technical information/business aids

ACTIVEPURE TECHNOLOGY

Combining high intensity UVX light with a specially developed rare metal hydrophilic coating on an engineered matrix, the ActivePure RCI Cell (Radiant Catalytic Ionization) reduces airborne and surface contaminants and odors while creating superoxide ions and hydroperoxides. These products of our Advanced Oxidation Process continue working to reduce more odors and VOC's, and to attack microorganisms.



"Purifying Plasma"

UVX Light and the Sun

ActivePure[™]

ECHNO

By engineering the proper light wavelengths into the ActivePure (RCI) Cell, activTek offers a highly effective system designed to utilize 254 nm hv germicidal UV light. Falling between visible UV light and invisible X-Rays in the light spectrum, UVX makes use of the same oxidation and ionizing properties of light as naturally occurring sunlight.

The ActivePure process takes advantage of these germicidal and ionizing properties, and combines them with the photocatalytic reactions of specific rare and noble metals to create Radiant Catalytic Ionization.







The ActivePure (RCI) matrix is specifically engineered and tested to work effectively in each purifier model.

Advantages of ActivePure (RCI):

- · Germicidal UV for microbe inactivation.
- · Germicidal UV for Catalytic Advanced Oxidation Process (AOP) reactions.
- Combination of UVX wavelengths to produce AOP reactions in the air.
- · AOP reactions inactivate microbes as well as destroy odors.
- AOP reactants remain effective after leaving the ActivePure equipped unit as a "purifying plasma."



USEFUL FORMULAS

Area – Is the calculation of the size of a room or building for determining the correct unit to place based on area.

- Area = length times (X) width of a room or building
- · Area is almost always given in
 - square feet (ft²)
- square meters (m²)
- Since length and width are in feet, therefore ft x ft = square feet (ft²)
- Example 1:
 - You are given an application for a reception area in a nursing home with moderate odors. The area measures 50 by 60 feet.
- The area equals: 50 ft x 60 ft = $3000 \text{ ft}^{2...}$
- Therefore a Fresh Air SE which is rated up to 3000 ft² could be used in this application.

Volume - Is the calculation of the size of a room or building in volume for the purpose of determining the correct unit to place based on volume - for example the EcoAir 4000 is generally for coolers or freezers, volumes of up to 4000 cubic feet (ft3).

- Volume = length times (X) width times (X) height of a room, cooler, freezer, or building
- · Volume is almost always given in
- cubic feet (ft³)
- cubic meters (m³)
- Since length, width, and height are in feet, therefore ft x ft x ft = cubic feet (ft³)
- Example 2:
- A fruit cooler needs an air purifier
- You are told that the width is 10 feet and the length is 30 feet
- The area is 10 feet wide x 30 feet long = 300 ft^2 total area
- You measure the floor to ceiling height and discover it's 8 feet
- Now, 10 feet x 30 feet x 8 feet = 2400 cubic feet (ft³)
- Therefore the cooler can be serviced by an EcoAir 4000

Converting "Tons" and "CFM" - Some of our Commercial equipment is recommended for a range of air flows usually given in CFM.

- Since: One (1) ton = 550 CFM/ton
- 18,000 CFM/550 CFM/ton = up to approximately (~) 32 tons capacity
- Given: A 20 ton unit services this building
 - 20 tons X 550 CFM/ton = 11,000 CFM
 - This means that (1) activTek INDUCT 5000 will work
- These examples do not take any special circumstances into consideration such as mold, previous flooding, and etc. These calculations merely serve as an example.
 Although different authorities use different equivalents ranging from 400 to 600 CFM/ton, activites Environmental chooses to use the most widely accepted standard of 550 CFM/ton.