**ELEVATOR AIR STERILIZATION SYSTEM**

1 – CRITICAL SYSTEM DESIGN REQUIREMENTS:

1. System shall utilize replaceable filters with minimum MERV 13 rating.
2. System shall incorporate initial filter to remove particles over .3 microns from entering sterilization apparatus.
3. System shall incorporate end filter after sterilization apparatus to remove particles over .3 microns from entering exhaust intake
4. System shall incorporate UV-C sterilization between filters to irradiate air and particles within flow with 254 nanometer wavelength radiation.
5. UV-C source shall not emit any ozone in to air flow.
6. Unit and all components shall be fabricated to meet or exceed:
   1. UL Listed components (or listed by recognize NRTL)
   2. All UV-C exposed components shall be metal or certified to be used in UV application
   3. Fan to be rated to exchange air at a rate of approximately twice per minute (approx 700 CFM typical for commercial passenger elevators)
   4. All components exposed to shaftway shall be metal or meet fire rating requirements (hoses / ducts shall comply to UL 94V-0)
   5. Unit must be designed for (unmodified) 110 VAC service.
   6. Unit shall be designed to be energy efficient (total usage under 5 amps)
   7. Unit shall be properly sound isolated form canopy or crosshead mounted to eliminate vibration
7. System design shall provide a distinct air circulation from floor to ceiling of elevator to remove air from cab flowing up to canopy and provide clean, fresh and disinfected air to the base area of the cab. For the safety of the passengers in a building shaftway smoke condition, shaftway air will not be permitted to be forced in to the cab.

2 – SYSTEM COMPONENTS

1. Sterilization unit shall be constructed of metal enclosure, air tight sealed and enclose fully UV-C device and filter cartridges. Unit shall
   1. Include on/off switches for fan and UV-C device independently.
   2. Include safety device to immediately disrupt power to device should unit be opened (with or without switch being turned off).
   3. Properly labeled with prominent warning labels for servicing and to warn of dangers of UV-C exposure
   4. Assembled with no rubber, plastic or non-UV use approved components that could be damaged and cause failure of the system due to UV-C exposure.
   5. Include a visual indicator to indicate UV-C in use. Indicator should be of a design that visual indication of UV-C irradiation danger is present under any condition (fail safe).
   6. Shall be so designed to increase the time of exposure and increase strength (reflection and minimal distance) to UV-C source during the air flow through the chamber.
2. Intake ducting shall consist of an opening in the car canopy consisting of an inlet start collar sealed to car canopy, flexible inlet ducting to sterilization unit within Code compliance (UL 94V-) sealed to start collar and sealed to sterilization unit.
3. Exhaust ducting shall consist of start collars sealed to sterilization unit, flexible exhaust ducting to base of cab within Code compliance (UL 94V-) sealed to register at car base with Code compliant grill or register cover.

3 – PREFERRED MANUFACTURER

1. System shall be Sterilyft, as manufactured by CEC Elevator Cab & Door Corp, or approved equal.
2. Approved equal systems shall be preferred to be manufactured, assembled, provided and supported by domestic US manufacturer.