (schedule.txt for programs, firmware.bin for firmware) to the top level directory of the USB stick (not in a folder or .zip file).

6. Insert the USB stick into the appliance.

Loading new firmware from a USB stick

1. Copy firmware.bin to a USB stick.

2. Insert the USB stick.

3. Press the reset button, and the five buttons will light in sequence from left to right.

4. The ⏻ and ⊕ buttons will light alternately.

5. Press and hold ⏻ for one second, and the display will show LOAD for about ten seconds.

6. The five buttons will light in sequence from left to right.

7. Remove the USB stick, the display will show the currently loaded firmware version and the pump will run for one second.

8. Press ⏻ to turn on the power.

9. Be sure that the power is on and the appliance is in RUN PROGRAM mode prior to closing and locking the door.

Programming the Appliance from a USB stick

1. Copy schedule.txt to a USB stick.

2. Insert the USB stick.

3. Press the reset button, and the five buttons will light in sequence from left to right.

4. The ⏻ and ⊕ buttons will light alternately.

5. Press and hold ⏻ for one second, and the display will show **LOAD** for about ten seconds.

6. The five buttons will light in sequence from left to right.

7. Remove the USB stick; the display will show the currently loaded firmware version and the pump will run for one second.

8. Press ⏻ to turn on the power.

9. Press ➡ to cycle through the modes to the **RUN PROGRAM** mode.

10. Press ⊘ to view the start time for the first program.

11. Press ⊘ again to view the stop time for the first program.

12. Press ⊕ or ⊖ to view the second and third programs.

13. Be sure the power is on and the appliance is in **RUN PROGRAM** mode prior to closing and locking the door.

Copying programs to a USB stick

1. Insert a USB stick.

2. Press the reset button, and the five buttons will light in sequence from left to right.

3. The ⏻ and ⊕ buttons will light alternately.

4. Press and hold ⊕ for one second, and the display will show **SAVE** for about ten seconds.

5. The five buttons will light in sequence from left to right.

6. Remove the USB stick; the display will show the currently loaded firmware version and the pump will run for one second.

7. Press ⏻ to turn on the power.

8. Be sure that the power is on and the appliance is in **RUN PROGRAM** mode prior to closing and locking the door.

9. The new file created on the USB stick will be called "outsche.txt." Changing it to "schedule.txt" allows the programs to be loaded on another appliance.

Setting Scent Intensity

1. Determine the approximate size of the room in cubic feet or cubic meters by multiplying length x width x ceiling height.

2. Consult the Room-Size Table to give you a level (1 to 50) to set. THIS IS ONLY A STARTING POINT.

> Hint: There are many variables to finding the scent level that works: size, airflow, number of fresh air changes per hour, number of people in the space and, most of all, user preferences. Experiment with different levels until you are satisfied. Utilize the S4 Tool.

Scent Control

If you followed the Room-Size Table or S4 Tool, you have set AirQ 1280 to the low end of the range for your room size. If after one hour you feel the scent is not detectable, increase the setting by about 10%. For example, if your start setting was 20, increase it by 10%, or to setting 22. Keep increasing until you and others in the space can detect a slight scent throughout the space.

The Last Step

1. Set the appliance to either 24/7 or RUN PROGRAM.

2. Make sure the power is on.

3. Close and lock the door, storing the key in a known place.

INSTALLATION: Diffusion via HVAC System

Installation Kit

Installation Kit for Appliance (included)

1. One (1) AirQ 1280 appliance (not pictured) with:

2. Eight (8) #10 self-tapping sheet metal screws for mounting in sheet metal

3. Plume connector: A: (1) Tubing; B: (1) Bulkhead Connector; C: (2) Washers; D: (1) Nut; E: (3) Cable Ties; F: (2) O-Rings; G: Cartridge Connector; H: Cap
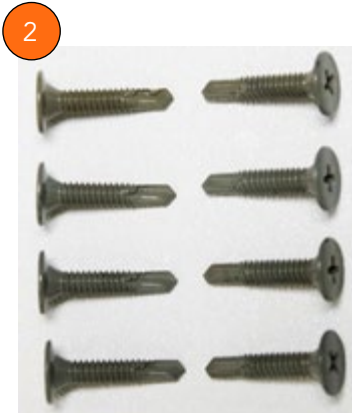
HVAC Pre-installation Checklist

This checklist should be completed before the install date.

1. Confirm the area to be targeted for air treatment.

2. Determine the Air Handling Unit or duct that serves the target area.

3. Make sure the AHU does not use an open gas flame.

4. Find and mark the optimal insertion point for the Injector Tube. (See "Appliance Positioning")

5. Find and mark the exact location for placement of the appliance. (See "Appliance Positioning")

6. Note the distance between the insertion point and the proposed appliance location. (NEVER MORE THAN 3 FEET and there should NEVER be a LOW POINT in the hose run.)

7. Determine and mark the location for the 110 or 220V AC power outlet (NEVER DIRECTLY BELOW THE appliance).

Appliance Positioning

It is important to find an insertion point where the plume output will be smoothly drawn into and mixed with the airflow. On larger AHU's it may be practical to mount the whole appliance inside the AHU.

Best practice when installing in an AHU is to place the injector tube after the heating and cooling coils. If this is not possible, the Plume output can pass over hot water, steam, chilled water, and DX coils.

AirQ Injection Locations
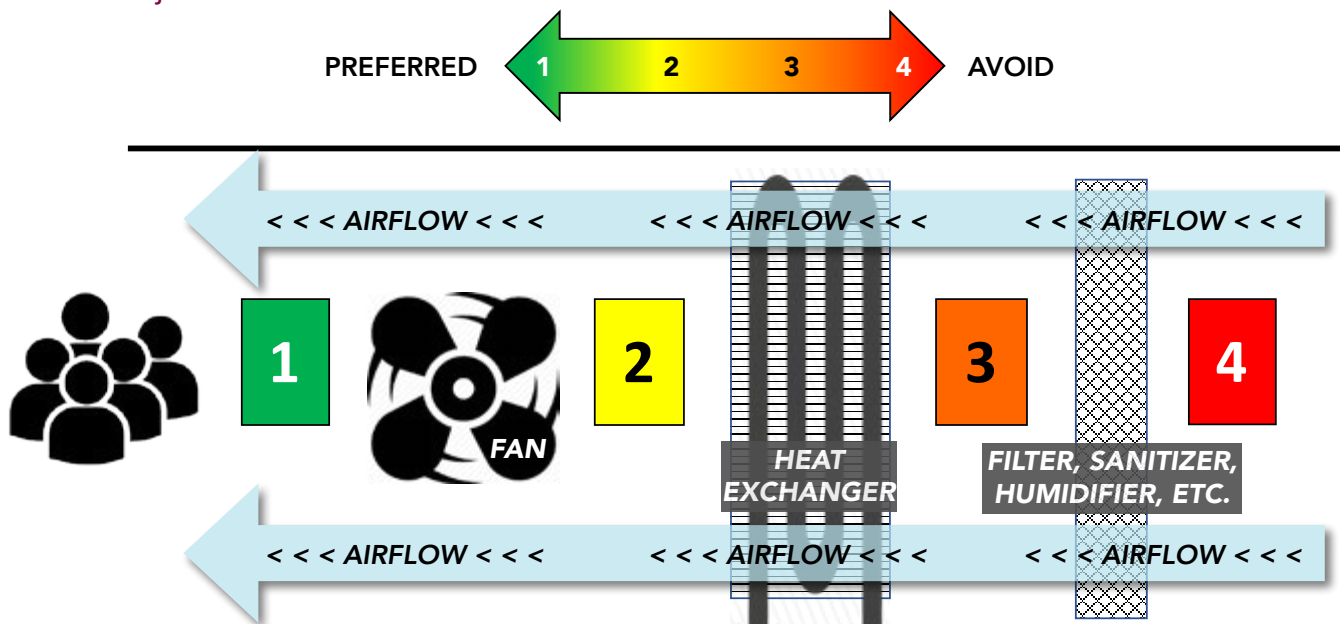
AirQ AHU and Duct Injection Locations

PREFERRED 1 2 3 4 AVOID
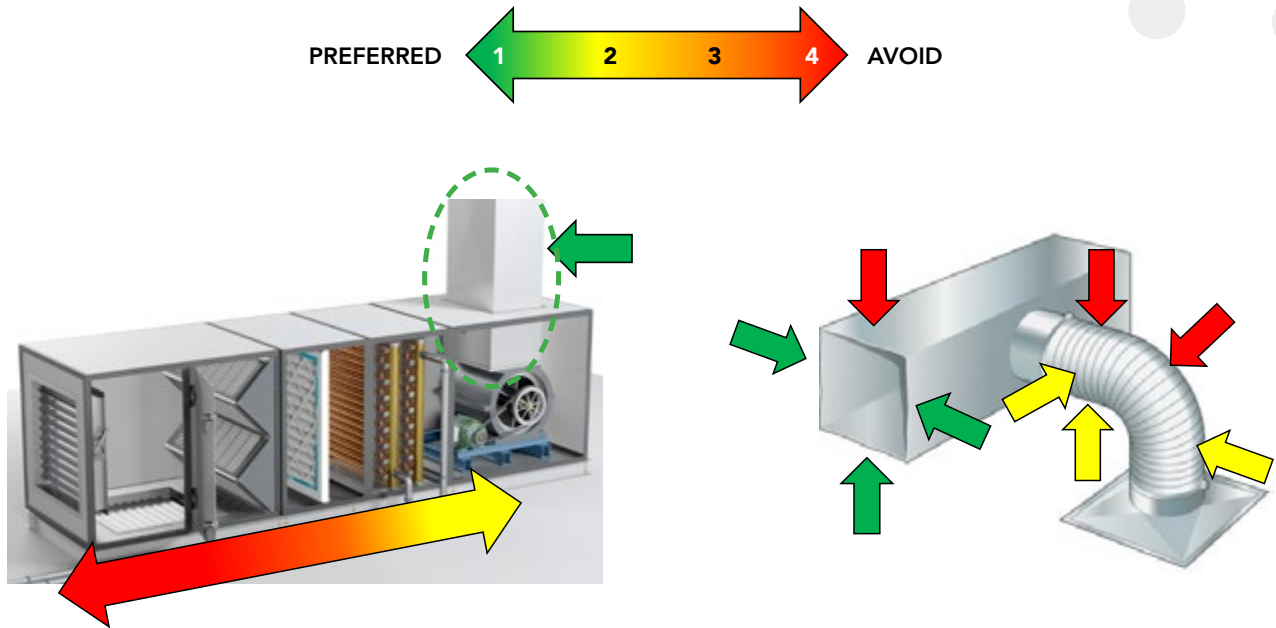
AirQ HVAC and Duct Injection Locations

