



EM360™ Electrostatic Sprayer
User Manual

Ver. 072220

Thank you for choosing the EMist EM360™ Electrostatic Sprayer.

We've created an easy-to-use system that combines advanced liquid application technologies with improved mobility. The result is superior application and enhanced disinfection, as well as a convenient convertible design for users.

We recommend you read through this entire instruction manual before beginning.

Included are assembly, operating, and safety instructions. Following these manufacturer guidelines will help the system perform at peak effectiveness, extend the life of the product, and ensure operator safety.

Questions?

Each component has been inspected prior to your purchase. However, in the event that there is a problem, please contact our customer support center at Emist.com.



EM360™ Electrostatic Sprayer User Manual

LIMITED WARRANTY FOR NEW EM360™ EQUIPMENT

A. GENERAL PROVISIONS: The warranties described below are provided by SanoTech 360, LLC, dba EMist to the original purchaser of the new EM360™ equipment from EMist or authorized reseller, with proof of purchase which may be accomplished by registering the product at emist.com/warranty/. Under these warranties, EMist will repair or replace, at its option, any covered part which is found to be defective in material or workmanship during the applicable warranty term. Warranty service must be performed by EMist, or its authorized service providers, which will use only new or refurbished parts or components furnished by EMist. Warranty service will be performed without charge to the purchaser for parts and labor. The purchaser will be responsible for any service call, and/or transportation of product to and from EMist, for any premium charged for overtime labor requested by the purchaser, and for any source and/or maintenance not directly related to any defect covered under the warranties below.

B. WHAT IS WARRANTED: All parts of any new EMist equipment are warranted for the number of months or days specified below.

C. WHAT IS NOT WARRANTED (EMist IS NOT RESPONSIBLE FOR THE FOLLOWING): (1) Any equipment that has been altered or modified in a way not approved by EMist including, but not limited to, EMist specifications, and such alteration or modification caused the defect or damage; (2) Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions, misuse, lack of proper protection during storage, or accident; (3) Normal maintenance parts and service.

D. SECURING WARRANTY SERVICE: To secure warranty service, the purchaser must (1) Report the product defect to EMist and request repair within the applicable warranty term; (2) Present evidence of the warranty start date (proof of purchase); (3) Make the Equipment available to EMist within a reasonable period of time.

E. NO RESELLER WARRANTY: The reseller makes no warranty of its own and the reseller has no authority to make any representation or promise on behalf of EMist, or to modify the terms or limitations of this warranty in any way.

F. LIMITATION ON IMPLIED WARRANTIES: Any implied warranties granted to the original purchaser of new EM360™ equipment under law shall be limited to the limited warranty time frame set forth herein.

If further information is desired, contact EMist at Emist.com.

EM360™ Equipment		Warranty Terms*
1. EM36-BPWD-2800	EMH System	12 Months or 365 Days
2. EM36-BPBT-1809	Battery	3 Months or 90 Days
3. EM36-BPCH-1810	Battery Charger	3 Months or 90 Days
4. EM36-BPTK-1811	Tank	1 Month or 30 Days
5. EM36-BPHA-1813	Harness	1 Month or 30 Days
6. EM36-BPHL-1814	Holster	1 Month or 30 Days
7. EM36-BPGS-1815	Grounding Strap	1 Month or 30 Days
8. EM36-BPPC-1818	Pull Cart	1 Month or 30 Days

* Each warranty term begins on the date of product delivery to the purchaser.

* Attachments purchased on the same purchase order as the equipment listed will be covered by the equipment's warranty terms.

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1. General Precautions & Safety Warnings

The EMist electrostatic sprayer is a battery-powered liquid spray system designed to improve the performance of water soluble or water based solutions used on touchable and other exposed surfaces. This is accomplished by applying an electrostatic charge to the surface of the liquid droplets as they leave the spray head. This unique process improves liquid adhesion to targeted surface(s).

The hazards associated with the liquids you choose to apply represent their own unique and important safety requirements. Refer to each chemical manufacturer's documentation to establish best use steps and any need for personal protective equipment (PPE).

