

Ventilated Headboard

Capturing patient-generated aerosol to protect healthcare workers during surge events

The Chaparral VH120 Ventilated Headboard is designed to meet the surge capacity demands of treating patients during widespread airborne infectious epidemics. The design of the VH120 is based on specifications developed by NIOSH and the CDC¹.

HOW IT'S USED

Room: Temporarily convert standard rooms to airborne infection isolation rooms (AIIRs)

Emergency Shelter: Enable conversion of shelter to provide airborne infection isolation

Large Scale Deployment: Daisy-chain for mass events

HOW IT WORKS

1. Localized control captures, contains and eliminates contaminants before they disperse
2. Low-velocity air currents capture and remove contaminants without irritating the patient
3. A retractable canopy, easily replaced between uses, allows access to patient's head and neck

BENEFITS TO HOSPITAL ORGANIZATIONS, ENGINEERS AND FACILITY TEAMS

- Highly durable construction is designed for multiple uses
- Easy to set up and breakdown with Chaparral's enhanced design
 - 20 components vs. 146 components in NIOSH DIY version
 - Saves stretched staff time for deployment and storage
- Minimal storage footprint
- Easy-to-clean stainless steel and aluminum construction
- Works with most shelter cots, gurneys, and hospital beds (CDC recommended 48" plenum width)

HIGHLIGHTS

WORKER PROTECTION:

Healthcare workers able to operate outside the infectious "hot zone" in patient room

NIOSH PROVEN:

NIOSH base design successfully captured/ removed over 99% of airborne infectious-sized aerosol during laboratory testing with the droplet nuclei test protocol²

MODULAR:

Can be daisy-chained for large-scale deployment

AIR CHANGE:

Typically 10-30 ACH depending on HEPA negative air filtration unit and room size

COST-EFFECTIVE:

Can be deployed quickly in place of expensive HVAC system alterations

PATIENT ACCESS:

Open front allows interaction between patient and other room occupants or equipment

APPLICATIONS

- Hospitals
- Field Hospitals/ Emergency medical shelter environments
- Triage stations
- Large-scale events
- Quarantine stations
- Nursing homes
- Healthcare environments

¹ <https://blogs.cdc.gov/niosh-science-blog/2020/04/14/ventilated-headboard/>
² Expedient Methods for Surge Airborne Isolation within Healthcare Settings during Response to a Natural or Manmade Epidemic, Mead, Feng, Hammond, Shulman 2012 EPHB Report No. 301-05f

The VH120 design has not been reviewed or endorsed by the CDC or NIOSH.

WHAT'S INCLUDED

Chaparral VH120 (adjustable frame with plenum and canopy arm) / Single Use, Canopy Poly Sheeting Kit - Clear / 24"x 24" MIRV 8 prefilters for plenum (pack of 2 prefilters) / 6" Clamp - duct to plenum

WHAT'S NOT INCLUDED

HEPA negative air filtration unit / 6" Duct (plenum to HEPA negative)