CONDITIONED AIR
TO ROOMS

A/C EVAPORATOR
COIL

FURNACE AIR
& EXHAUST

RETURN
AIR DUCT

PREFERRED 1 2 3 4 AVOID

GAS LINE

GAS FURNACE

AIR FILTER

CONDENSATE
DRAINS
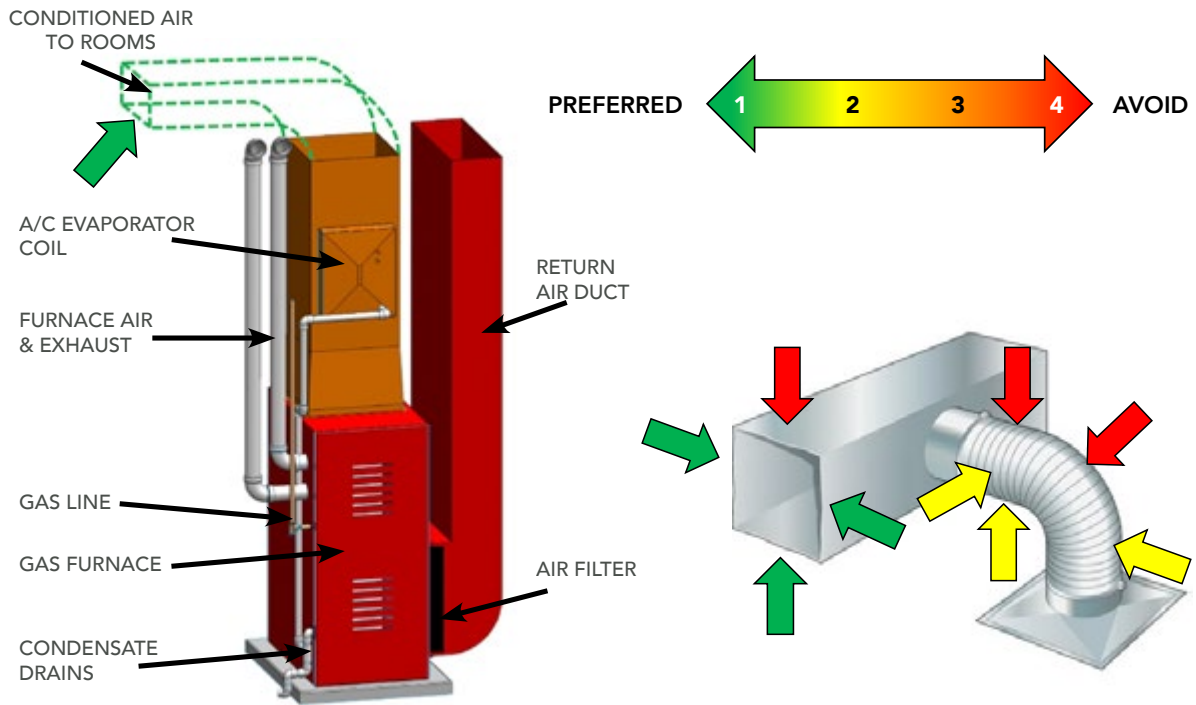
AirQ Duct Injector and Appliance Mounting

UP

SQUARE DUCT

UP

180° — — 0°

ROUND DUCT
6" MINIMUM DIAMETER

PREFERRED 1 2 3 4 AVOID

SMOOTH BENDS,
ONE-PIECE TUBE

INJECTION
POINT

36" MAX.

Y

X

0" IS BEST
X MUST BE LESS THAN Y

AIRQ
BY PROLITEC
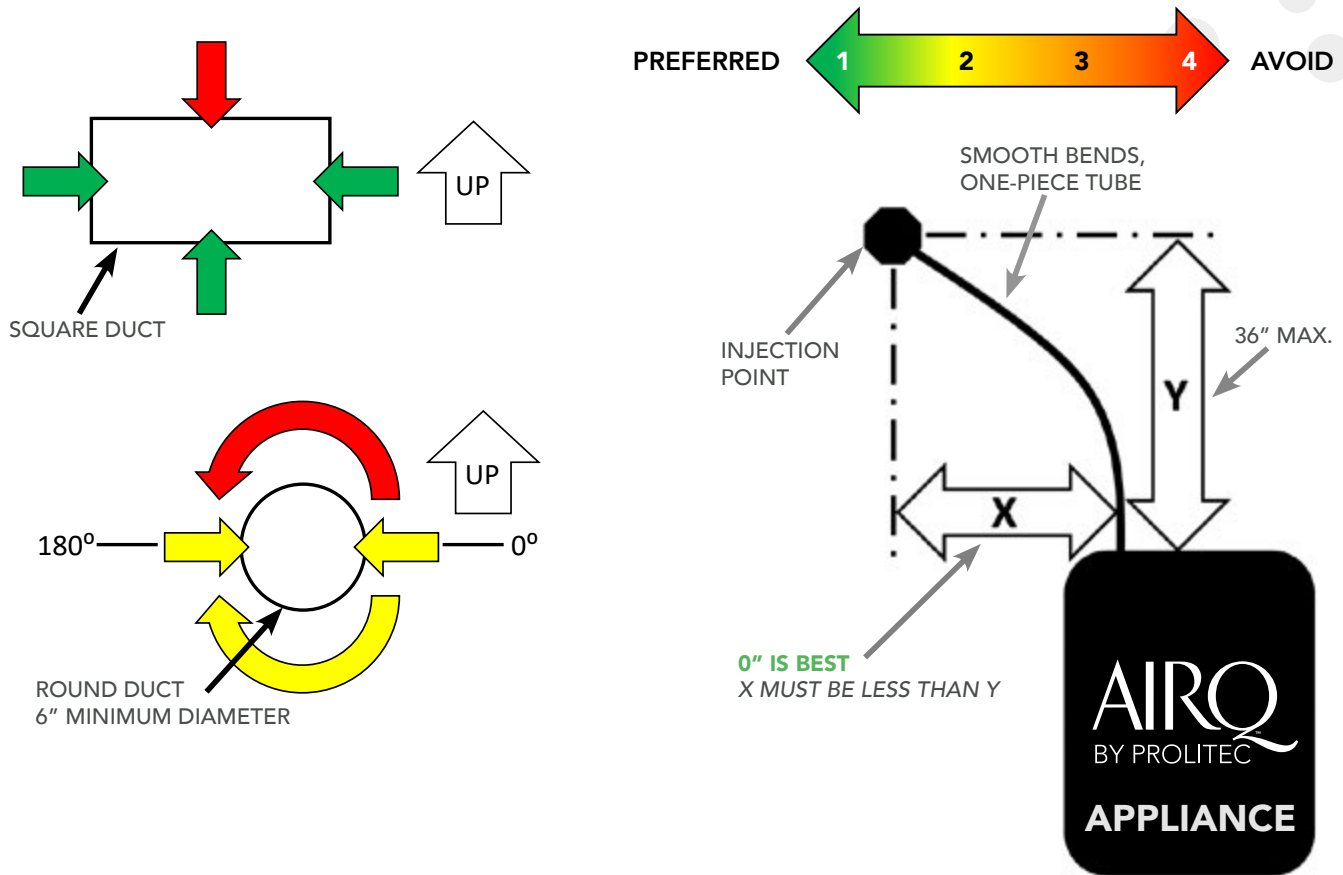
APPLIANCE

Open gas flames should absolutely be avoided. If installation must be over gas heated coils or open gas flames, contact Prolitec Technical Support.

The best location for the Appliance is below the injector tube (Fig. A). The injector hose should be run upward as short a distance as possible and NEVER MORE THAN 3 FEET. If an upward injector hose run is not possible, care should be taken support the hose to prevent sagging or any low spot in the run to avoid any possibility of condensation and liquid collection which will block the plume output. The injector hose is prone to stretching, so support points should be placed every 6 inches on horizontal runs. Give the hose a slight upward slant along its run (See Fig. B). The hose must not be run horizontally. A strong tape (such as Venture tape) may be used to support short runs. The hose may be run through PVC pipe for longer distances.

