Ventilation Requirements: Procedure Rooms vs. Operating Rooms (ASHRAE 170)

THE DIRECT ANSWER

Under ASHRAE 170-2021, operating rooms require positive pressure, 20 total air changes per hour (4 outdoor ACH), MERV-16 filtration, 20–60% relative humidity, and 68–75°F . Procedure rooms require positive pressure, 15 total ACH (3 outdoor ACH), MERV-14 filtration, 20–60% RH, and 70–75°F . The operating room is the more stringently ventilated space — more air changes, finer filtration — reflecting the open surgical wound and the sterile field.

DESIGN DETAILS THAT MATTER

- Operating rooms also require a primary diffuser array over the surgical table (extending 12 inches beyond the table footprint on each side), unidirectional downward airflow at 25–35 cfm/sq ft, and low sidewall return grilles. Both rooms prohibit recirculation by room units.

FIELD QUESTION

How many air changes does an operating room need?

20 total ACH with at least 4 outdoor ACH, positive pressure, per ASHRAE 170-2021.

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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.