

Disinfection Procedure Available.

The Complete Solution for Clean Room and Critical Area
Minnicare Fog Dispersion

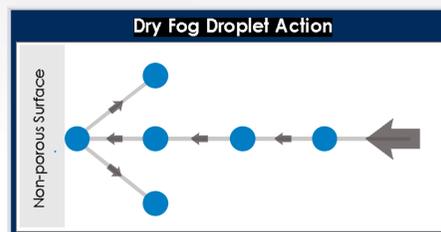
Optimal System... Optimal Efficacy.

The Difference is the **Droplet Size.**

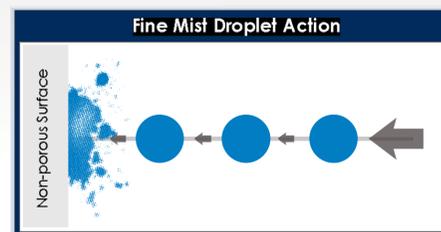
Dry Fog Droplet Size				
10µm	100µm	300µm	1000µm	
Ultra-Fine Atomization	Fine Atomization	Semi-Fine Atomization	Semi-Course Atomization	Course Atomization
Dry Fog (under 10µm)	Fine Mist (10µm - 100µm)	Fine Drizzle (100µm - 300µm)	Light Rain (0.3mm - 1.0mm)	Thunderstorm (under 1.0mm)

The **Minnicare Dry Fog** equipment is designed to produce ultra fine droplets that average 7.5 microns in diameter, which will ensure even dispersion of the Minnicare solution throughout the room.

Dry Fog Droplet Action



The Minnicare Dry Fog System produces an ultrafine droplet size that tends to bounce off of hard surfaces and thus avoid excessive condensation, corrosion and surface wetting issues associated with a fine mist disinfection procedure.



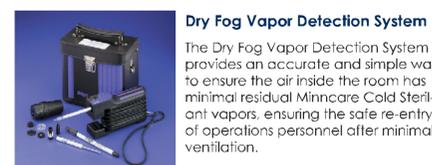
Mar Cor Purification Dry Fog System

Product Information & Options

System Specifications			
Model	Minnicare Dry Fog System	Mini Dry Fog System (US Version)	Mini Dry Fog System (EU Version)
Dry Fog Machine dimensions	11.1" x 13.2" x 10.3" (28cm x 33.5cm x 26.1cm)	6.6" x 13.1" x 11.4" (16.8cm x 33.5cm x 29.0cm)	6.3" x 13" x 17.3" (16cm x 33cm x 44cm)
Shipping dimensions	17.7" x 17.7" x 47.2" (45cm x 45cm x 125cm)	14.6" x 11.8" x 8.7" (37cm x 30cm x 22cm)	15.4" x 11.8" x 9.1" (39cm x 30cm x 23cm)
Dry Fog Machine weight	57 lbs. (26 Kg)	9 lbs. (26 Kg)	9.3 lbs. (4.25 Kg)
Shipping weight	117 lbs. (53 Kg)	17.2 lbs. (53 Kg)	17.6 lbs. (8 Kg)
Compressed air supply needs	75 psi (5 bar)	75 psi (5 bar)	75 psi (5 bar)
Minimum 2.5 scfm (70 liters/minute) air supply per nozzle			

Part Number	Description	Packaging
290-01-021	Dry Fog Machine, 25L, one 7.5µ Nozzle with aluminum case	per piece
290-01-022	Dry Fog Machine, 25L, two 7.5µ Nozzles with aluminum case	per piece
290-01-023	Dry Fog Machine, 25L, three 7.5µ Nozzles with aluminum case	per piece
290-01-024	Dry Fog Machine, 25L, four 7.5µ Nozzles with aluminum case	per piece
290-01-101	Mini Dry Fog Machine with aluminum case (U.S. version)	per piece
290-01-061	Mini Dry Fog Machine with aluminum case (European version)	per piece
290-01-034	Minnicare Dry Fog Remote Control Unit (U.S. version)	per piece
290-01-035	Minnicare Dry Fog Remote Control Unit (European version)	per piece
290-01-010	Dry Fog Nozzle, 7.5µ	per piece
290-01-011	Dry Fog Cap	per piece
290-01-031	Dry Fog Vapor Detection Deluxe Pump Kit	per piece
290-01-032	Dry Fog Hydrogen Peroxide detector tube	per 10
290-01-033	Dry Fog Acetic Acid detector tube	per 10

