

Portable Electrostatic Sprayer
No-Contact Disinfection * 8'-18' Spray Distance *
4.22 Gallon Tank Capacity



Instruction Manual

Electrostatic spray technology is a new way to apply cleaners, sanitizers, and disinfectants to help facilities treat surfaces, often in less time and with better coverage than traditional cleaning methods. The technology is well-established, with a history of more than 60 years in other areas, including agriculture, automotive, and tanning industries, but it has only recently been applied to surface disinfection.

Electrostatic sprayers work by charging liquids (i.e., cleaners, sanitizers, and disinfectants) as they pass through a sprayer nozzle. This generates charged droplets that repel one another and actively seek out environmental surfaces, which they stick to and even wrap around to coat all sides. The result is a uniform coating of sanitizer or disinfectant on sprayed objects, including hard-to-reach areas that manual cleaning can miss. The technology also helps avoid liquid pooling often associated with trigger sprayers

Warnings and Safety

- This sprayer should only be operated and maintained by someone who is familiar with its operation and correct maintenance practices as outlined in this manual.
- NanoVapor Biotech is not liable for decreased reliability, damages, or injuries due to improper maintenance or modifications to the sprayer.
- Be sure the lid is completely tightened before operating. *Spillage could be poisonous* and cause skin irritation or other injury. Clean the outside of the tank if any spillage occurs, and immediately clean skin if you come in contact with the chemicals inside.
- **WARNING: BE SURE TO INSTALL GREEN GASKET BEFORE USE OF UNIT.** Refer to Operation Section for installation instructions.
- Wear eye protection and gloves when filling the sprayer, *avoid contact with skin and eyes* while filling and during operation.
- Liquids being put into the tank must be filtered clean of particles in order to keep the nozzle from becoming clogged. *Do not use powders* in the tank as this will cause buildup and clog the nozzle. If using soluble solutions, mix them outside the tank and then filter before pouring into the tank.

THESE INSTRUCTIONS MAY NOT COVER ALL DETAILS OR VARIATIONS OF THIS PRODUCT FOR YOUR EQUIPMENT OR INSTALLATION REQUIREMENTS. SHOULD FURTHER INFORMATION NOT COVERED BY THESE INSTRUCTIONS BE REQUIRED, PLEASE CONTACT NANO VAPOR BIOTECH BY EMAIL AT sales@nanovaporbiotech.com OR BY PHONE AT 1-877-572-1906 FOR FURTHER ASSISTANCE. PLEASE CONTACT sales@nanovaporbiotech.com FOR WARRANTY AND RETURN INFORMATION.

USE AND CARE

Unauthorized modification may impair the function and/or safety of this device and could affect the life of the equipment. Always check for damaged or worn out parts before using the device. Store it in a secure place out of the reach of children when not in use. Inspect for good working condition prior to storage and before re-use.

REPLACEMENT PARTS

The sprayer is designed to provide years of reliable performance. Should the need for replacement parts arise, please contact NanoVapor Biotech.

Specs:

	Imperial	Metric
Packing Size	14.37*16.1*24	36.5*41*61cm
Net Weight (with Battery)	4.1lbs	4.1 Kgs (Lithium battery)
Gross weight	15.43lbs	7.0 kgs
Water tank	4.22 Gal	16 ltrs
Voltage	12v	12v
Pressure	2.17- 5.8 Psi	0.15-0.4 Bar
Battery capacity	12V 8-8aH	12V 8-8aH
Charger input/output voltage	AC110-240/DC12-14.8	AC110-240/DC12-14.8
Speed	32,291 - 161,458ft ² /Hour	3000-15000m ² /Hour
Spray amplitude	About 26.9 ft (nozzle swing) About 64.58ft (nozzle swing)	About 2.5m (nozzle swing) About 6m (nozzle swing)
Gun weight	3.3lbs	1.5 Kgs
Continuous working time	(spray rod) 6 hours (spray gun) 1.5 hours or so	(spray rod) 6 hours (spray gun) 1.5 hours or so
Median drop diameter	40-90 um	40-90 um
Spray flow	1-3.17 Gal/hr	4-12L/hr
Effective Output voltage of electrostatic generator	15-30Kv	15-30Kv