Fig. A

Injector Hose

Injector Tube

Power
Source

AirQ 1280
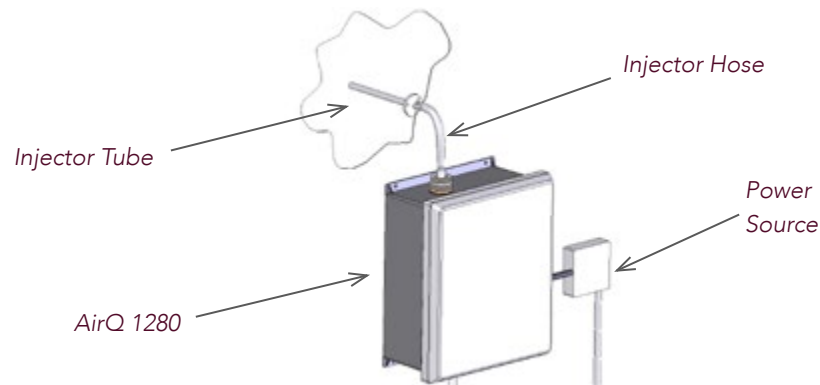
Fig. B
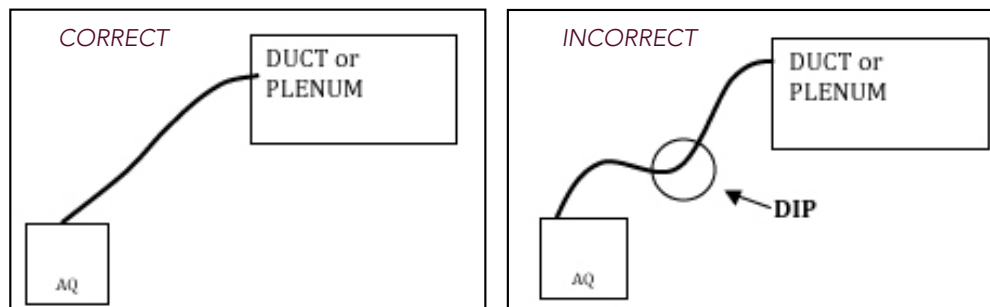
Appliance Installation

1. Place the appliance onto the desired location on the wall or AHU and ensure that it is level.

2. Fasten the appliance to the wall or AHU using necessary screws.

3. Attach an AC cord and connect to a nearby outlet.

4. Assemble the plume connector

Assembling the Plume Connector

- Roll O-rings into grooves (Fig 1)

- Insert assembly into cap, barbed end first, so that threads of cap cover O-rings (Fig 2)

- Push tube over barbed end of cap assembly (Fig 3)

- Push tube over barbed end of bulkhead fitting (Fig 4)

- Tightly secure tube in position with ZipTies (Fig 5)

- Cut off excess tie (Fig 6)

- Push exposed threaded portion of assembly through gasket (Fig 7)

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

- From the interior of the appliance, fit the exposed threaded end of the assembly through the hole in the TOP of the cabinet (Fig 8 – Fig 9)

- Apply gasket over exposed threaded portion of the assembly (Fig 10)

- Firmly tighten nut in place to create a water tight installation (Fig 11)

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Universal HVAC Kit Installation Instructions

Installation Kit for HVAC System Diffusion
(KITHVAC, included)

A	INJECTOR TUBING	36"
B	ALUMINUM TUBE	1 ea
C	SELF DRILLING SCREW	2 ea
D	SET SCREW	1 ea
E	ZIP TIE (colors may vary)	2 ea
F	INJECTOR MOUNT	2 ea
G	CARTRIDGE ADAPTER	1 ea
H	SENSOR COVER	1 ea

Note: not all parts are used in all installations.
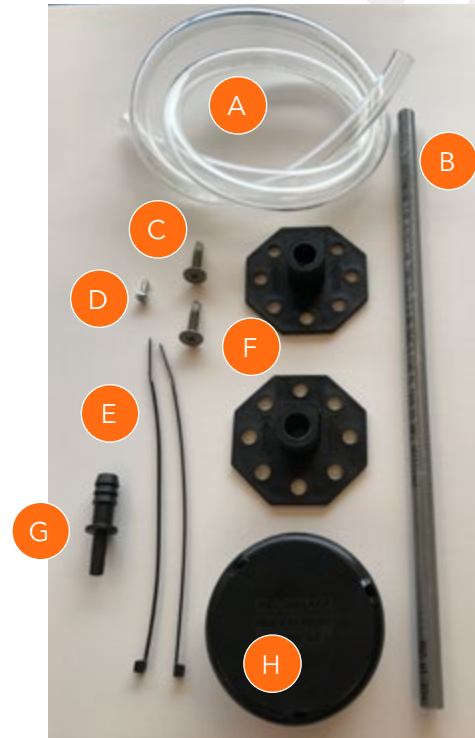
KITHVACSENSOR
(Optional accessory, sold separately)
adds these COMPONENTS:

AA	ADAPTER TUBING	1"
BB	SENSOR CABLE	1 ea
CC	SELF DRILLING SCREW	2 ea
DD	SET SCREW	1 ea
EE	SENSOR	1 ea

Recommended Tools

1.   3/8″ Electric Drill

2.   Step Drill Bit 1/8″ – 1/2″+ capacity

3.   #2 Phillips Screwdriver

4.   #2 Phillips Screwdriver Bit (for use with Electric Drill)

5.   Tubing Cutter w/ Deburring Tool (capacity to cut 3/8″ Aluminum tube)

6.   Diagonal Cutter

7.   Torpedo Level

8.   Tape Measure

Installing the HVAC Kit

1. Identify the best location for fragrance injection. **Ensure that no obstacles will interfere with this installation before proceeding.** Using a step-drill, drill a hole into the HVAC system to create an injection port that is <u>slightly larger</u> than 3/8" diameter:

2. Confirm the hole size is large enough using the Aluminum tube. Enlarge the hole as necessary. While securely holding the Aluminum tube, check the fit to the hole – it should pass freely into the injection port with a minimum gap:

3. <u>Start</u> the set screw into the injector mount as shown. Do not allow the screw to poke through into the center at this time:

4. Insert the Aluminum tube into the center hole of the injector mount as shown. Using a tape measure, set the length to reach to the center of the duct, or leave <u>at least 1"</u> of tube exposed as shown. <u>Gently</u> hand tighten the set screw as needed to positively maintain the position of the Aluminum tube:
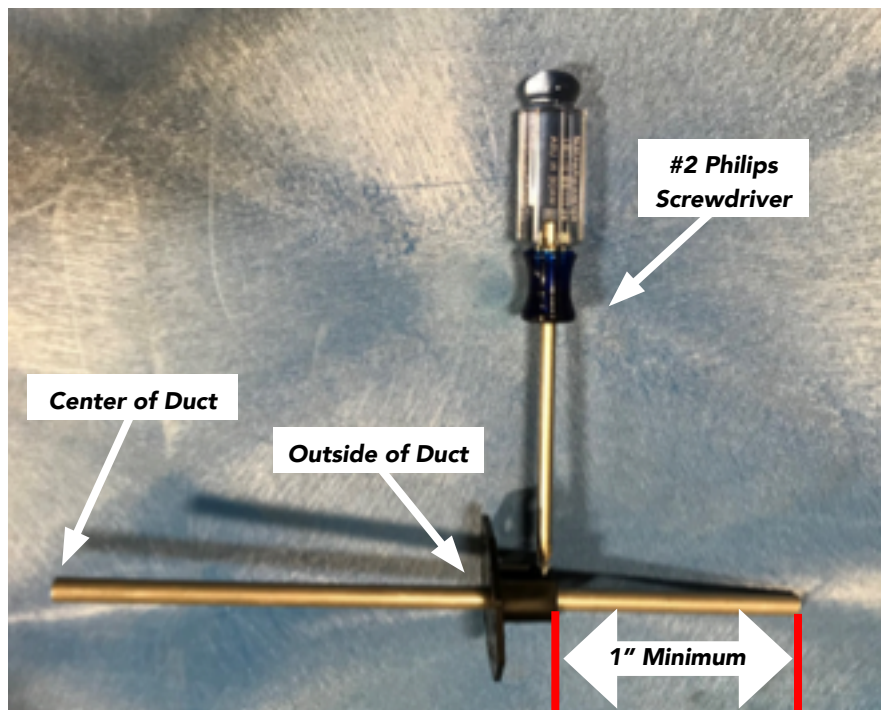
5. If necessary, cut off any excess Aluminum tubing using a tubing cutter. Cut the Aluminum tube to ensure that 1" of tube is left exposed:
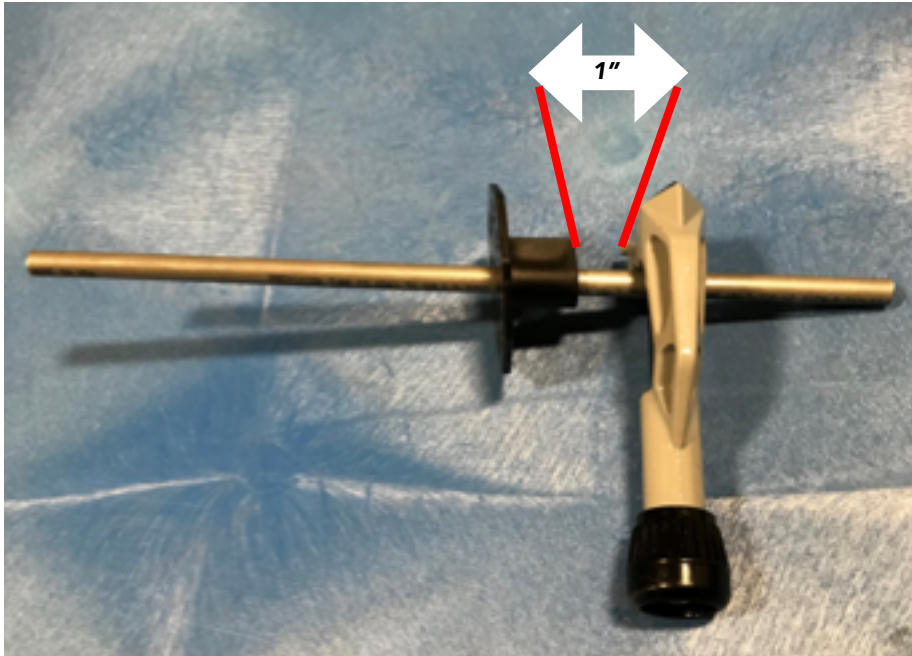
6. If you cut the tube, deburr the Inside Diameter (ID) of the Aluminum tube, then **clean out any debris** from the inside of the tube:

