CERR ZONE™
HEALTHCARE

Delivering the Future of Indoor Air Quality and Safety

Engineered for Healthcare

- ✓ FDA 510(k) Class II Medical Device Clearance
- ✓ UL 2998 "Zero Ozone" Designation
- ✓ California CARB Standard Compliant
- ✓ 3rd Party Clinical Validation
- ✓ Made in the USA
- ✓ A Marmon/Berkshire Hathaway Company

Built to Defend

MARMON
A Berkshire Hathaway Company

CERROZONE™

Continuous *Room-Based* Air Purification

We Operate at the Source of Contamination and Disease Transmission

People are the Source of Contamination

- Humans shed 37 million bacteria per hour
- These pathogens travel through the air on indoor air currents
- These airborne pathogens land on surfaces creating additional pathways of disease transmission

CerroZone Works at the Source of the Problem

- CerroZone operates and eliminates opportunistic pathogens at the Source where they are created and spread
- Creating Healthier Environments keeps staff safe and happier
- Reduction of airborne pathogens keeps facilities safer for patients and visitors

CerroZone vs. HVAC

CERROZONE™
SOURCE-CONTROL TECHNOLOGY

CerroZone Operates At The Room Level Where People Are Present

Continually Defending Against the Transmission of Dangerous Airborne Pathogens and VOCs

Whole Building HVAC

Air Travels From One Source Through Hundreds of Feet of Duct Work to Reach All Areas of a Building

HVAC is Designed to Supply Heated or Cooled Air to an Entire Building – *Not To Protect Human Life*

HVAC is *Not* Designed for Critical Pathogen Control at the Room Level

CerroZone Technology Engineered for Healthcare

ASHRAE
Standard 241
Control of Infectious Aerosols

ASHRAE Standard 241

Released July 7, 2023

- Requirements For Filtration And Air Cleaning Technology
- Infection Risk Management Mode (IRMM)
- Planning And Commissioning
- Testing Standards And Reporting

Healthcare Facility "Clean Airflow" Requirements in ASHRAE Standard 241

	Exam Room	Waiting Room	Patient Room	Group Treatment Area
CFM Per Person Required for IRMM**	40	90	70	70
Room Occupancy	4	30	4	15
Total Required CFM in IRMM	**160**	**2700**	**280**	**1050**

Unit Operating CFM	# Units Required in IRMM based on Occupancy and Required CFM Per Person			
50	3.20	54.00	5.60	21.00
110	1.45	24.55	2.55	9.55
220	0.73	12.27	1.27	4.77
400	0.40	6.75	0.70	2.63
800	0.20	3.38	0.35	1.31
1000	0.16	2.70	0.28	1.05

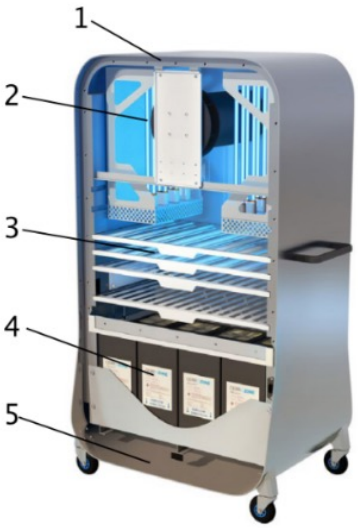
To achieve this level of "Clean Airflow" CFM delivery using HVAC only, creates several problems:

- Increase in Electric Usage and Higher Maintenance Costs
- Use of HEPA Filters May 'Choke' HVAC Equipment Creating Unwanted Mechanical Failures
- Restricted Air Flow Caused by HEPA Filters can Lead to Pressure Changes and Air Balance Problems

**ASHRAE 241 Table 5-1 Minimum Equivalent Clean Airflow per Person in Breathing Zone in IRMM

CERROZONE™

Harnessing the Power of Ozone



1. Air from the room is drawn into the unit through a series of fans and proprietary filters.

2. Internal UV-C lamps generate ozone within the sealed mixing chamber.

3. Ozone destroys all microorganisms within the mixing chamber. Viruses, bacteria, mold, fungus and VOCs are eradicated.

4. The air within the chamber passes through the proprietary catalyst converting the Ozone back to Oxygen.

5. Clean and Purified Air is Returned to the Room.

SAFETY VALIDATION

Organization/Third Party	Test	Results
FDA	510(k) Class II Medical Device Clearance	✓
Intertek	UL 867	✓
Intertek	CSA C22.2	✓
Intertek	UL 2998 (“Zero Ozone” designation)	✓
Intertek	IEC 60601-1-2	✓
Intertek	AIM 7351731	✓
Intertek	AHAM AC-2 Sound Testing	50 Decibels (dB), 4.64 Sones
CARB	Clearance to sell air cleaning device	✓

Don’t Simply Take Our Word For It

Proof of Efficacy – 3rd Party Testing

Bacteriophage MS2 (1/4 the size of SARS-CoV-2) – over 99.998% per pass, 99.9999% removal in a room. Testing conducted at Aerosol Research and Engineering “ARE” Laboratories (Olathe, KS).

SARS-CoV-2 (original and Delta strains) – over 99.998% per pass, 99.9999% removal in a room. Testing conducted at the University of Missouri Laboratory for Infectious Disease Research (Columbia, MO), MRIGlobal (Kansas City, MO), and Innovative Bioanalysis (Costa Mesa, CA).

Gram-Positive (Staphylococcus) and **Gram-Negative** (Pseudomonas) **bacteria** -- over 99% removal per/pass with both. Testing conducted at ARE Labs (Olathe, KS).

Ammonia (NH_4) – 100% removal (hit limits of detection) per/pass. No by-products detected. Testing conducted at ARE Labs (Olathe, KS).

Hydrogen Sulfide (H_2S) – 100% removal (hit limits of detection) per/pass. No by-products detected. Testing conducted at ARE Labs (Olathe, KS).

Ozone (O_3) – The "Zero Ozone" testing at Intertek has a 5 PPB (parts per billion) max threshold. The testing on CerroZone units showed less than 1 PPB and went down to the detection limit of the sensors since the catalyst was removing background ozone from the room.

FDA – 510(k) Class II device clearance approved on July 1st of 2022.

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Delivering the Future of Indoor Air Quality and Safety

CerroZone Mobile
(220 CFM)
28.75" wide x 54" high

CerroZone Mini
(110 CFM)
21" wide x 36" high

Coming Soon:
CerroZone In-Ceiling
(110 CFM)
48" x 24"

MARMON
A Berkshire Hathaway Company