- **ALWAYS REVIEW THE SAFETY INFORMATION AND WARNINGS FOR THE CHEMICALS USED IN THIS SPRAYER.** Magic Wand is not responsible for any injury associated with the chemicals used in the sprayer. Avoid using chemicals that are corrosive to metal or plastic. Always wear protective equipment to avoid ingesting or coming into contact with harmful chemicals.
- *Do not* use this sprayer in an explosive or flammable environment.
- *Always keep the sprayer dry and clean.* Do not submerge in water or use in overly wet location to protect the motor and electronics from water damage.
- *The use of strong acids or bases is prohibited.* Other chemicals should be used in accordance with manufacturer instructions and safety warnings.
- Battery contains high voltage, **DO NOT** disassemble the sprayer yourself as electric shock could occur.
- Avoid contact with other persons during operation. Avoid touching the spray rod and charging port during operation.
- Place a mega-ohmmeter in the area needing to be tested to make sure you have a true earth ground.
- *Avoid all possible insulators:*
 - Do not wear insulated or rubber shoes. We recommend leather soles
 - Do not stand on paper unless it is conductive
 - Make sure the floor is clean and dry. Any liquid overspray on the ground can act as an insulator
- It is recommended to use a grounding strap. These are not included with unit.
- Grounding straps can be connected to the unit by clamping to the cable attachment found on bottom of the unit.
- The Portable Battery-powered Electrostatic Sprayer is a no-contact disinfection solution for hard-to-reach surfaces in work sites, outdoor areas, gyms, offices, daycare centers, warehouses, airports, healthcare facilities and more. This wireless device sprays a mist consisting of a sanitizing agent, which applies an even coating on surfaces and equipment. Equipped with a 4.22-gallon tank capacity, the sprayer comes with a power charger, lithium-ion battery, nozzle adjuster and tank with lid.

Battery

The sprayer is powered by a lithium-ion battery, which offers a runtime of 10 hours per full charge. A wall charger that operates on 110V, 50/60Hz is included with the unit. Allow the unit to sit for 10 minutes following a charge, before using. The battery should be charged at least once per month to maintain good working order. Proper use and maintenance of the battery can greatly extend the life of the battery.

Mounting

The sprayer is equipped with a carrying handle and is completely wireless, allowing for portable use to allow maximum reach of areas and surfaces that may be hard to get to. Keep handle dry during operation to prevent slippage or dropping of the tank. Also includes straps so device can be worn as a backpack.

Operation

The sprayer disinfects hard-to-reach surfaces, areas and odd-shaped equipment without contact. This portable electrostatic unit is equipped with a 4.22-gallon tank capacity that holds the sanitizing agent. The device turns the liquid solution into a mist (approximately 5-40µm droplet size) as the mixture is released into the area. For best results, an 8-20' spraying distance between the sprayer and the target surface should be observed during application. This device has a working pressure of 0.15-0.4 MPA and a flow rate of 1-3.7 Gal/hour in addition to sanitation, the portable sprayer can be used for pest control and plant fertilization (using various liquid material, soluble powder or emulsion). Start by filling the tank with your solution. If you are using a soluble powder-based solution, mix outside of the tank and then filter before pouring in to prevent clogging the nozzle. Be sure the solution is free of particles before putting into the tank. Tighten the lid securely and clean/dry the outside of the tank and handle.

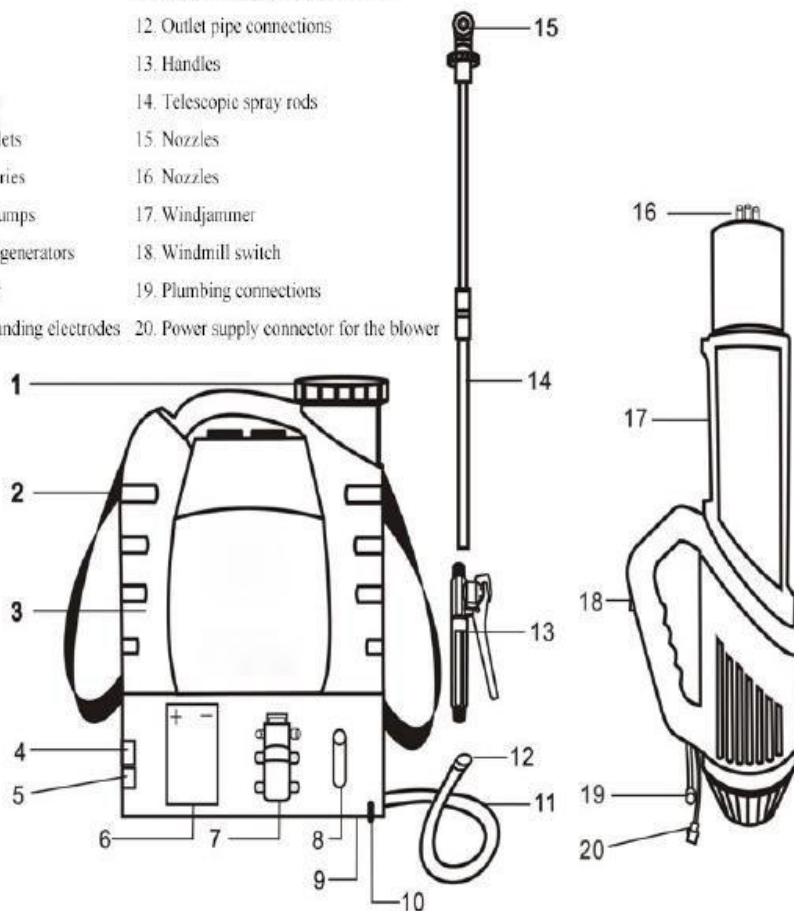
First switch on the main power switch located at the bottom of the tank, and then squeeze sprayer handle to spray. Be sure you are holding the sprayer by the handle, not the spray wand/gun, and point the nozzle away from yourself before squeezing the handle. When spraying is done, switch off the handle before switching off the main power switch. After spraying, always clean the device with water. Dispose of chemicals in accordance with regulations and chemical instructions, and then spray water through the device to clean out the