7. Insert the injection assembly through the injection port, until it meets the duct. While using a level, ensure that the 'UP' arrows are pointing vertically up in <u>both planes</u> as shown. **Note: the vertical orientation of these planes is important to help prevent condensation from draining into the HVAC system**
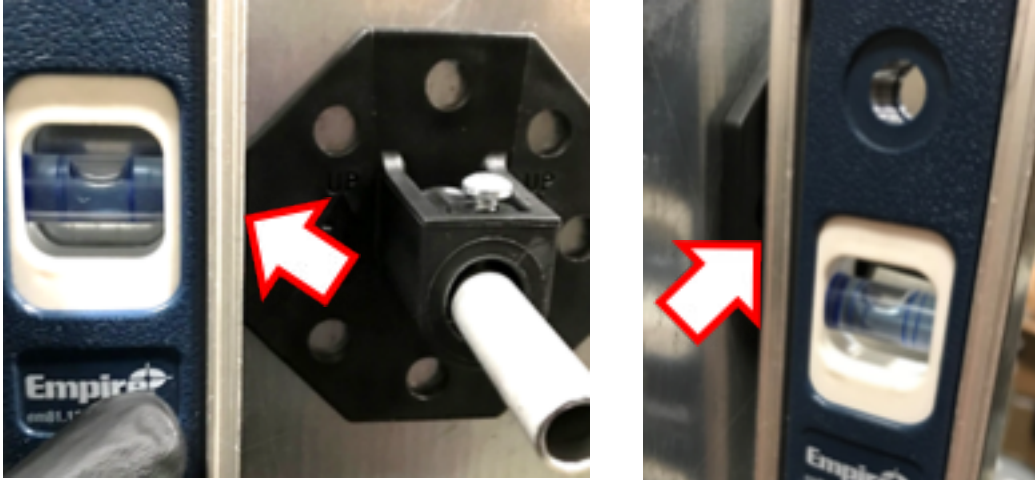
8. Mark the (2) mounting holes that you will use to mount the injection assembly:
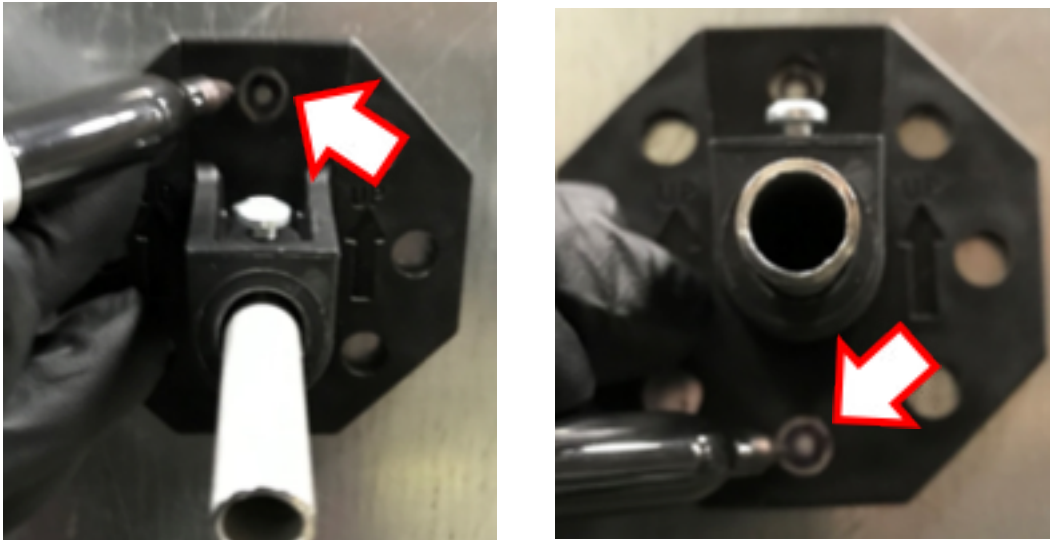
9. Remove the injection assembly and pilot drill the marked mounting holes with a 1/8" diameter drill:
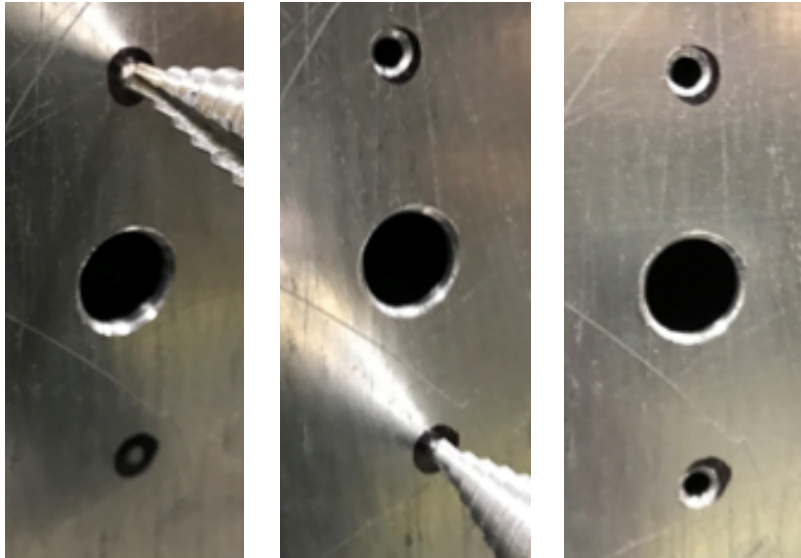
10. Attach the injection assembly to the duct with the top self drilling screw, tightening it to hold the injection assembly in position as needed:
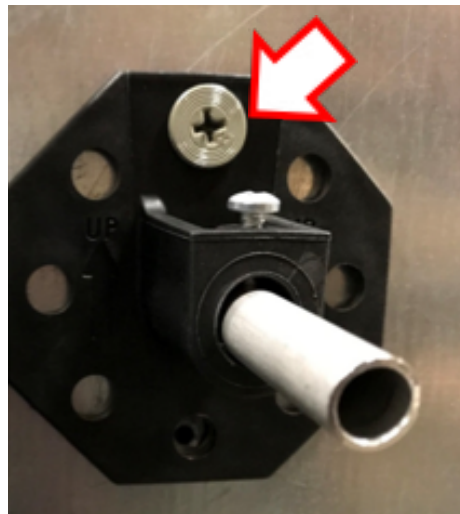
11. Secure the injection assembly to the HVAC system with the second self drilling screw, tightening both the screws as necessary to secure the assembly to the HVAC system while maintaining the vertical orientation set forth previously:
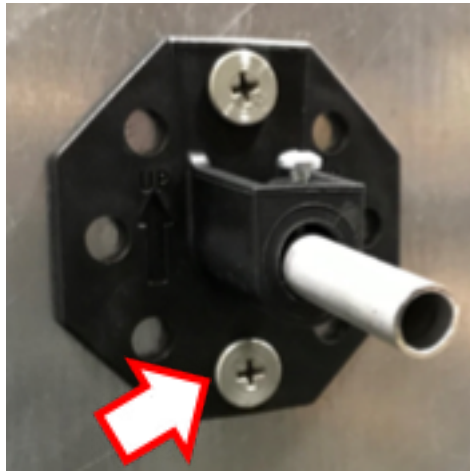
12. Attach the injector tubing to the injection assembly, fully covering the exposed Aluminum tube as shown:
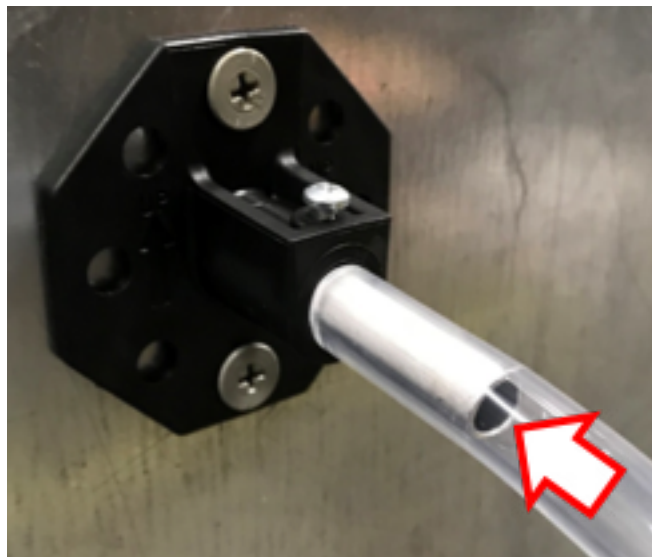
13. Secure the tube with a zip tie at the midpoint of the Aluminum tube. Tighten the zip tie as needed to secure the tubing in place:
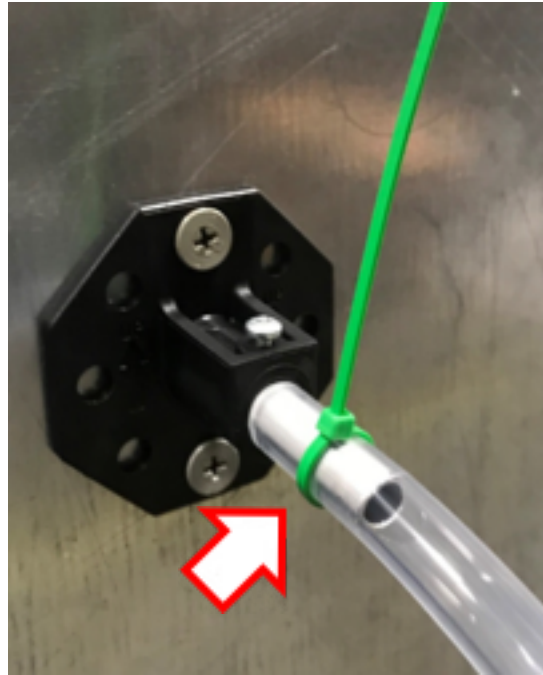
14. Cut off the excess zip tie to complete the injector installation:
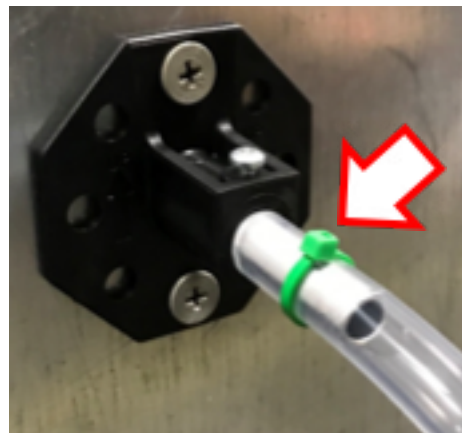
15. Cut tube to the desired length and connect to the appliance:

16. Secure the tube with a zip tie as shown. Tighten the zip tie as needed to secure the tubing in place:
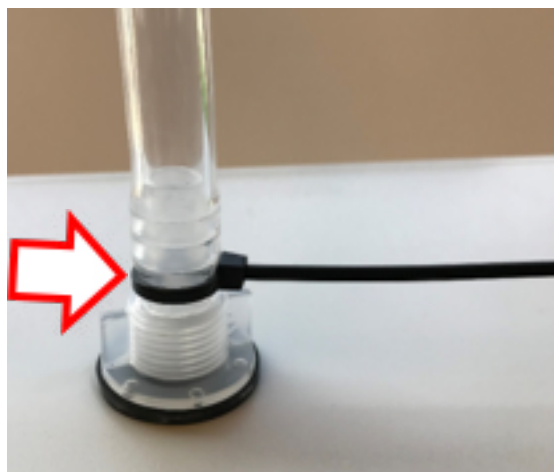
17. Cut off the excess zip tie to complete the appliance connection:

Installing the KITHVACSENSOR (optional accessory sold separately).