Never point the spray applicator at another person and never touch or handle the charging area within the applicator (front end) during spraying. This will help avoid chemical splash and other possibly unsafe spraying conditions.

DO NOT USE LIQUIDS THAT ARE NOT WATER SOLUBLE OR WATER BASED WITHIN THE ELECTROSTATIC SPRAYER. HIGH ALCOHOL CONTENT LIQUIDS MUST NEVER BE SPRAYED NEAR AN OPEN FLAME OR OTHER POSSIBLE IGNITION SOURCES.

Safety Notes: Users are required to read this User Manual, understand the safe and correct operating procedures that pertain to the operation of the electrostatic sprayer, and maintain the product according to the User Manual. It is the operator's responsibility to ensure that any person who uses this equipment has read this manual.

Lack of attention to safety can result in reduced efficiency, accident, or personal injury. Please watch for safety hazards and correct deficiencies promptly. Use the following safety precautions as a guide when using this machine:

- Read the User Manual thoroughly. Failure to read the manual is considered misuse of the equipment.
- Use the sprayer only for its intended use as directed in this manual.
- Familiarize yourself with all components, including caution and warning labels.
- Only trained and qualified personnel should operate the electrostatic sprayer.
- Do not use the equipment while under the influence of drugs or alcohol.
- Turn off and remove the batteries when leaving the equipment unattended.
- Store the system in a cool, dry place. Do not expose to extreme temperatures.
- Flush the system before storing (see Section 5).

Safety Tips:

- Use caution when walking, floor surfaces will be slippery when wet.
- Do not touch or insert objects into the EMist electrostatic sprayer.
- Wear grounding strap properly to avoid static shock.
- Use caution while spraying around furniture and electronics to avoid getting these surfaces too wet.
- Use caution when walking backwards during spray application to avoid tripping.



Safety Warning!
Do not use the electrostatic application system if you have a pacemaker or an Implantable Cardioverter Defibrillator (ICD).

1. General Precautions & Safety Warnings

Electrical Warning

To reduce the risk of electrical shock or injury, follow these guidelines:

- Only use the system for its intended purposes, as described in this manual.
- Always turn the system off when not in use.
- Do not place body parts or any foreign object into any opening of the sprayer.
- Never reach inside of the applicator while the sprayer is powered on.
- Never place equipment in standing water or liquid.
- Never operate the sprayer if it has been damaged or if it is not working properly.
- Always wear the grounding strap to prevent electrostatic shock.

Chemical Safety Precautions

Read and follow all instructions on the chemical manufacturer's label.

- Follow the chemical manufacturer's recommendations to handle, mix, apply, store, and dispose of their chemicals.
- Follow the personal protective equipment (PPE) requirements as recommended by the chemical manufacturer's safety data sheet (SDS).
- Be aware of poisoning symptoms and know the appropriate first aid protocol of your organization if poisoning symptoms appear to be present.
- Consult chemical manufacturer's recommendations so you know how long to wait before allowing people or pets to return to the treated area.

2. Initial Inspection & Set Up - Inventory

EMist Electrostatic Sprayer Components



Power Pack with Applicator

Power pack with applicator may be used with either the backpack harness or pull cart configuration.

Battery Charger

The battery charger kit comes with AC adapter, smart battery charger, connector cable, and provides approximately 45 minutes recharge time.



Tank

Interchangeable one-gallon liquid tank includes strain filter and cap. It is inserted with a light downward pressure then rotated ¼ turn to lock in place.

Harness

This commercial harness for the backpack configuration is designed for comfort and safety. It is adjustable to the user from small to large frame individuals.



Applicator

The applicator is connected to the application power pack housing by a electro-fluid cable. This hand-held device is trigger activated for the charging and applying of your liquids.

Pull Cart

This commercial pull cart for the pull cart configuration is designed for ease of use and safety. It provides an applicator holster for ease of storage.



Battery

The rechargeable battery will stop working once it reaches 20% capacity (or one indicator bar). The system can accommodate two batteries for longer run time, but only requires one to operate.



