



BRIGHTBOT GERMICIDAL TOWER USER AND SAFETY MANUAL

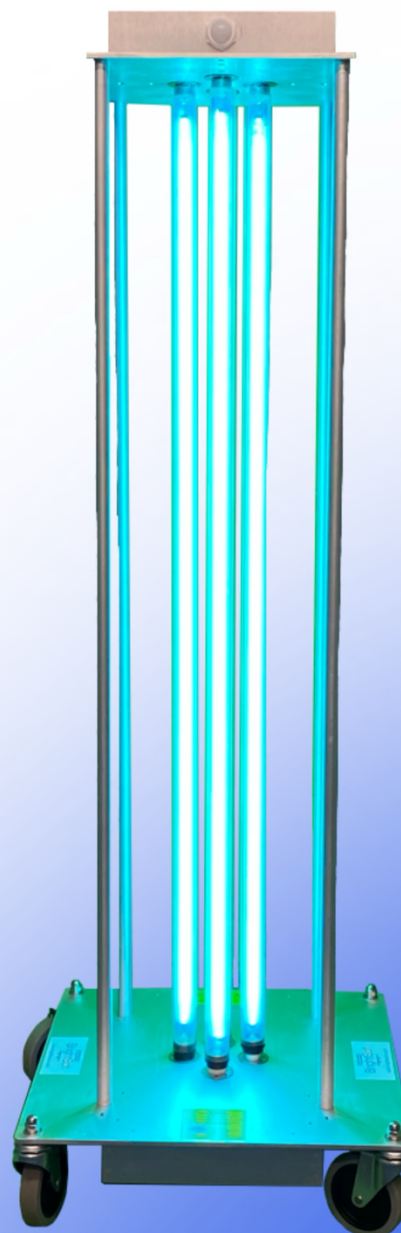


BrightBot UV-C Germicidal Tower

User Safety Manual



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BRIGHTBOT GERMICIDAL TOWER USER AND SAFETY MANUAL

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These instructions provide an overview of the installation, routine use and operation, and maintenance of the BrightBot Germicidal Tower unit. The BrightBot lamp system is in excess of the Exempt Group and viewer-related risk is dependent upon how users install and use the product.

Any question not specifically answered by the instructions given in this manual should be directed to BrightBot for clarification. Follow all labels and signs. Information contained in this publication is based on data collected by BrightBot and is believed to be correct and accurate. However, no guarantee explicitly stated or implied, is made or intended within this document. Product specifications and information are subject to change without notice.

SAFETY WARNINGS

WARNING! READ AND SAVE THESE INSTRUCTIONS

IMPORTANT: READ THIS MANUAL CAREFULLY BEFORE using this device. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

 Failure to follow all the instructions listed below may result in electric shock, fire and/or serious personal injury.

1. To avoid fire and shock hazard, plug the appliance directly into 120 VAC power outlet.
2. Never operate the unit with a damaged cord or plug,
3. Do not use the germicidal lamp near water.
4. Never touch the germicidal lamp or plug with wet hands.
5. Always unplug the power cord from electrical outlet when the germicidal lamp is not in use, before cleaning, inserting or removing parts or before moving to another location.
6. Do not use outdoors.
7. Never use power cord to pick up, carry, drag, pull or lift the germicidal lamp. Do not pull the cord against or around sharp corners or edges. This could result in injury to the user and/or damage to the cord.
8. Never pull the cord itself to unplug from power outlet.
9. Always turn unit off before unplugging.
10. Do not place anything on top or around the unit when disinfection in progress.
11. Always place the unit on a smooth, flat, level surface. Keep the cord away from heated surfaces and areas where it could be walked on or tripped over. Unplug the unit when not in use and whenever you clean or move the unit.
12. The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. Operator must exercise common sense when using this UV-C germicidal tower.
13. All occupants and personnel should be alerted to the potential hazards indicated by the product safety labeling on this unit.
14. Product safety labels should be periodically inspected and cleaned, as necessary, to maintain good legibility. Always replace illegible safety labels. Contact the manufacturer to obtain replacement safety labels.



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RISK GROUP 3 - WARNING – UV emitted from this product. Avoid eye and skin exposure to the unshielded product.

EYE EXPOSURE: NEVER look direction at the UV-C light while it is illuminated. UV-C radiation can injure the cornea, the outer protective coating of the eye. Photokeratitis is a painful inflammation of the eye caused by UV-C radiation-induced lesions of the cornea. Symptoms include a sensation of sand in the eye that may last up to two days. UV-C light does not penetrate the eye to the lens.