1. This sensor functions by detecting a pressure difference of at least 0.05" WC between the interior (higher pressure) and exterior (lower pressure) of a duct. Using this information, identify the best location for detecting airflow in the duct. **Ensure that no obstacles will interfere with this installation, AND the provided sensor cable can connect to the appliance before proceeding.** Using a step-drill, drill a hole into the HVAC system to create a sensing port that is 1/2" diameter:

2. To create the sensor mounting assembly, <u>fully thread</u> the set screw by hand into the injector mount (from the KITHVAC) until the head contacts the mount (**red** arrow). Then, unthread the screw until it is clear of the center hole as shown (**green** arrow). **Note: the set screw is a thread-forming type, and if this step is not completed as instructed, you will not have the sensitivity needed to properly tighten the screw later.**
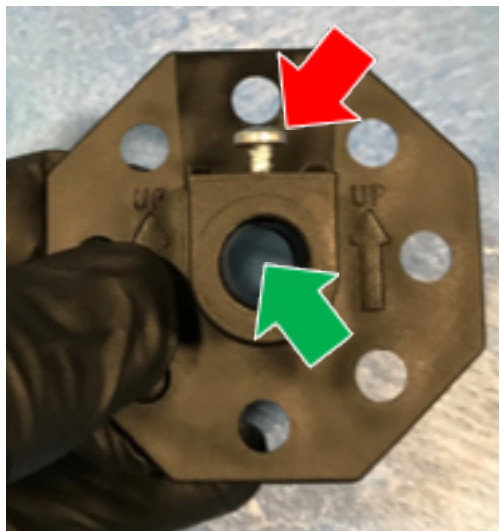
3. Align the center hole of the mount with the sensing port. Ensure that the 'UP' arrows are pointing vertically up and mark the two holes shown:
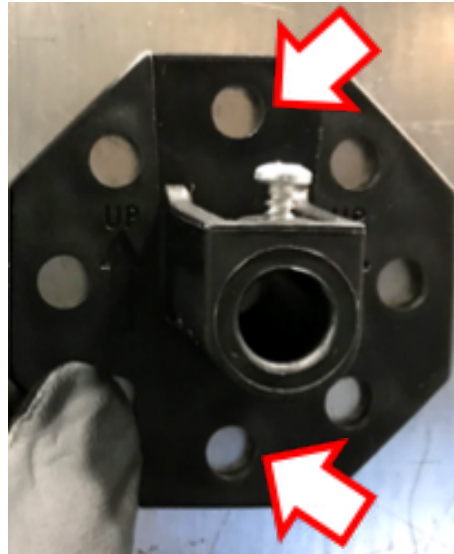
4. Drill the marked holes with a 1/8" diameter drill:
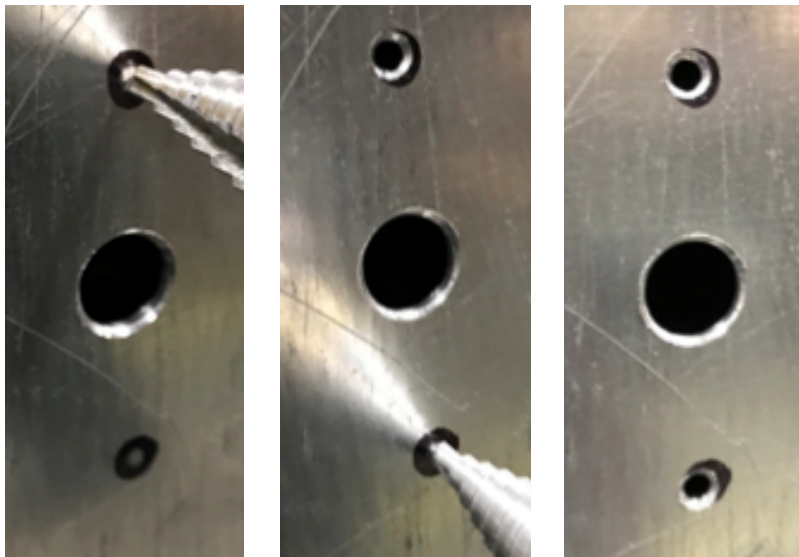
5. Secure the sensor mounting assembly to the HVAC system with (2) self-drilling screws, tightening both the screws as necessary to secure the mount assembly to the HVAC system:
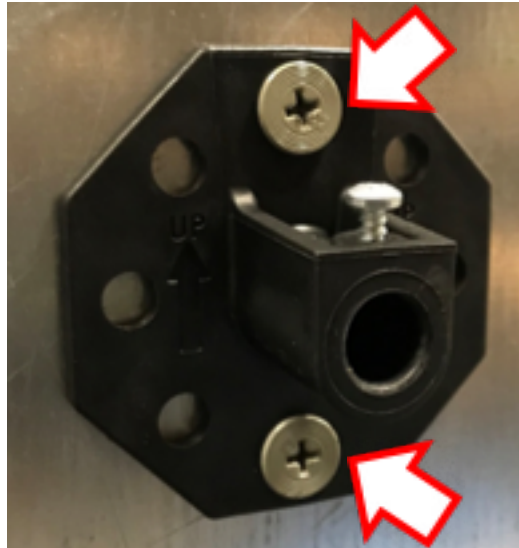
6. Attach the terminals of the sensor cable to the tabs on the terminal side of the sensor as shown:

Terminal Side

Back Side
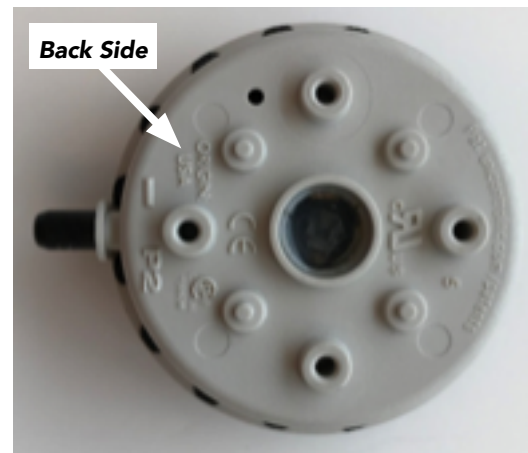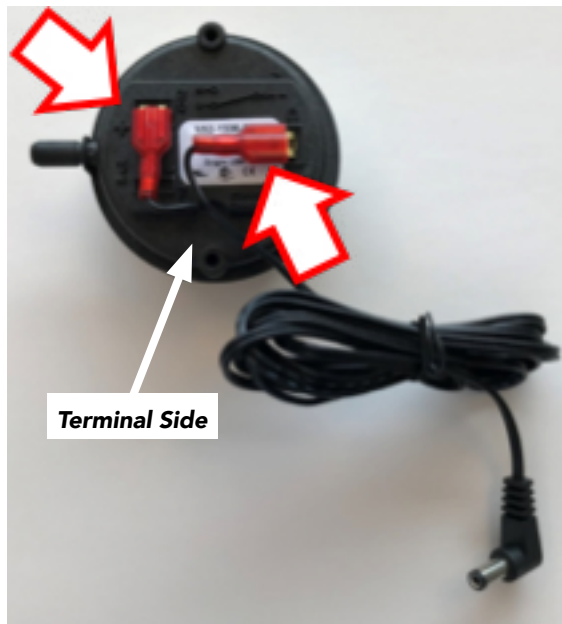
7. From the terminal side of the sensor, guide the sensor cable into the slot of the sensor cover (from the KITHVAC) as shown (**green** arrow). Align the cover of the sensor over the port as shown (**red** arrow), then snap the cover fully into place:

8. Push the adapter tube over the sensor port as shown:

9.   <u>Gently</u> guide the adapter tube portion of the sensor assembly fully into the mount as shown:

10. Use a level to ensure that the surface marked "THIS SURFACE MUST REMAIN VERTICAL" is vertical. **Note: if this surface is not vertical, the sensor can give a false 'ON' signal.**

11. **DO NOT OVER TIGHTEN THE SET SCREW IN THIS STEP, AS IT WILL DAMAGE THE SENSOR!**
    While maintaining the vertical orientation, <u>GENTLY HAND TIGHTEN</u> the set screw just enough to compress the adapter tube and hold the sensor in place, completing the sensor installation.