Grounding Strap

The grounding strap snaps to the bottom of the application power pack and is an extra layer of safety in the event static charge accumulates with extended use of the system. A simple loop slips over the toe of the shoe and heel.

* The grounding strap must be worn by the user when using the backpack harness or the system will shut down and not operate correctly.



Inspection

After unpacking, inspect components for any damage or missing hardware pieces, etc.

- Power Pack with Applicator
- One-gallon Liquid Tank
- Rechargeable Battery
- Grounding Strap
- Battery Charger
- Backpack Harness with Holster (Optional)
- Pull Cart (Optional)

2. Initial Inspection & Set Up - Before You Use

1. Install Battery (procedure same for both battery slots):

- a) Charge the battery first:
 1. Plug cord into AC adapter.
 2. Plug AC adapter cable into Smart Battery Charger.
 3. Plug AC adapter into 120v wall outlet.
 4. Install battery into smart charger.
 5. Reference power indicator (5 bars = full charge).
- b) With the application power pack battery slots facing you, remove battery covers by pinching the triangle.
- c) Install battery with tab facing left.
- d) Gently push battery to seat.
- e) Replace battery cover.
- f) Depress the power button to verify power on the power pack (LED will blink continuously).

2. Liquid Tank Removal:

- a) While gently depressing tank lid/handle, rotate counter-clockwise about 1/4 turn. Once disengaged, it will pop up slightly.
- b) Lift liquid tank out of power pack.

Note: Over time, the tank connector may need adjusting to align with placard.

3. Liquid Tank Insertion:

- a) For initial set up/test, fill the liquid tank 1/3 full with water.
- b) Gently place the liquid tank in the power pack.
- c) Slightly rotate clockwise about 1/4 turn while depressing tank until you feel resistance. Handle of tank should line up with placard on the power pack.

4. Pull Cart Installation (optional):

- a) Raise adjustable clamp, loosening the two knobs and positioning as desired then re-tightening the knobs.
- b) Put the clamp over the hand grip of the power pack keeping the electro-fluid cable out of the way. This secures the pack in place.
- c) Use the applicator holster when system is not in use.

5. Grounding Strap Installation:

- a) Identify the white or brown portion of the grounding strap ring and install placing the white or brown portion to the bottom of the ball of your shoe.
- b) Place the elastic strap around heel. This is adjustable if needed.
- c) Snap the button to the bottom of the power pack.

6. Power Pack Harness Strap Adjustments (optional):

- a) Put the Harness on the power pack.
- b) Put the power pack on like you would a backpack and adjust the straps to fit comfortably.

7. Power Pack and Applicator Function Check:

- a) With grounding strap attached and the tank installed, push/flip the toggle power switch down to turn the machine on.
- b) The green LED on the applicator will light up green for power on.
- c) Once the applicator trigger switch is depressed, the fan will turn on first, followed by liquid spray.
- d) The yellow LED illuminating signifies that the high voltage power supply is charging the liquid droplets.
- e) Once the applicator is released, the liquid will stop, and the fan will turn off after slight hesitation to ensure the liquid is cleared from inside the applicator.
- f) To turn the system off push/flip toggle switch up to turn off the system.

3. Assembly & Operating Instructions

Assembly Instructions and Tips



Keep this tab to the left as you insert the battery into its compartment on the power pack.

1. Rechargeable Battery:

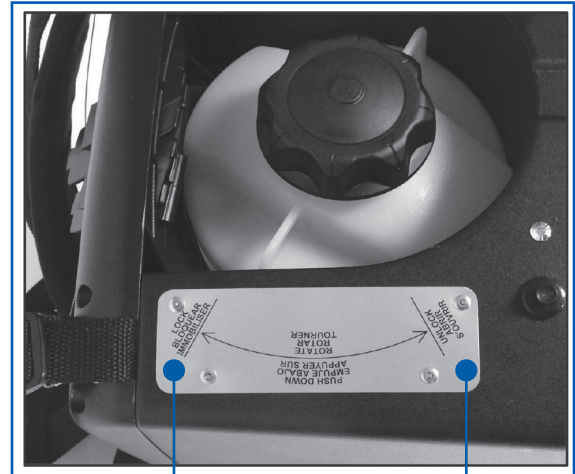
The system uses up to two lithium-ion batteries.

