

23 40 00 Air Cleaning Devices

Revision 01/04/2019

Purpose:

The Architect and/or Engineer shall incorporate the Rice specific requirements indicated in this standard's section into their design. The Architect and/or Engineer shall further produce project specifications in line with industry standards that are updated to reflect these Rice specific requirements.

1. General Design Standards

- a. Central Station Air Handlers serving labs
 - i. Pre-filter Graduated density filters
 - ii. Final filter 12" deep box filters
- b. Central Station Air Handlers not serving labs
 - i. Filter Graduated density filters
- c. Fan Coil units Graduated density filters
- d. UV-C Germicidal Lamps
 - i. Irradiation
 1. Emitters and fixtures shall be installed in sufficient quantity and arranged so as to provide an equal distribution of UV-C energy on the coil and drain pan.
 - ii. Intensity
 1. The minimal UVC energy striking the leading edge of all the coil fins shall not be less than 2500 $\mu\text{W}/\text{cm}^2$. This sets the minimum quantity of fixtures to be installed and their placement. Additionally, equal amounts are to strike the drain pan, either directly or indirectly through reflection.
 - iii. Installation
 1. Emitters and fixtures shall be installed at right angles to the conforming lines of the coil fins, such that through incident angle reflection, UV-C energy strikes all target surfaces of the coil, drain pan, and the available line of sight airstream.
 2. Emitter and fixtures shall be of the very high output, HVAC type. The emitter shall be hot cathode, T5 (15 mm) diameter, and medium pin type. They shall produce 95% of their energy at 254 nm and be capable of producing the specified output at airflow velocities to 1000 fpm at temperatures of 35 - 170° F. UVC emitters shall produce no ozone or other secondary contamination. The UVC fixture shall have a high efficient electronic power source of 115-208/230V, or 277V, 60 Hz, single phase. They shall be UL Listed to comply with UL Standard 1995 and shall be equipped with RF and line noise suppression.