SKIN EXPOSURE: DO NOT allow UV-C light to shine on exposed skin. It can cause skin reddening and pain similar to sunburn. Prolonged and repeated exposure may damage skin.

This lamp system is in excess of the Exempt Group and that the viewer-related risk is dependent upon how users install and use the product.

SAFETY INSTRUCTIONS

RISK GROUP 3 - WARNING – UV emitted from this product. Avoid eye and skin exposure to the unshielded product.

1. Instruct service personnel to never look directly at UV-C light without adequate eye protection.
2. Never enter areas being disinfected with UV lighting systems without first powering down the system using the wireless remote actuator.
3. Place warning signage near all openings/entrances to areas being disinfected with UV lighting systems. When possible, lock access doors to prevent unexpected guests from entering the area.
4. Educate non-service personnel about the intended operations for UV disinfecting and what signage will be posted. Instruct non-service personnel to never look directly at UV-C light. This product produces UV radiation at 253.7nm. Anything in front of the unit will be exposed to UV radiation when the bulbs are on. Operators positioning the light while it is not illuminated will not be exposed. Radiation is only emitted while the bulbs are on. Radiation will not linger in the environment when the lamps have been powered off. This unit produces no ozone. Safety equipment is only required when the device is in-use.

Even with the benefits they provide, germicidal ultraviolet lamps pose imminent danger if used without taking the proper precautions. You MUST avoid exposure to direct or reflected germicidal ultraviolet rays, since they cause painful eye irritation and reddening of the skin. Under no circumstances should this germicidal UV-C unit be permitted to operate with humans, plants, or animals present in the operation area.

UVC radiation at 253.7 nm only penetrates most substances to a depth of a few millimeters. Regular glass blocks UVC radiation at 253.7 nm.

SAFETY LABELS



This label provides directions for use and a health warning regarding improper use.



This label reiterates the warning on the first label, with directions to this manual, and contact information.

CAUTION

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 with the cover on, out of the reach of unauthorized users when not in use. Inspect for good working condition prior to storage and before re-use.



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PRODUCT APPLICATIONS

PRINCIPLE OF OPERATION

BrightBot Germicidal Towers are intended to be used indoors in an unoccupied space to reduce harmful pathogens. BrightBot UV-C germicidal towers use bulbs that produce UV-C light at 253.7 nanometers (nm). This frequency of light is highly effective against pathogens including viruses, bacteria, mold and fungi.

This frequency of UV-C light is also harmful to skin (causing a burning and reddening sensation similar to sunburn) and harmful to the eyes (causing a temporary burning sensation to the cornea).

LIMITATIONS

UV-C only sanitizes areas in a line-of-sight fashion. Shadowed areas will not be sanitized.



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UNPACKING & INITIAL SETUP

CONTENTS

The contents of your BrightBot package include:

- 1 BrightBot UV-C tower.
- 1 Brightbot UV-C tower cover
- 4 Shatterproof UV-C bulbs packed in separate box.
- 2 remote controller actuators hanging from top platform of UV-C tower.
- 1 Caution UV-C in-use sign.
- 1 BrightBot User Safety Manual
- 1 15 foot 10 amp power cord

UNPACKING

- 1. Place the box sideways upon a sturdy surface. Assistance may be needed for this step.
- 2. Open the box you received by slicing the package tape along the flap seams of the box labeled the top of the box.
- 3. Gently pull the unit from the box and stand it on the casters.
- 4. Remove remaining cardboard and plastic packaging as needed.