- The battery should be fully charged prior to the start of a project.
- Inspect the quick connectors for any debris or damage prior to inserting.
- The tab end of the battery includes a power meter to show remaining charge (5 bars = full charge).
- Two bars or less during startup may limit time of use without charging.
- The connector side of the battery enters the power pack case.
- Keep battery handle tab to the left as you insert.
- The battery easily seats in the power pack. Over applying pressure may make the battery difficult to remove without tearing tab.
- Insert battery cover (plastic cover is attached by a lanyard).

2. Interchangeable One-gallon Liquid Tank:

- Remove the vented cap, leaving strain filter in place.
- Fill as needed and replace vented cap.
- Tank does not need to be removed to fill.
- Align the tank handle with manual identified on the power pack top label.

IMPORTANT: DO NOT DROP TANK INTO THE TANK WELL. CAREFULLY APPLY SLIGHT DOWNWARD PRESSURE ON THE TANK AND TURN INTO THE LOCKING POSITION.



Tank Locked
Handle Alignment

Tank Unlocked
Handle Alignment

- Utilize liquids for duration of project or until refill is required.
- You may exchange tanks with different liquids at any time.

IMPORTANT: CAREFULLY APPLY SLIGHT DOWNWARD PRESSURE ON THE TANK AND TURN TO UNLOCK BEFORE LIFTING TO REMOVE.

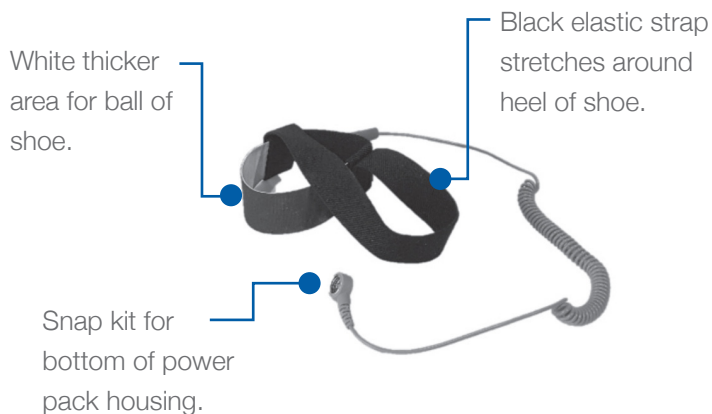
CAUTION: TURNING OR LIFTING A TANK FOR INSERTION OR REMOVAL WITHOUT APPLYING SLIGHT DOWNWARD PRESSURE PRIOR TO LOCKING OR REMOVAL CAN DAMAGE THE TANK OR THE SYSTEM.

3. Assembly & Operating Instructions

3. Grounding Strap:

This protection accessory is light weight and very flexible.

- Snap to the bottom of the power pack housing.
- Slide toe strap onto the toe of the shoe with the white or brown area touching the ball of your shoe.
- The black elastic strap area will stretch around the heel of your shoe. This strap is adjustable if needed.



CAUTION: THE GROUNDING STRAP MUST BE WORN WHILE USING AS A BACKPACK BY USER. IF THE TOE STRAP IS NOT UTILIZED THE SYSTEM WILL SHUT DOWN AND NOT OPERATE CORRECTLY.

4. Pull Cart Configuration:

This optional feature is easy to use and mobile using four ESD (Electrostatic Dissipative) wheels for grounding.

- The power pack fits into the lower portion of the cart between four metal sides to hold the pack in place during use.
- The cart has an adjustable clamp that is attached to the handle to secure the power pack in place during use.
- The handle also contains a holster for the applicator for the ease of storage.



