Basis Guideline: 230012 – “Air Filters”
5.13 – “UMHHC - Healthcare Procedure Room Infection Control Types and Requirements”

For an explanation of the use of these guidelines, see “Design Guidelines for UMHHC Facilities”

Included as part of this UMHHC guideline section are the details described within the following UM Master Specification sections:
MS234000 – “HVAC Air Cleaning Devices”

The UM Master Specifications may be used as a reference and/or basis, but the A/E is completely responsible for contract specifications (meeting the intent of the UMHHC Guidelines and Preferred Manufacturers List) that are used in UMHHC projects.

Use in Air Handling Units (AHU’s)

All filtration requirements shall comply with Health Facilities Evaluation Section (HFES) Minimum Design Standards (MDS).

UMH’s standard for filtration is the following:
- Standard recirculating AHU (i.e. <50% OA): MERV 8 pre-filters (30%) and MERV 14 final filters (95%)
- High OA AHU (i.e. >50% OA): MERV 8 pre-filters (30%), MERV 11 secondary filters (60%) and MERV 14 final filters (95%)
- Critical Environment AHU’s (serving Infection Control Room Types 1 thru 3- see design guideline SBA-K-H): MERV 8 pre-filters (30%), MERV 11 secondary filters (60%) and HEPA final filters (99.9%)

In all instances the pre-filters and secondary filters shall be located upstream of any coils and the final filter shall be located downstream of all AHU components, prior to the air leaving the AHU. Access/location of filter banks shall comply with AEC basis guideline.

Pre-filters shall be 2” deep, pleated panel type; secondary and final filters shall be bag type. All filters shall be face-loaded, on the upstream side of the filter bank. Side access filter banks are generally not acceptable and should only be considered for small AHU’s serving non-critical, non-clinical uses. Use of side access filter banks shall be by approval by UMHHC Mechanical Engineer.

Each filter shall be monitored with differential draft gauge (manometer) equal to Dwyer Magnehelic® 2002, located at eye level.

Face velocities through filters shall not exceed 400 FPM at maximum CFM thru unit.

Special Filter Requirements

All exhaust systems handling infectious pathogens or radioactive materials shall be filtered prior to exhaust discharge with MERV 17 (99.97%) face-mounted filters.

Coordinate filtration requirements for all clean room applications with UMHHC Mechanical Engineer.