Minnicare Cold Sterilant Ordering Information		
United States Part Number		
176-01-001	Minnicare Cold Sterilant (4 - 1 quart bottles)	4x1 qt
176-01-002	Minnicare Cold Sterilant (4 - 1 gallon jugs)	4x1 gal
Canadian Part Number		
78399-647	Minnicare Cold Sterilant (4 - 1 quart bottles)	4x1 qt
78399-646	Minnicare Cold Sterilant (4 - 1 gallon jugs)	4x1 gal
European Part Number		
176-01-121	Minnicare Cold Sterilant (2 - 10 liter bottles)	2x10 liters
176-01-125	Minnicare Cold Sterilant (2 - 5 liter bottles)	2x5 liters
176-01-129	Minnicare Cold Sterilant (6 - 1 kg bottles)	6x1 kg



Dry Fog Vapor Detection System

The Dry Fog Vapor Detection System provides an accurate and simple way to ensure the air inside the room has minimal residual Minnicare Cold Sterilant vapors, ensuring the safe re-entry of operations personnel after minimal ventilation.



Dry Fog Remote Control

The optional wireless remote control unit allows the operator to turn the system on and off from outside the cleanroom.



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Mar Cor Purification

Minnicare® Dry Fog Technology



An Integral Part of **Modern Critical Area Disinfection Procedures**



The Safest & Most Effective Clean Room Disinfection Procedure Available.

Clean Room • Lock • cRABS • Isolator • Biohazard Cabinet • Animal Room

The Minncare® Dry Fog system provides an easy to use, high technology solution for clean room and critical area disinfection. The combination of our highly effective Minncare® Cold Sterilant chemical and our state of the art Dry Fog delivery system enables users to rapidly and safely deliver Minncare® vapor to even the most complex areas. Its sanitary and autoclavable design will permit its use in the most critical areas within pharmaceutical and other industries concerned with maintaining the utmost levels of sterility. The location and action of the dry fogging head at the highest point of the equipment allows for rapid vapor dispersion and ensures that the most distant areas are reached effectively.

Dry Fog System Advantages

100% Coverage

The Minncare® Dry Fog equipment is designed to produce fine droplets that average 7.5 microns in diameter, which will ensure even dispersion of the Minncare® solution throughout the room. These small droplets will tend to bounce off of hard surfaces and thus avoid excessive condensation, corrosion and surface wetting issues associated with systems producing larger droplets.

Lower Capital Costs

The system is easily adaptable to differing room dimensions and configurations and can be adjusted to suit any room height. It is readily transportable and can be used in multiple locations, needing only a compressed air source to operate. It will deliver an adequate solution quantity to rooms up to 35,000 ft³ (1000 m³). Beyond this size, multiple machines may be required.

Ease of Validation

Minncare® is a peracetic acid and hydrogen peroxide based proprietary chemistry developed by Minntech for optimized biocidal efficacy. It is registered by the EPA for use as a fog to enhance existing cleaning and disinfection process. Minncare® Dry Fog is used by hundreds of FDA audited Pharma Companies. It successfully passed the AFNOR Norm NF T 72-281, showing a 6.9 log reduction of bacteria spores.

Environmentally Friendly

The Dry Fog System utilizes Minncare®, a fully biodegradable sporicide that will leave no measurable air residuals once the room has been fully ventilated. Minncare® contains only pharmaceutical quality raw materials, limiting the introduction of any undesirable components into the clean room environment.

Reduced Time & Labor

The lack of toxic aldehyde vapors results in extremely short process times—over 95% faster than some conventional systems. This means less production downtime and lower total costs. Typically, the entire process can be completed in less than 3 hours, depending upon room size and ventilation system efficiency, compared to up to 3-5 days with some conventional systems.

Choose the System that Fits Your Application.

Mar Cor Purification offers two different Dry Fog Systems depending on the size and accessibility of the application.

Minncare® Dry Fog System™

The Minncare® Dry Fog system provides an easy to use, high technology solution for rooms up to 35,000 ft³ (1000 m³) and was designed specifically for use in pharmaceutical clean rooms.

- Controlled and consistently accurate droplet size
- Minimizes risk of condensation
- Ensures penetration of Minncare® into normally inaccessible areas

Robust construction with easy maintenance and no moving parts

Does not require electrical connection

Sanitary construction using 316L Stainless Steel for key components

Substantially lower cleanroom downtime.

Validatable & Autoclavable design

Over 95% faster than some conventional systems

Portable system can easily be used in multiple locations



Minncare® Mini Dry Fog System

The Mini Dry Fog system provides an easy-to-use, high technology solution for confined-space fogging. The flexibility of the Mini Dry Fog nozzle allows for rapid vapor dispersion and ensures the entire space is exposed to dry fog.

Single units are suitable for use in volumes up to 20 m³ or a 700 ft³ room and will disperse up to 500 ml of liquid Minncare solution.