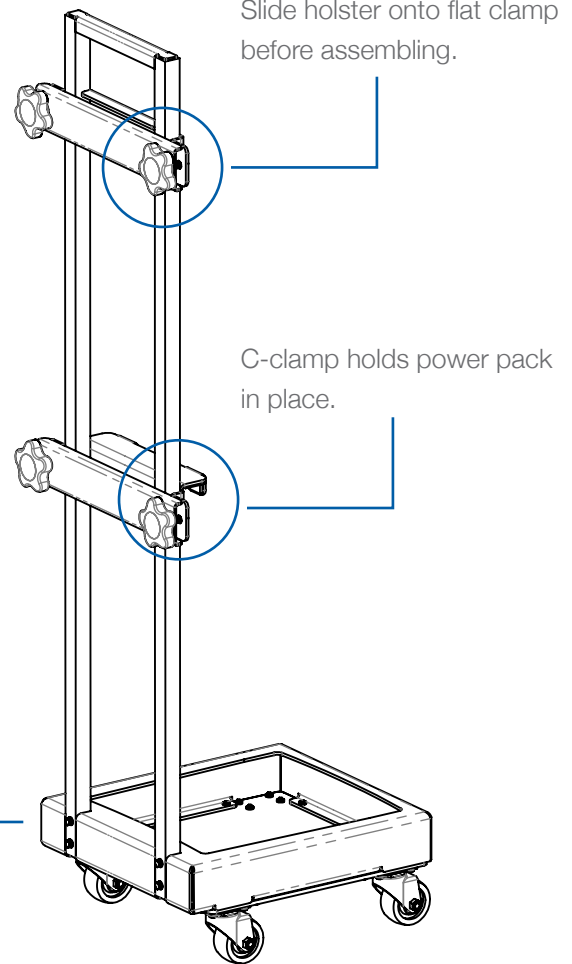
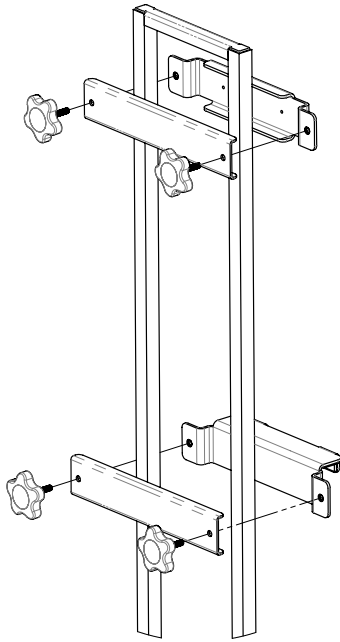
Tips

- While using as a backpack, the grounding strap must be worn by the user. If the grounding strap is not utilized the system can shut down and/or not operate correctly.
- Optimal distance from a target is 2-3 feet.
- Applicator will shut off once power indicator on battery reaches 1-2 bars.
- Ensure applicator is secured while putting the backpack on/adjusting straps/taking backpack off to avoid damaging the applicator.
- While using the pull cart configuration, the ESD (Electrostatic Dissipative) grounding is completed by the snap button of the Power Pack touching the silver circle located on the base plate of the pull cart. If the power pack is not seated correctly in the pull cart, the system can shut down and/or not operate correctly.

3. Pull Cart Assembly

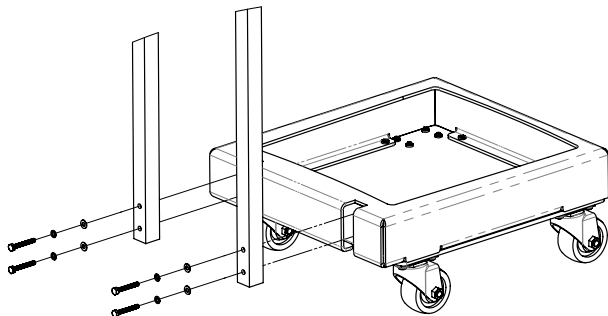
Handle Rails

Handle assembly positions can be adjusted by loosening the two knobs and positioning as desired and then re-tightening the knobs.



