HEPA-Filtered Negative Air Machines in Hospitals

THE DIRECT ANSWER

A HEPA-filtered negative air machine (NAM) is a portable air filtration unit that draws contaminated air through a HEPA filter (99.97% efficient at 0.3 microns) and exhausts it — creating negative pressure inside a construction containment zone so dust and pathogens can't escape into occupied areas. It's the engine of ICRA containment: the barrier holds the dust in, the NAM makes sure the air only flows one direction — inward.

THE THREE JOBS IT DOES

- Creates negative pressure. By exhausting more air than enters, the NAM keeps the work zone negative relative to adjacent spaces; -0.01" water column is a widely used facility target, not an ICRA 2.0 or CDC requirement.
- Filters the air. HEPA filtration captures 99.97% of particles at 0.3 microns — the dust, mold spores, and Aspergillus that threaten immunocompromised patients.
- Provides air changes. Continuous filtration dilutes airborne contaminants inside the work zone, protecting workers and reducing the dust load that escapes at shift changes.

WHERE THE EXHAUST GOES

- Best practice: exhaust directly outdoors , at least 25 feet from entrances, air intakes, and windows — in which case HEPA filtration of the exhaust may not be required.

FIELD QUESTION

What does HEPA stand for and what does it capture?

High-Efficiency Particulate Air — 99.97% of particles at 0.3 microns, including construction dust, mold spores, and Aspergillus.

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