Eliminates formaldehyde disinfection procedures.

For use in biological safety cabinets, cRABS, glove boxes, pass-through rooms, and ambulances; the system can be easily built into small cabinets as an inexpensive alternative to H₂O₂ vaporization systems.



Minncare® Cold Sterilant

A Superior, Safe, Environmentally Friendly Biocide

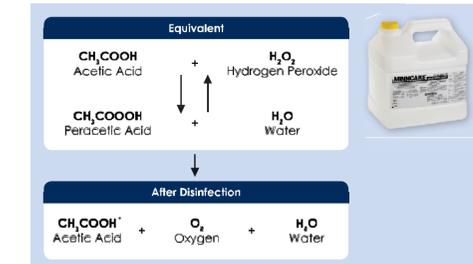
Minncare® Cold Sterilant is a powerful disinfectant containing a proprietary mixture of 4.5% peracetic acid and 22.0% hydrogen peroxide. It is effective against a broad spectrum of organisms, including bacterial spores, fungal spores, bacteria, mycobacteria, yeast, molds and viruses. Minncare® Cold Sterilant is not a systemic bactericide. Rather it is a powerful oxidizer that attacks and breaks down the organic components of microorganisms, not just killing them, but destroying their structure. This makes Minncare® Cold sterilant one of the fastest acting and most effective disinfectants available.

Minncare® Features & Benefits

- No toxic aldehyde vapors
- Faster and safer to use than aldehyde based disinfectants
- Very effective bactericide, fungicide, virucide and sporicide
- EPA registered for fogging as part of normal disinfection procedures
- Fully biodegradable
- Contains only pharmaceutical quality raw materials
- Less corrosive than aldehyde based liquids
- EPA and CE registered



The Chemistry of Minncare®



* At 20°C AA cannot be a solid on the surfaces and its vapors are vented through the HVAC system

Deactivation of Organisms By Minncare Vapor	
Estimated spore concentration of filter suspended 1 inch above	B. atrophaeus filter
Control: water	loop
10 ³ spores	9.6 x 103 CFU*
10 ⁴ spores	> 3 x 103 CFU
Minncare solution (1%)	
10 ³ spores	<1 CFU
10 ⁴ spores	<1 CFU
10 ⁵ spores	<1 CFU
10 ⁶ spores	<1 CFU
* Colony forming unit	

Minncare Dry Fog Tested according to AFNOR NFT 72-281		
Species		Log Reduction
Pseudomonas aeruginosa (CIP A22)		> 7.5 log reduction
Enterococcus hirae (CIP 58 55)		7.0 log reduction
Penicillium verrucosum var. cyclopium (IP 1186-79)		6.4 log reduction
Satphyllococcus aureus (CIP 53 154)		6.8 log reduction
Candida albicans (IP 1180-79)		6.8 log reduction
Bacillus stearothermophilus spores (CIP 52 81)		6.8 log reduction
Bacillus atrophaeus spores (CIP 52 62)		6.9 log reduction

In Vitro Aqueous Test at 20°C		
Minncare Concentration .5%		
Species	Count per ml	Time for 100% kill (min)
Bac. subtilis	6 x 10 ⁶	2.5
Bac. stearothermophilus	6 x 10 ⁶	2.5
Bac. subtilis NCTC 3610	2.4 x 10 ⁹	5.0
Bac. mesentericus	1.6 x 10 ⁹	5.0
Clostr. perfringens	1 x 10 ⁷	10.0
Clostr. tyrobutyricum	1 x 10 ⁷	5.0
Sacchar. cerevisiae	6 x 10 ⁷	0.5
Cand. mycoderma	1.4 x 10 ⁸	0.5
Hansenula anomala	6.4 x 10 ⁸	0.5
Pichia membranaefaciens	4.8 x 10 ⁸	0.5
Pen. cameronense	1.7 x 10 ⁸	2.5
Mucor plumbeus	3 x 10 ⁸	2.5
Geotrichum candidum	2 x 10 ⁷	0.5
Bysschlamys nivea	6 x 10 ⁷	0.5
Staph. aureus	2.6 x 10 ⁹	0.5
Strept. faecalis	4.6 x 10 ⁹	0.5
Kleb. aerogenes	2.3 x 10 ⁹	0.5
Ps. fluorescens	4.6 x 10 ⁹	0.5
Ps. aeruginosa	2 x 10 ⁹	0.5
Salm. thyphimurium	2.8 x 10 ⁹	0.5
Corneb. rubrum	1 x 10 ⁷	1.0
Leuconostoc spec.	5.3 x 10 ⁸	0.5
Lactob. brevis	1.8 x 10 ⁹	0.5