Cart Attachment

Assemble the handle to the cart base using the four hex bolts, lock washers and flat washers supplied with the unit.



4. Spray Application

A. Preparing the Spray Area:

1. Make sure food and drinks are removed or covered before application.
2. Spotless, clean interiors require no prep work prior to application.
3. Loose debris must be swept from floors and other surfaces prior to application.
4. Inspect the area for mechanical barriers such as: magazines on table tops, chairs touching each other, a table or a wall. The intended target surface area for application will need to be accessible.
5. Please cover and remove valuables. Electronics, furniture, paper or other common necessities do not need to be removed from the area.
6. Once the area has been cleaned, application can begin.
7. This system is NOT a mechanical cleaner.

B. Spray Application Process:

1. Begin at the farthest point from the doorway, work back toward the doorway so you can step out when application is complete.
2. Aim applicator 3 feet (optimal distance) from the surface target area, begin with a smooth figure “S” movement aiming below, at, and above the surface target area while walking at an average pace (continuously moving).
3. Make sure you are working in a methodical “S” pattern and let your passes overlap when moving to the next surface target area.
4. Allow treated area to set for contact time as recommended by the chemical manufacturer’s label before re-entry into the area.

TIP: IF THE APPLICATOR BECOMES WET OR BEGINS TO DRIP, YOU ARE MOVING TOO SLOW OVER THE SURFACE TARGET AREA AND NEED TO SPEED UP THE APPLICATION PROCESS. DO NOT OVER-SATURATE THE SURFACE. IF YOU SEE RUNS OR PUDDLES YOU ARE APPLYING TOO MUCH CHEMICAL. THE GOAL IS TO ACHIEVE EVEN COVERAGE OVER THE TARGET SURFACE AREA.

C. Fluid Management:

The system is designed for single or multiple application environments. Please use the multiple tank applications carefully by marking tanks with your chemical identifiers when necessary.

Application Tips:

1. While depressing the trigger button, move the applicator in an “S” pattern from bottom to the top of the surface target area in a continuous motion.
2. Stay in motion, electrostatically charged droplets will accumulate in higher levels at the tip of the applicator if you move too slowly while the device is in use.
3. Do not over apply.
4. In between chemical changes, press the trigger while pointing to the floor or other safe target area for four to five seconds to clear the remaining chemical in the system.

D. Battery Management:

The system’s battery use is controlled to draw down the battery to 20% of available cell power and to then shut off. This will eliminate the possibility of unwanted battery damage and extend the life of the battery.

Tips:

1. Fully charge each battery before use.
2. Keep connectors clean and dry at all times.
3. Insert with battery tab to the left and the battery meter facing outwards.
4. Do not expose batteries to standing liquid.

5. Maintenance & Cleaning

Flushing the Electrostatic Sprayer

TIP: IT IS GOOD PRACTICE TO FLUSH THE APPLICATION SYSTEM EVERY 24 HOURS WITH CLEAN WATER. DO NOT STORE CHEMICALS IN THE RESERVOIR WHILE THE SYSTEM IS NOT IN USE FOR GREATER THAN A 24 HOUR PERIOD.

The system is designed to minimize maintenance and cleaning.

Tips:

- Clear the system at least once a day by spraying clean water through the system for at least ten seconds.
- Keep batteries charged.
- Inspect cable for cuts, tears or damage.
- Inspect applicator for debris or damage.

Changing Chemicals:

TIP: IT'S IMPORTANT TO FLUSH THE SYSTEM IN BETWEEN USE OR WHEN SWITCHING CHEMISTRY TO PREVENT RESIDUAL BUILD UP AND TO AVOID MIXING CHEMICALS.

- To flush the system, empty the liquid tank and fill with at least 1 inch (2.5cm) of clean water.
- Spray for at least 45-60 seconds to flush the previous fluid from the system.

CAUTION: TO PREVENT CROSS CONTAMINATION OF CHEMICALS, YOU MUST PERFORM A FLUSH ANY TIME YOU CHANGE THE TYPE OF CHEMICALS BEING USED.