#2 Phillips Screwdriver
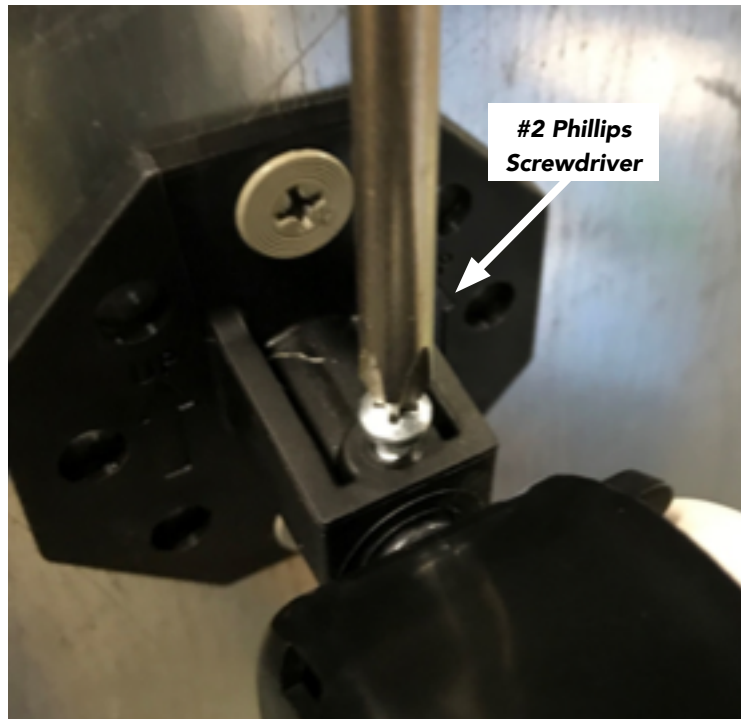
12. Remove the access plug from the appliance:

13. Remove the HVAC JUMPER plug:
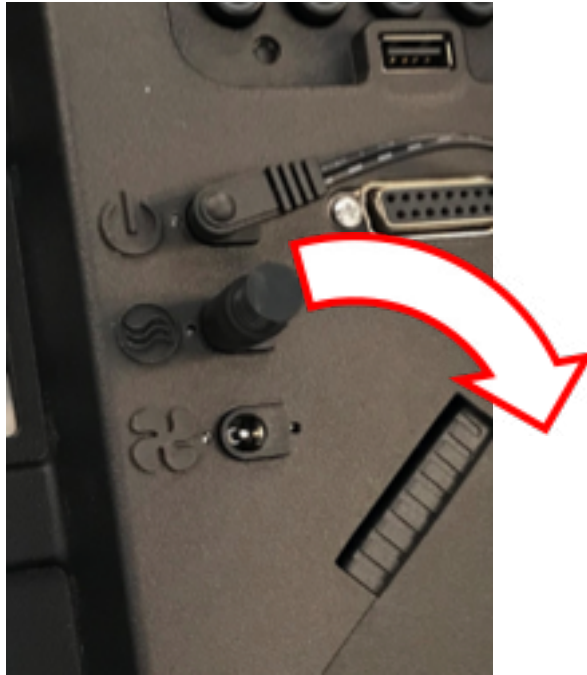
14. Connect the HVAC SENSOR CABLE as shown to complete the appliance connection:

INSTALLATION: Diffusion via Direct Indoor Fan

Installation Kit for Fan (accessory sold separately)

1. One (1) Prolitec Diffusion fan and cable for direct indoor diffusion

2. Three (3) drywall anchors for mounting fan onto dry wall

3. Three (3) screws for mounting in drywall and concrete

4. Five (5) feet of small cable raceway for fan cable

5. Three (3) feet of OD injector hose
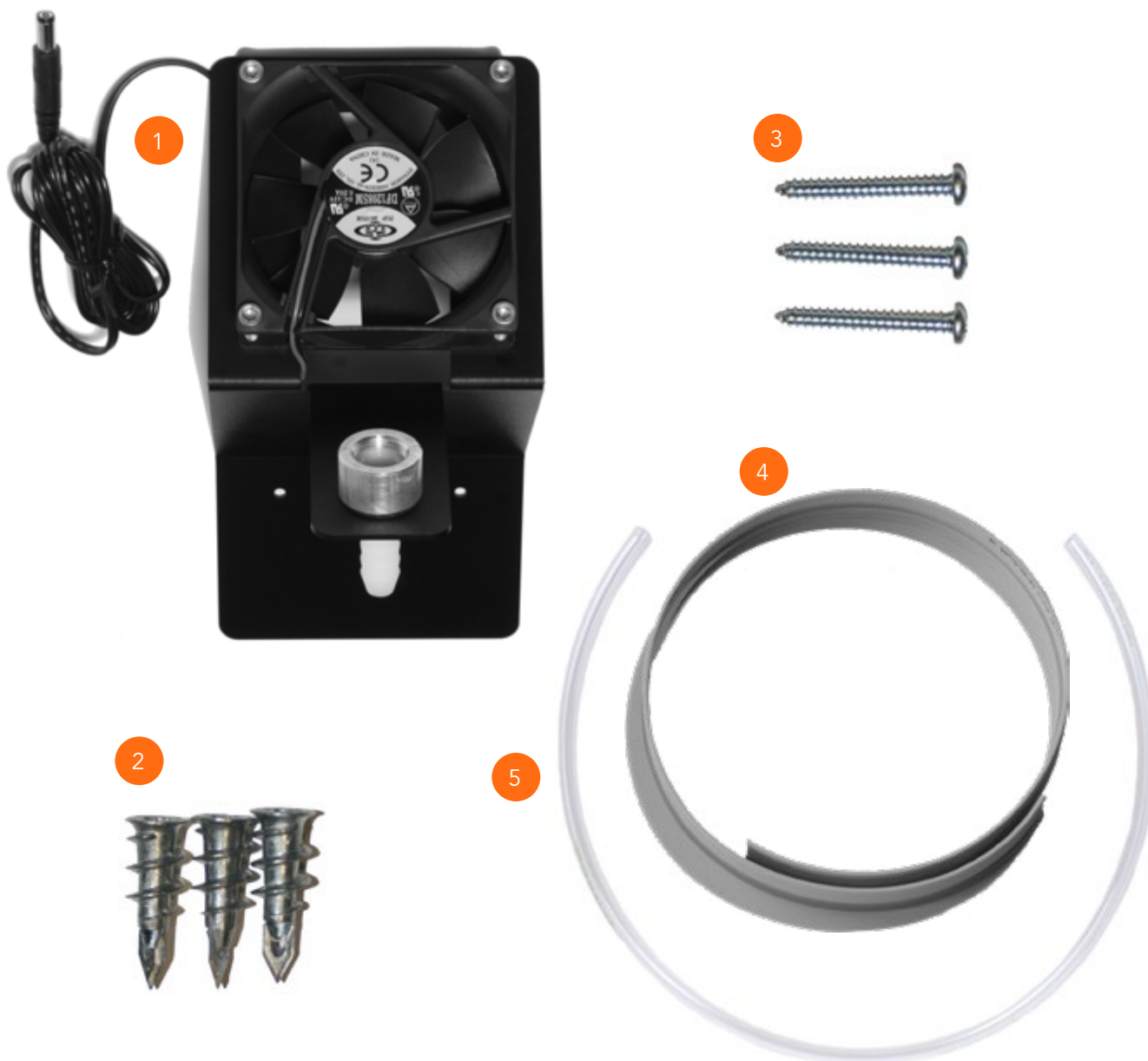
Pre-installation Checklist

This checklist should be completed before install date.

1. Confirm the area to be targeted for air treatment.

2. Confirm the general direction of ambient air flow in the area and position the machine so that the plume will be more evenly distributed and carried by the natural air flow.

3. Determine the number of machines required, which is the total cubic feet to be served divided by a maximum of 150,000.

4. Based on step 2, determine the wall positions for installation, keeping in mind that the Appliance requires 110/220V AC.

Appliance Positioning

It is important to find a location that is easily accessible for service and cartridge refills.

Appliance Installation

1. Place the appliance onto the desired location on the wall and ensure that it is level.

2. Fasten the appliance to the wall using the necessary anchors, screws and washers provided.

3. Assemble the Plume Connector (see instructions in HVAC section)

4. Assemble hose and hose connector together (see cartridge change). Be sure to leave approximately 1/8 of an inch clearance between the top of the cartridge hose connector and the end of the hose. Then secure with clamp, ensuring that the hose connector is still free to rotate.

5. Connect the power cord to a junction box or connect AC plug to a nearby outlet.

Diffusion Fan Installation
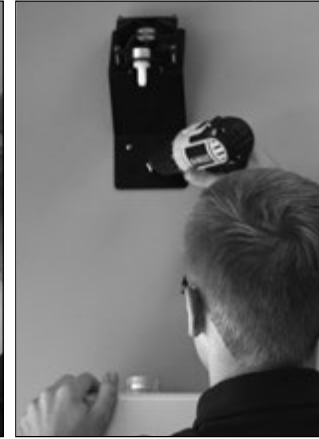
| Fig. 3 | Fig. 4 | Fig. 5 | Fig. 6 |

1. The diffusion fan is positioned directly above the appliance hose output port located on the top left of the appliance but no more than 4-1/2 feet above it. (Fig. 3)

2. Use the diffusion fan assembly as a template to mark the location of the mounting holes. (Fig. 4)

3. For installation on drywall, drill the 3 anchors into drywall and install the 3 screws to secure the diffusion fan to the wall. Use the metal screws provided for installation on sheet metal or appropriate fastening hardware for other wall surfaces. (Figs. 5 & 6)

4. Verify cable connection with diffusion fan. (Fig. 7)

5. Measure the length of cable raceway needed and cut to length using a pair of scissors or a cutting blade (Fig. 8). Fold into an "L" shape and peel off liner (Fig. 9). Fasten adhesive side to the wall between appliance and Diffusion Fan assembly.

Fig. 7
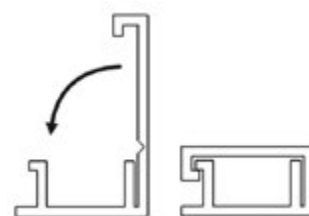
Fig. 8   Fig. 9   Fig. 10   Fig. 11

6.   Run Diffusion Fan cable inside the raceway (Fig. 10), fold the raceway into a square and snap the raceway cover closed. (Fig. 11) If needed, use a flat-head screw driver to push in the side wall of the cable raceway.

Fig. 12A   Fig. 12B   Fig. 13   Fig. 14
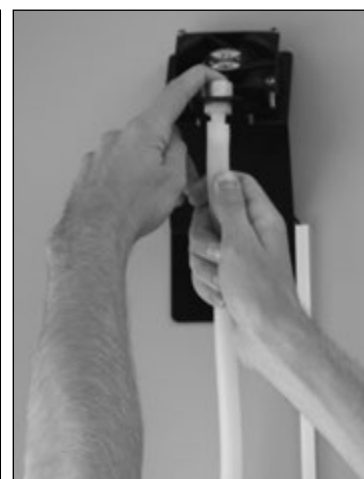
7.   Remove plug. (Fig. 12A)

8.   Thread cord through access hole and insert cable connector into ❀ jack located on the face of the appliance. (Fig. 12B)

9.   Extend the hose from appliance toward the diffusion fan hose barb, cut to proper length (Fig. 13) and secure to the hose barb of the diffusion fan assembly. (Fig. 14)

10. Turn the APPLIANCE on and verify that a plume is produced.

ScenXus Installation (optional accessory, sold separately)

Connecting the System

1. Unpack the appliance as normal, but do not plug it in yet.

2. Remove the extra labels from the ScenXus module.

3. Adhere the remaining ScenXus label inside the appliance door, adjacent to the serial number, and take a photograph.

4. Attach the ScenXus module to the appliance by pressing the connector into place.

5. While remaining in the approximate installation location of the appliance, open "settings" on your smart phone and locate "Wi-Fi settings."