INITIAL SETUP

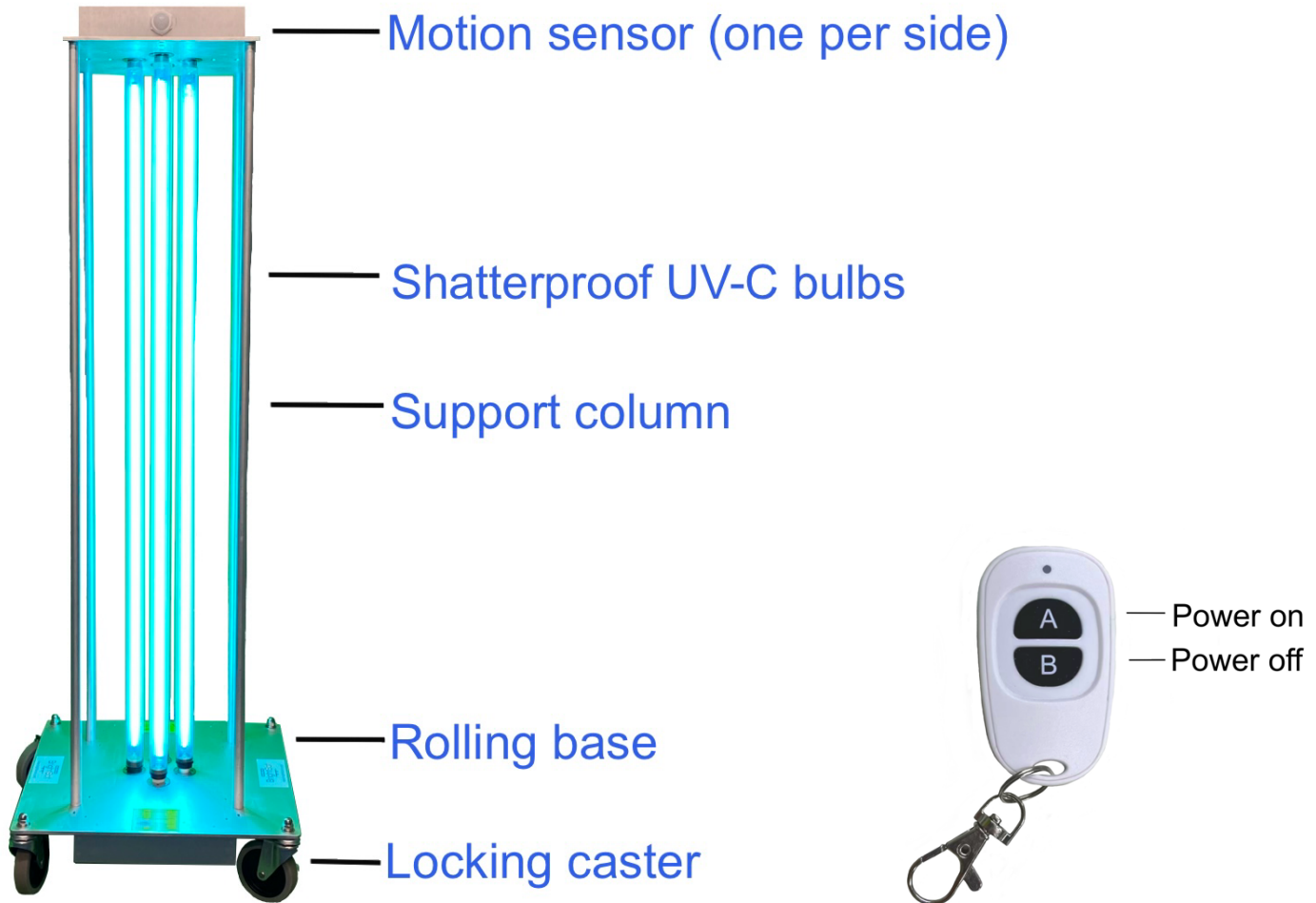
- 1. Remove the blue cover from the UV-C tower.
- 2. Remove the box containing the UV-C bulbs and place to the side.
- 3. On the UV-C tower, remove the cardboard protecting the bulb sockets on the top and bottom plate of the UV-C tower. If any sockets have become dislodged from socket holes, reinstall by pushing the socket back into hole. Tap lightly with a rubber mallet if needed. Keep aligned with socket for opposite end of bulb.
- 4. Carefully remove the 4 shatterproof UV-C bulbs from their box. Each UV-C bulb will be enclosed in a paper sleeve.
- 5. Install all four lamp bulbs (see LAMP INSTALLATION).
- 6. Remove the 2 remote control units hanging from the top of the UV-C tower.
- 7. Keep one remote control with the tower and place one remote controller in a safe place as backup for the original remote controller.
- 8. Plug power cord into connector on bottom box below main deck of tower.
- 9. Place blue cover back on UV-C tower. Your BrightBot UV-C tower is now ready to operate per instructions in the user manual.