PARTS LIST

NUMBER	DESCRIPTION	UNIT	QUANTITY	REMARK
1	Sprayer	unit	1	
2	Charger	unit	1	
3	Manual	unit	1	
4	Nozzle	unit	1	
5	Double Nozzle	unit	1	
6	O Ring	unit	2	
7	Gasket	unit	2	
8	Telescopic Nozzle Bar	unit	1	
9	Cluster Adjustable Nozzle	unit	1	
10	Gun	unit	1	
11	Gun Nozzle	unit	1	For Gun

VIII. product structure chart

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|----------------------------------|---|
| 1. Barrel lids | 11. Explosion-proof insulated hoses |
| 2. Back strap | 12. Outlet pipe connections |
| 3. tank | 13. Handles |
| 4. Power switch | 14. Telescopic spray rods |
| 5. Charging outlets | 15. Nozzles |
| 6. Lithium batteries | 16. Nozzles |
| 7. Diaphragm pumps | 17. Windjammer |
| 8. High voltage generators | 18. Windmill switch |
| 9. Bottom cover | 19. Plumbing connections |
| 10. Ionized grounding electrodes | 20. Power supply connector for the blower |



spray wand/gun and nozzle. Pour out the remaining water and wipe the device clean. Store in a clean, dry area. Do not spray in rain, snow, heavy fog, or high winds. Winds may carry poisonous chemicals downwind, be mindful of this when spraying.

BEFORE OPERATION: Install gaskets where needed.

- Unit MUST have green gasket installed before use.
 1. Locate and disconnect the hose from the sprayer wand.
 2. With your green gasket, place into sprayer wand and make sure it is snugly inside lining and flush with the walls.
 3. Reconnect sprayer wand and hose.
 4. NOTE: if there ever is a leak from this connection, the gasket may need replacing. Simply follow the steps again while the unit is off to replace gasket.



BEFORE OPERATION: Replace gaskets where needed.

- Unit may need gaskets replaced as it is used over time. Unit comes with a black gasket pre-installed on the end of the sprayer wand where a wand attachment may be connected.
 1. If this gasket needs to be replaced, first take off any wand attachment to locate the gasket.
 2. Remove the gasket from the wand and replace with a new one. Make sure when putting the new gasket on it is flush with the base so it forms a tight seal when connected.
 3. Connect desired wand attachment and make sure it is screwed on tightly, so a liquid tight seal is created at the base

Handle connection instructions



1. Tighten the handle end to the aerosol dispenser water hose connection.



2. Tighten the spray rod to the handle connection.



3. Turn on the power switch for the aerosol dispenser.



4. When spraying, hold the handle by hand and depress the flow switch.



5. When spraying is complete, turn off the power switch.

Wind Gun Connection Instructions



1. When installing the nozzle, take care that it must be tightened.



2. Installation of nozzle shields



3. Tighten the inlet and aerosol dispenser hose connections.



4. Connection of the power plug for the air gun to the power outlet for the aerosol sprayer



5. Turn on the air gun power switch first.



6. Then opening the power switch for the aerosol dispenser

1. Activate the air gun power switch before activating the power switch at the base of the backpack sprayer when in use.
2. When done, turn off the power switch on the base of the backpack, then the power switch on the air gun to clear out the line.
3. When spraying, you should follow the wind and do not spray against the wind to avoid mis-directional spraying.