Humidity Control in Hospitals Under ASHRAE 170

THE DIRECT ANSWER

ASHRAE 170 sets relative humidity ranges per space type : operating rooms, procedure rooms, and trauma rooms at 20–60% RH ; most other clinical spaces capped at 60% maximum (some at 65%). The critical history: the 2017 edition lowered the OR minimum from 30% to 20% — a major change driven by evidence that low humidity doesn't increase surgical site infections, saving enormous humidification energy and cost.

KEY HUMIDITY REQUIREMENTS (170-2021)

- Operating rooms, procedure rooms, trauma rooms, C-section delivery: 20–60% RH.
- Patient rooms, ICUs, recovery, ED treatment: maximum 60% RH (no minimum).
- Waiting areas, some support spaces: maximum 60–65% RH.

WHY HUMIDITY MATTERS BOTH WAYS

- Too high (above 60%): mold and microbial growth in ductwork and building materials, condensation on cool surfaces. Too low : static electricity (a concern around flammable anesthetics historically), staff and patient comfort, dry mucous membranes.

FIELD QUESTION

What humidity does ASHRAE 170 require for operating rooms?

20–60% relative humidity (the minimum was lowered from 30% in the 2017 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.