Filtration Levels for Surgical Suites Under ASHRAE 170

THE DIRECT ANSWER

ASHRAE 170-2021 requires MERV-16 final filtration for operating rooms (Class B/C surgery), with MERV-14 for procedure rooms and trauma rooms. Systems use two filter banks in series : a prefilter (typically MERV-7/8) upstream of coils and the final filter bank downstream. Earlier editions specified MERV-14 for ORs — confirm which edition your AHJ enforces before designing or replacing.

THE FILTRATION CHAIN

- Filter Bank 1 (prefilter): MERV-7 or higher, upstream of heating/cooling coils — protects the coils.
- Filter Bank 2 (final): MERV-16 for ORs, MERV-14 for procedure rooms — downstream of coils and supply fan, the patient-protection layer.
- Seal the edges: filter bypass around poorly seated filters defeats the rating — gasket and seal filter racks.
- HEPA is not generally required by 170 for ORs (MERV-16 suffices), though some facilities specify it; protective environment (PE) rooms for transplant/burn patients have their own HEPA requirements.

MAINTENANCE IS THE REQUIREMENT TOO

- The standard's filtration levels assume maintained filters : pressure drop monitored, changeout on schedule or differential pressure, not on the calendar alone.

FIELD QUESTION

What MERV rating do operating rooms require?

MERV-16 final filtration under ASHRAE 170-2021 (MERV-14 under earlier editions — verify your adopted edition).

From Healthcare Facility Hub - free, like everything on the site. The full article is at the link below.

Caution: codes, editions, and targets vary by facility and authority having jurisdiction (AHJ). Figures marked as common practice are facility targets, not code requirements. Confirm against your AHJ and the current code text before acting.