6. Under "Wi-Fi settings," make sure you see the network that will provide ScenXus internet access.

7. Install the appliance normally, with ScenXus still attached next to the DC jack.

8. Power on the appliance and look for the firmware on the display.

9. The network icon will blink .

10. Refresh the list of Wi-Fi networks on the phone until you see a network titled "ScenXus…"

11. Connect your smart phone to the network named "ScenXus..."

    On most iPhones, you will be redirected to a list of other networks. On most Android phones, you will either need to select "manage router" or open a web browser and enter the IP address 192.168.0.1 to see the list of networks.

12. Connect to the network that will provide ScenXus with internet access.
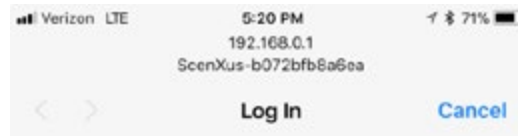
13. Type in the password for your wireless router.

14. Wait as your smart phone disconnects from ScenXus, ScenXus connects to the router, and the router connects to the internet. When ScenXus is connected to the cloud, you'll see the message: "connection complete."

15. The network icon should stop flashing and Wi-Fi signal strength should appear .

Controlling the Appliance Remotely

1. Check your email for an email from Ayla (ayla@aylanetworks.com) that gives you a token to confirm your account. Be sure to check your junk and spam folders.
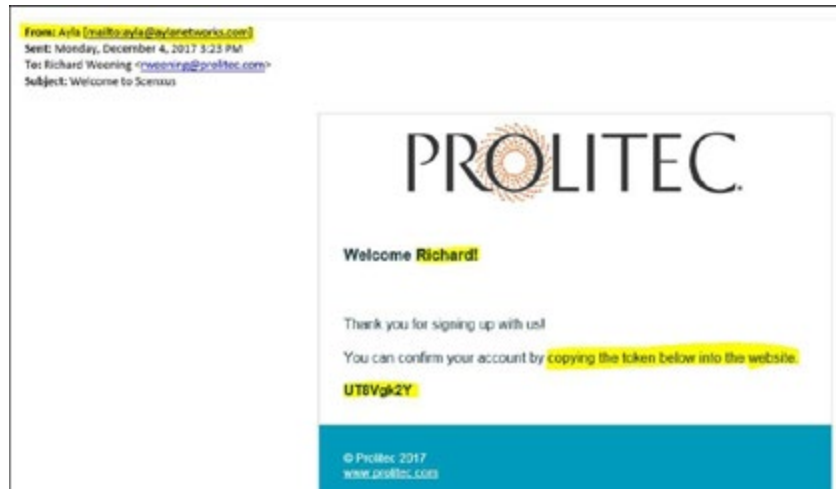
2. On your iPad or Laptop, go to scenxus.com and sign in using your email address and the aforementioned token.

3. Depending on your account, you will see a slightly different version of this homepage.

4. Click on the "Install" tab and enter the ScenXus DSN, appliance serial number, and other information about the appliance, cartridge, and install location.

Add/Update Device	
ScenXus DSN	
Appliance Model	ScenXus1
Appliance Serial No	
Appliance Nickname	
Configuration	Choose a Cartridge ▼
Fragrance	Choose a Fragrance ▼
Country	Choose a Country ▼
Province/State	Choose a State ▼
City	
Customer	
Time Zone	(GMT-12:00) International DateLine ▼

Update   **Add**

5. Go to the "Monitor/Control" page and adjust the appliance options and settings as needed.

	Appliance Nickname	Appliance Model	Appliance Serial Number	ScenXus Device ID	Connect Status	App Life (hrs)	Pump Life (hrs)	Fragrance	Fragrance Remaining (hrs)	Appliance Firmware	Mode	Intensity	Off Cycle	Fan Speed
☐	Matt's Desk	ScenXus1	1711000000	AC000W000583297	Offline	1584	4	Victory	380	Version 006	Off	28	VSOC	3
☐	Kendra Jewelry Room	ScenXus1	171101988	AC000W000583237	Online	26	0	Dewey Morning	579.9228	Version 009	Run	1	SOC	5
☐	HVAC	ScenXus1	171101992	AC000W000583157	Online	8	0	Dewey Morning	580	Version 009	24/7	1	NOC	0
☐	HVAC	ScenXus1	171101993	AC000W000563866	Offline	0	0	Dewey Morning	580	Version 009	Off	1	VSOC	5

Edit Selected

6. For complex programming, navigate to the SD card programming tool on airqtools.com and download the schedule.txt file to your laptop.

7. Upload the schedule.txt file to the appliance via the "Monitor/Control" page at scenxus.com.

Browse for .txt file	**Upload Schedule**							
Appliance Nickname	Appliance Model	Appliance Serial Number	Fragrance	Appliance Firmware	Mode	Intensity (If 24/7)	Off Cycle	Fan Speed
Kendra Jewelry Room	ScenXus1	171101988	Dewey Morning	Version 009	Run ▼	1	SOC ▼	5 ▼

Cancel   **Save Changes**

8. The web application is designed to "time out" for security purposes. If you see a runtime error page, simply close down your browser (not just the tab), re-launch the browser, and log in again.
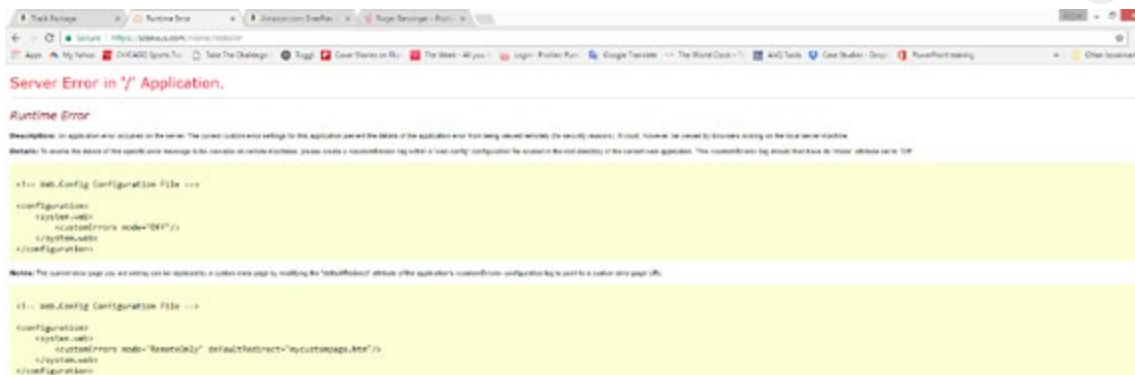
Internet Explorer relies heavily on cached data, meaning that changes may have been sent to the cloud, but your browser may still show old values. There are settings to prevent this behavior, and other browsers (Chrome, Firefox, Safari, Edge, etc.) do not have this issue.

Troubleshooting

Condition	Causes	Solutions
Power light off.	Power supply fault.	Confirm power is present at all electrical connections from the source all the way to the panel jack. Unplug the power at the panel. Using a known good Prolitec provided 15VDC power supply, reapply power at the panel. If the appliance works, replace internal power supply.
The fragrance cannot be detected when coming into the treated area from an untreated area.	The output rate is too low or there is an insufficient number of appliances serving the space.	Increase the output rate by one or two settings and evaluate detection in 30 minutes. Repeat as needed. If consumption requires cartridge change more frequently than each month, install an additional appliance.
	The O-Rings on the stem that fits into the head may be worn out and causing an air leak.	Replace the O-Rings by removing the worn one with a pointy tool and rolling on the new ones.
Fragrance intensity is stronger than just detectable.	The output rate is too high.	Lower the output rate in increments of one or two settings or down to the starting rates suggested in the room size chart.
The power light is on but there is no output or you cannot hear the compressor in the appliance.	You are in an "OFF" period in the Timer cycle. Sensor not recognized.	If sensor is not being used, reinsert or replace HVAC jumper. If sensor is being used: 1. Confirm sensor installation meets requirements 2. Confirm air is flowing in the duct being sensed 3. Using a multimeter, confirm that there's continuity on the sensor plug when air is flowing, and an open circuit when the air is not flowing. If 1-3 above are confirmed, replace appliance.

Condition	Causes	Solutions
The power light is on and the compressor can be heard but no fragrance detected.	The output tube may be blocked.	Remove the hose from the output tube leaving the Cartridge in place in the appliance. Turn the appliance on so you can hear the compressor. Use a flashlight to observe the top of the output head for a plume of droplets. If you can see the plume then the blockage may be in the hose or the injector tube into the HVAC. Check these. If there is no plume something is blocking the output tube. Check and remove it.
	The air intake may be blocked.	Another method for clearing obstructions is, while the appliance compressor is running, block the output tube with a finger for a few seconds and then open it by removing your finger.
	The O-Rings on the stem that fits into the head may be worn out and causing an air leak.	Replace the O-Rings by removing the worn one with a pointed tool and rolling on the new ones.
You detect the fragrance when entering the room but after a while you no longer notice it.	This is called olfactory adaptation and is normal.	Leave the area for 5 to 10 minutes. Come back inside, you will smell the fragrance once again. Do not hesitate to repeat this process every time that you doubt the presence of the fragrance in the area.

General Care and Customer Support

- Do not drop AirQ 1280 on the floor. Do not drop it in or position it near an open basin of water.

- Do not paint or otherwise try to alter the color of the outer cover.

- Always keep the cap and plug on cartridges when stored outside of the AirQ 1280.

- Do not operate AirQ 1280 in very dusty areas that may cause the air intake to clog.

- Do not move or transport an appliance with a cartridge installed.

