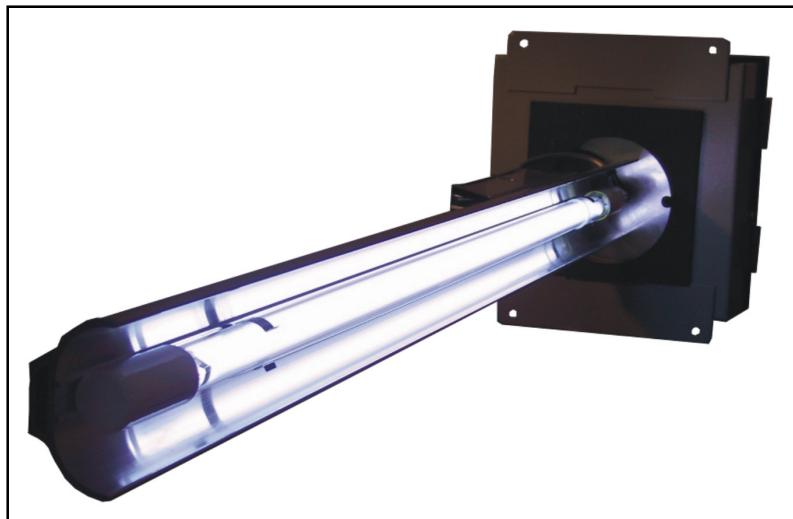

Client:

Ultraviolet and Indoor Air Quality
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Rooftop (Case Mounted) Object Purifier

Date :

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Object Purifier with NEMA 4X Enclosure

1. BUILDING MATERIALS

1.1. Description: Sanuvox Object Purifier or equivalent

1.1.1 The case mounted UVC coil purifier is housed in a NEMA 4X enclosure installed from the exterior of the HVAC air handler units.

1.1.2 The high intensity UVC lamp will be held inside a parabolic aluminum reflective device that will direct at least 90% of the total UVC generated by the lamp onto the coil that will continuously clean the coil and kill odor causing mold and fungus that may develop in an HVAC unit.

2. ELECTRICAL ELEMENTS

2.1. The electronic ballast for the lamp will be potted to prevent corrosion and to facilitate cooling, and is housed in an aluminum enclosure mounted on the back of the aluminum reflector

2.2. The ballast will be an electronic type, rapid start with a power factor greater than 0.95 and an energy conversion of at least 75%, and is protected from air stream impurities and moisture by an adequate potting substance that protects the power source from corrosion as well.

2.3. The ballast will be available in 208/230V AC and will be able to operate reliably in environments ranging from 45° F (8°C) to 170°F (86°C) temperature, with relative humidity up to 100% and air velocities up to 1900 fpm.

3. INSTALLATION

3.1. Installation can be either horizontally or vertically in the air handler. The preferred installation is on the return side of the coil.

3.2. To effectively irradiate the coil surface, the UVC lamp will be mounted on a geometrically adequate, parabolic shape, back-reflector to redirect at least 90% of the total emitted UVC onto the coil.

3.3. The reflector will be built out of a heavy single piece aluminum extrusion, aerodynamically shaped to be capable of withstanding fast air velocities up to 1900 fpm without wobble, vibrations or noisy whistle.

3.4 The reflector will be adjustable 360 degrees from inside the NEMA 4X enclosure, so that it can be angled to direct the UV output onto the coil.

4. UV LAMP

4.1. The High Intensity UVC lamp will be of the low-pressure (3.0 Torr) mercury laden argon-neon type that incorporates a getter assembly to reduce and control the mercury levels. The getter assembly absorbs inner lamp contaminants, which would typically reduce output and have a bearing on overall lamp performance and life.

4.2. The UVC lamp is a pure fused quartz type 219 shell, properly doped with Titanium Oxide in order to filter out 99.99% of the 185 nm wavelength.

4.3. The UVC net output directed at the coil will be at least 120 microwatts/cm² at 1 meter in the 245 nm to 266 nm band while operating in a 45°F (8°C) air stream moving at 400 fpm.

4.4. The UVC lamp design will be based on a 4-pin type connection, hot cathode, 100-watt high intensity T6 diameter (19 mm), UVC lamp available in either 24 or 30 inch lengths (60 or 75 cm)

5. PERFORMANCE

5.1. The UVC lamp and reflective fixture will be factory tested.

6. WARRANTY

6.1. The electronic ballast will carry a 5-year corrosion warranty.

6.2. The high intensity UVC lamp will be guaranteed for 12,000 hours.