Battery Removal

- Make sure the system is powered off.
- Remove both battery covers by squeezing the triangular pop-out portion of the covers and pulling outwards.
- When covers are off, a pull-tab will be visible to assist in removal of the batteries.
- Place batteries into charger to fully charge for next usage. Each battery takes approximately 45 minutes to fully charge.

CAUTION: DO NOT STORE THE SYSTEM IN AN AREA THAT MAY FREEZE (TO AVOID DAMAGE FROM LIQUID REMAINING IN THE SYSTEM AND LINES). THIS WILL VOID THE WARRANTY.

Storage

- Empty fluid or run until empty.
- Insert at least 1 inch (2.5cm) of clean water in the liquid tank.
- Run the electrostatic sprayer for at least 45-60 seconds to flush active chemicals from the system.
- Remove batteries and re-charge by placing on the charger.
- Wipe down exterior with water or alcohol to remove dirt and soil.
- Use the power indicator on the end of the battery to determine the battery state of charge (5 bars = full charge).
- Insert battery covers back into battery compartment slots to prevent foreign particles and moisture from damaging battery contact connectors.
- Coil the quick connect electro-fluid cable up neatly and securely.

6. Troubleshooting, Support & Repair

The EM360™ is designed and manufactured to function without defects. The system will operate normally with properly maintained batteries and without abuse to the connector or other system parts.

Indications & Remedies

PLEASE SEE BELOW FOR EASY INSTRUCTIONS FOR ADDRESSING ISSUES THAT MAY ARISE WHILE USING THE EM360™

Issue	Reason	Troubleshooting	Result
NO POWER TO THE SYSTEM (BATTERY)	BATTERY NOT INSTALLED CORRECTLY	VERIFY BATTERY CONNECTOR ISSUE BY USING THE OPPOSING BATTERY SLOT WITH A CHARGED BATTERY	RETURN TO NORMAL USE
	BATTERY NOT CHARGED	BATTERY IS MECHANICALLY OBSTRUCTED	
	BATTERY DOES NOT SLIDE EASILY INTO THE SLOT (DO NOT TRY AND SLAM THE BATTERY TO SEAT)		
	BATTERY CONNECTOR NOT WORKING	VERIFY BATTERY CONNECTOR ISSUE BY USING THE OPPOSING BATTERY SLOT WITH A CHARGED BATTERY	CALL TECH SUPPORT
SYSTEM OPERATES, BUT LED(S) NOT ILLUMINATING	GREEN LED NOT ILLUMINATING	RETURN TO NORMAL USE	CALL TECH SUPPORT
	YELLOW LED NOT ILLUMINATING		
NO MIST/INADEQUATE MIST	TANK EMPTY	VERIFY BATTERY CONNECTOR ISSUE BY USING THE OPPOSING BATTERY SLOT WITH A CHARGED BATTERY	RETURN TO NORMAL USE
	TANK NOT SEATED CORRECTLY	BATTERY IS MECHANICALLY OBSTRUCTED	
	BATTERY LIFE		
	IMPROPER GROUNDING	VERIFY BATTERY CONNECTOR ISSUE BY USING THE OPPOSING BATTERY SLOT WITH A CHARGED BATTERY	RETURN TO NORMAL USE
	NOZZLE CLOGGED	RETURN TO NORMAL USE	
	TANK CONNECTOR BROKEN	VERIFY BATTERY CONNECTOR ISSUE BY USING THE OPPOSING BATTERY SLOT WITH A CHARGED BATTERY	CALL TECH SUPPORT
	PUMP NOT WORKING	BATTERY IS MECHANICALLY OBSTRUCTED	
	LEAKING AT THE NOZZLE		

Support or Repair

If your system fails to function, excluding obvious user damage, please contact EMist or your authorized EMist distributor.

If an issue occurs that is not addressed in the troubleshooting methods, please contact a customer support representative at: 888.534.7001 or visit Emist.com.

emist

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