- Please call Prolitec Customer Service at 844-247-7599 for return shipping instructions or questions.

Applications

AirQ 1280 is used to enhance indoor air quality by neutralizing odors or introducing and maintaining a scent in the air or both at the same time. This is accomplished by blending ultra-low concentrations of odor neutralizers and fragrance ingredients ("Air-Treatment Agents") into the air. In fact, AirQ 1280 is fully effective with air concentrations of Air-Treatment Agents less than 1 part per million (ppm). This means that for every 1,000,000 molecules of air there is only one molecule of Air-Treatment Agent.

There are four basic applications for AirQ 1280: ambient scenting, product marketing, odor control and aromatherapy. These applications are different in terms of their objectives, but they all employ the same combination of Prolitec's proprietary air-treatment chemistry and AirQ 1280 computer-controlled delivery system.

Ambient Scenting

Ambient Scenting is the use of a scent alongside other design elements in a space to help create or enhance its ambience. In this application, scent is comparable to visual elements such as graphics, colors, materials, textures and shapes as well as auditory elements like music. With ambient scenting, a carefully selected fragrance is used to enhance themes, animate visuals, make a tree or a flower smell like a tree or a flower, and many other uses. Major brands are using scent to extend and animate their brand by associating a scent experience with a brand, like a hotel chain using ambient scenting to make all their lobbies smell like the same scent.

Indoor air quality and the overall ambience of a space can be substantially improved with the introduction of a pleasant scent. Scent can cause humans to recall a brand with positive feelings and communicate brand values. Scent can create inviting environments that attract retail customers and cause them to stay longer and shop more, improve employee productivity, and make all the occupants feel positive about their experience in the space.

Of all the senses, the sense of smell is the most powerful trigger of memory. Hotels, casinos, retail establishments and other businesses seeking to provide a positive experience that clients will recall and repeat should use scents to enhance indoor air quality. The use of a signature scent to extend the brand image is a powerful tool for the sophisticated marketer.

Typical areas where Ambient Scenting is used:

• Retail Stores

• Hotel Lobbies

• Malls

• Showrooms

• Clubs and Bars

Product Marketing

Product Marketing is the use of scent as a medium of communication in advertising and promotion of certain products for which scent is a primary element or feature. Presenting the scent of a scented product to customers at the point of sale is the most powerful way to sell any product with a scent including fine fragrances; soaps, detergents and fabric softeners; lotions and potions; scented health and beauty aids; food products like coffee, fruits, and baked goods; and other fresh and aromatic products.

AirQ 1280 is used as an automated presentation and product-sampling system to deliver the exact aroma of a scented product throughout a store or at the point of sale.For example, enabling the client to experience a fine fragrance, personal care or home fragrance is the most effective way to sell it. Scent is the main feature of these products. Using AirQ 1280 to present that scent to a customer is the best way to present and sell the product. In this way, AirQ 1280 delivers a true and complete experience of the scent to clients and passersby without intrusion or sales associate intervention.

Billboards and advertising panels can be equipped with AirQ 1280 to treat the surrounding air space with the scent that is being advertised on the billboard. This is particularly effective in high-traffic areas such as malls, airports and train and subway stations. This is a multi-sensorial approach that draws customers to the display while simultaneously enhancing the visuals and allowing the prospective customer to experience or "sample" the scent of the product.

Odor Control

One of the most challenging problems in indoor air quality is bad odors. Bad-smelling places have a negative emotional impact on all the occupants of the space. This means both employees and customers.

AirQ 1280 and Prolitec's proprietary odor-remediation chemistry are capable of blocking the human ability to detect most malodors and replacing these odors with pleasant scents. Prolitec's proprietary air-treatment chemistry and the accompanying computer-controlled delivery system are rapidly becoming the standard solution for difficult odor issues in several industry sectors.

Typical problem areas that can be addressed by AirQ 1280 include:

- Restrooms

- Garbage-compaction areas

- Areas adjacent to cooking and food preparation

- Swimming pools and adjacent areas

- Workout facilities

- Elevator shafts

- Hotel hallways

The Prolitec approach to odor remediation uses a proprietary and patented neutralizer that inhibits the human olfactory system from detecting the odor and then injecting a small amount of scent to create an ultra-low concentration in the air of less than 1 ppm. This approach is unique and much more effective than traditional approaches that simply douse the odor with a high concentration of scent.

Aromatherapy and Performance Scenting

It is well known that scent has a powerful impact on human emotion and behavior. The use of scent to influence human emotion is just like Ambient Scenting but with a specific objective for the occupants of the treated space. The use of scent and the essential oils of flowers, herbs and trees to promote health and well being is the well-established branch of alternative medicine known as aromatherapy. It is also recognized that scent can be used to optimize performance in the workplace. The benefits include reduced errors in routine functions, increased employee sense of well being, higher morale, improved customer service and overall improved productivity.

AirQ 1280 and Prolitec aromatherapy chemistry can help make a workspace a more comfortable and appealing place to be. As examples of the positive effect of aromatherapy on the workplace, below are results of several relevant studies:

- A 1991 study demonstrated that "sustained attention tasks" were performed with greater accuracy by the participants in scented rooms compared to those in the non-scented control rooms.[1]

- Another study found that fragrance had a dramatic and positive effect on a proofreader's efficiency.[2]

- It is commonly known that the Tokyo Stock Exchange diffuses peppermint into the air in the afternoons to make the brokers feel invigorated.

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[1] Dr. Joel Warm and Dr. William Dembar. "Olfactory Stimulation and Sustained Attention." *Compendium of Olfactory Research*, (Dubuque, Iowa: Kendall/Hunt Publishing Co., 1995) p. 47.

[2] Mark Kilauga et al. "Consumer Panel Study on the Effect of Peppermint and Lavender Fragrances on Proofreading." *Compendium of Olfactory Research*, (Dubuque, Iowa: Kendall/Hunt Publishing Co., 1995) p. 131

Frequently Asked Questions (FAQs)

How does AirQ 1280 work?

AirQ 1280 uses a patented technology to convert liquid fragrance compounds into tiny droplets less than 1/100th the diameter of a human hair. By comparison, an aerosol droplet is 100 times bigger and 1,000,000 times heavier. AirQ 1280 droplets present 100 times more surface area to the air being treated, which means much less fragrance is used to create the scent effect. AirQ 1280's tiny droplets are extremely light so they float easily into the air and disperse throughout a space to create an even scent effect.

What size room will AirQ 1280 handle?

AirQ 1280 is fully adjustable for different size rooms. AirQ 1280 is effective in spaces from 1,800 to 150,000 cubic feet (50 to 4,245 cubic meters). The cubic measure is width x length x ceiling height.

Where can I place AirQ 1280?

AirQ 1280 should be placed on a wall where it can take full advantage of the natural air currents in the space as determined by a smoke test or as known by you. Accessory kits can be ordered for placing the unit on a ceiling (track light) or table top.

Do I need to adjust AirQ 1280?

Yes! AirQ 1280 is a powerful machine. AirQ 1280 can handle small and very large rooms. If it is set too high for the room size, it can cause discomfort for some people. Adjusting is simple. Take the time to do it right.

How do I adjust AirQ 1280?

With the power cord plugged in you can adjust AirQ 1280 up and down using the $\oplus$ and $\ominus$ buttons just to the right of the LCD screen. You can see the setting levels (1 to 50) on the right side of the LCD. ALWAYS START WITH THE RECOMMENDED SETTING and adjust upward in small steps.

How strong should I make the scent?

Less is more. AirQ 1280 allows you to erase odors and use only a small amount of scent. Unlike most other air fresheners, AirQ 1280 is adjustable. Use this important feature. Always start on the lowest settings for the size of the space then adjust upward in small steps.

> IMPORTANT
>
> ALLOW ONE HOUR TO ASSESS the scent strength after starting or adjusting. It is best to assess strength when you first enter the room from another room.

How about safety? Is AirQ 1280 safe to use with children and pets?

When used as directed, AirQ 1280 is the safest air freshener available. Of course, it is important to read the Material Safety Data Sheets enclosed with each cartridge, which should be stored in a secure, visible location.

How does AirQ 1280 differ from aerosol room fresheners?

The more expensive aerosols can produce a very pleasant scent, but only for a few minutes and in very high concentrations just in the area they were sprayed. AirQ 1280 is what is known as a "continuous action" air freshener. AirQ 1280 is programmed to deliver an evenly distributed scent throughout the room.

Is AirQ 1280 eco-friendly?

Yes, AirQ 1280 is the most eco-friendly air freshener on the market. Unlike aerosols, AirQ 1280 uses no propellants and produces no harmful volatile organic compounds, or VOCs. Unlike many air fresheners, AirQ 1280 uses no ethanol or similar solvents to enhance the evaporation of fragrance chemicals.

I only want to scent the room at certain times. Do I have to turn it on and off every time?

AirQ 1280 has a tiny on-board computer for fully automatic operations. You can set set up to 21 separate start and stop times. (See Unit Programming)

If I want a different scent, can I switch cartridges?

Yes, simply remove the cartridge and replace it with another.

> **IMPORTANT**
>
> Always keep plugs in cartridges when not in use. If you have misplaced the plugs from the cartridge being removed from AirQ 1280, you can use the plugs from the new cartridge being inserted.

How do I clean up a drip?

If there is a drip, blot it as quickly as possible and then clean with soap and water.

Specifications

Dimensions
AirQ 1280 Appliance 15 1/2" x 13 3/8" x 6 3/4" (39.4 cm x 34.0 cm x 17.2 cm)

Weight
13.7 lbs (6.2 kg) with 1250mL cartridge
15.4 lbs. (7.0kg) with 2500mL cartridge

Power Supply
Input — 100 – 240V AC at 0.6A Max
Frequency — 50/60 Hz
Protection — Class 2 power supply
Internal Power — 15V DC at 1.2 A
Battery — Internal backup battery

Approvals
FCC part 15, CE, RoHS Listed — Separate

Working Temperature

0˚ to 40˚ C

Working Humidity
85% or less

Liquid Capacity
1250mL or 2500mL cartridges

Service Area
Up to 150,000 cu. ft. (4245 m^3) served

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