

EPM SAVINGS TIMES

MANUFACTURERS OF COMPUTERIZED TEMPERATURE CONTROL
(CTC) FOR A THIRD OF A CENTURY
PROUDLY MADE IN FULTON, MISSOURI USA

Volume 20 Issue 8

COVID 19 CHOICES GOOD OR BAD!

Facility Cost

OPEN YOUR BUILDING, BRING YOUR PEOPLE BACK?

Recently, a customer of over thirty-five years asked how EPM selected the COVID 19 virus killers to add to the EPM CTC system line? The quest was complicated and difficult to obtain. Just like the patent medicine salesmen of the old West, Covid 19 killer manufacturers of completely different technologies made identical claims. Finally, independent evaluations of the choices were available on cdc.gov and related websites. It boiled down to basically seven choices or combinations:

1. **Filters** - Although HEPA and Carbon filters will reduce or capture a portion of some airborne particles, the virus is smaller than one thousandth of a human hair and is difficult to trap in the best filter. Virus on contaminated surfaces such as doorknobs, light switches, desk, walls and floors are not removed. **Any volunteers for changing filters containing the Covid 19 virus?;**
2. **Ultraviolet (UV) light** – High intensity UV devices placed in entry areas or restrooms can cause cancer and other skin and eye damage and diseases. Fortunately, most are placed in heating and air conditioning (HVAC) air ducts. Their purpose is to kill viruses circulating in the HVAC air. HVAC systems are designed to change the air in a room about three to five times an hour. Because of mixing of the air in a room, some of the air is changed more often and some less. **Regardless, the virus on the room's surfaces remain;**
3. **Chemical scrubbing** - The virus was initially thought to be transferred to humans through physical contact with a virus contaminated surface. The treatment of choice was to scrub the room or area with a virus killing chemical that remained on the surfaces, like a child's desk. **Want the chemical on your child's or grandchild's desk at school?** To avoid potential negative reaction the scrubbing must be completed well prior to occupancy.
4. **Chemical misting** – Same comments as #3;
5. **Corona discharge devices** – These are electrical devices that not only kill the virus, but also create “ozone”. Ozone damages human respiratory systems and materials within the building. Covid 19 virus targets and damages the human respiratory system. **Probably not a good idea to have a virus killer that damages the target of the virus?**
6. **Air Purifiers/Bipolar Ionization (BPI);** - BPI systems are placed in rooms or mounted in HVAC ducts and generate oxygen ions. The ions circulate throughout the area served. The ions attach to pathogens, including viruses, mold spores and bacteria, stripping hydrogen from them causing them to die. They also eliminate odors. **However, they generate ozone with the same problems as #5.**
7. **Needlepoint Bipolar Ionization (NBPI)** – NBPI is a significant improvement of the BPI system. Unlike the simple BPI in #6, the NBPI does not generate ozone making occupants more susceptible to Covid 19. In addition, all other filters and electronic devices as in #1, #2, #5 #6 and many #7 must be regularly cleaned to remain operational, whereas the NBPI devices provided by EPM are self-cleaning. Another advantage of the EPM NBPI systems is they are equipped with a fault indicator that continually monitors the operation of the NBPI system. **Should the NBPI system fail the alarm contacts will notify building management of the problem allowing a timely repair.**

LIFE SAFETY MONITORING REQUIREMENTS

The EPM CTC Monitoring continually monitors and checks the operation of the connected building equipment including Life Safety Equipment (LSE).

LSE is building equipment installed to protect the lives and safety of employees and visitors. Examples are fire alarm systems, strategically located fire extinguishers and soon Covid 19 killers will gain such importance. As such, they typically are equipped with a monitoring malfunction detection

and alarm system.

Unlike a fire alarm systems the Covid 19 killer system not only protects the employees and visitors, but also outside relatives, friends and others in contact with employees and visitors of the building.

EPM's choice of the NBPI system provided the real time notification by the ion generator failure to operation. **The EPM monitoring programs interface with the alarm contacts, providing real time local and remote**

notification of their operation.

Without the true operational alarm and EPM CTC monitoring, a regular physical monitoring program must be established. With the ion generators installed inside the HVAC unit or related air ducts, physical visual inspections are difficult, time consuming and expensive.

The EPM monitoring system also eliminates the need for continuing maintenance contracts to verify their operation.

AVOIDING THE LEGAL LIABILITY OF PROTECTING EMPLOYEES AND VISITORS FROM COVID 19!

With today's litigious society record keeping of proper operation is extremely important. **The latest responsible manager legal liability is employee and customer protection from the Covid 19 Virus.**

Unfortunately, the employer can take all the necessary steps and still be found negligent. To avoid negligence, the employer must prove the proper steps to ensure the Covid killer equipment was operating properly.

EPM developed a system that continually removes the airborne and surface virus without costly physical inspections. Should the system or a component fail to operate, the EPM CTC system enters an alarm mode, records the date, time and duration of the alarm. The alarm is saved and sent to designated employees. This allows employers to be proactive, but also provides a proof of fault and correction of the fault. Otherwise, the Covid 19 eliminator is not defec-

tive and operating properly.

This liability protection can be provided by other vendors, but cost many times more than adding it to the existing EPM CTC system. Nor does the other systems include the central system capability of the EPM CTC system for ease of access and retrieval.

With a software addition, this is compatible with the existing EPM SBD-3200 CTC systems.

ENERGY SAVINGS

Many design professionals feel the solution to Covid 19 is substantially increasing fresh air ventilation to dilute the virus. Although it may dilute the airborne virus somewhat, it will not kill it or reduce the contact virus. It is like finding the "no pee" section of a swimming pool!

Also, increased ventilation will significantly increase HVAC

utility cost. The best solution is to kill the virus without increasing utility cost or introducing a dangerous element such as "ozone".

The NBPI generator is the only solution that kills the airborne and surface Covid 19 virus while decreasing fresh air, and not causing health problems or damaging property.

The NBPI generator kills the virus, bacteria and odors. The fresh air can be reduced below the pre-virus levels! In many buildings this can reduce the HVAC energy cost 30%. Counting only the ongoing utility cost reduction it provides a six year payback for the EPM NBPI Generators.