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INSTALLATION

PRODUCT DESCRIPTION



LAMP INSTALLATION

1. Stand facing the tower. Grasp bulb in one hand and hold at approximately 30-degree angle from tower.
2. Place two pins at bottom of bulb into lower spring-loaded connector. Push down on connector and move bulb just below upper connector aligning two top pins with holes in top connector.
3. Gently push bulb upward into upper connector with two top pins going into holes of top connector.
4. Release bulb.

UNIT PLACEMENT

Operators can easily move the UV lighting system around facilities via four wheels at the bottom. Pull or push the UVC unit by grasping one or two of the support columns mid-shaft. One of the wheels features a wheel lock to keep the unit stationary during use.



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For best results, the light should be setup in the middle of the area to be sanitized on a flat surface. If the UVC germicidal tower needs to be lifted and moved for any reason, grasp two of the support columns mid-shaft with each hand and lift the unit.

UNIT OPERATION

Motion Sensing

This UVC germicidal tower is equipped with motion sensors that will turn off the UVC bulbs in the unlikely event where someone enters the room being sanitized. The UVC bulbs will remain off for 30 seconds after the motion sensors detect no motion and then turn back on.

ROUTINE OPERATION

1. Remove ripstop nylon cover.
2. Inspect UVC tower for damage. If damaged, do not use.
3. Remove remote control from top plate of tower.
4. Remove all people, pets, plants from room being sanitized.
5. Place UVC tower in center of room to be sanitized.
6. Plug in UVC tower to grounded 120VAC outlet.
7. There is a 1-minute warmup period for the motion sensors to activate. The UVC bulbs cannot activate until 1minute after the unit is plugged in.
8. Exit room and close door.
9. Place "Caution UVC in use" sign on outside of door of room being sanitized.
10. Press A on the remote control to turn on the UVC tower.
11. There will be up to a 1-minute time before the UVC bulbs activate after the A button on the remote is pressed. This is normal.
12. Wait the designated time for the UVC tower to Sanitize the room.
13. Turn off UVC tower by pressing the B button on the remote control.
14. Re-enter room.
15. Unplug UVC tower and hang the remote control from the top plate of tower.
16. Place the cover back on tower.
17. Remove the UVC unit from the room.
18. Remove "Caution UVC in use" sign from door.



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MAINTENANCE

MAINTENANCE OVERVIEW

WARNING: MAKE SURE THE UNIT IS UNPLUGGED BEFORE performing any maintenance.

BrightBot Germicidal towers are designed to provide years of reliable performance. Should the need for replacement parts arise, please contact BrightBot, Inc.

Replace battery (CR2032 3v Lithium) in remote control actuator yearly.

CLEANING

When bulbs get visibly dirty wipe down surface with alcohol and cotton cloth. Bulb can be cleaned in place and it is not necessary to remove bulb for cleaning.

1. Wearing gloves, use a clean cotton cloth and alcohol to wipe down bulbs.
2. Do not use bleach wipes on tower or bulbs.

BULB REMOVAL/ REPLACEMENT

BULB REMOVAL

1. **Verify the UVC tower is unplugged.**
2. Stand facing the tower.
3. Grasp bulb in hand and push down depressing bottom spring loaded connector until bulb comes out of top connector. Gently push bulb upward into upper connector with two top pins going into holes of top connector. Release bulb.
4. Tilt bulb towards you and when clear of top plate pull from bottom connector.
Replace bulbs on Bot48 UVC tower every 8000 hours of use or 2 years.

BULB REPLACEMENT

1. **Verify the UVC tower is unplugged.**
2. Stand facing the tower.
3. Grasp bulb in hand and hold at approximately 30-degree angle from tower. Place two pins at bottom of bulb into lower spring-loaded connector.
4. Push down on connector and move bulb just below upper connector aligning two top pins with holes in top connector.
5. Align top connector pins, and gently release bulb into position. Lamp bulb will fit snugly in place.

BULB BREAKAGE

BrightBot Bulbs are covered with a shatterproof material. All glass and bulb contents will be contained in the event of bulb breakage. Please dispose of bulbs per your facility guidelines.



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LAMP DISPOSAL

As with a fluorescent light bulb, your UV lamp contains a small amount of mercury and must be disposed of properly. Therefore, do not throw old lamps into the trash. Many communities have agencies that take in mercury along with other materials that require special disposal. Please contact your municipal or county waste collection agency for proper disposal procedures.



Technical Specifications

BrightBot germicidal towers are rated for indoor use only and are not to be used in wet conditions or standing water.

Model	Bot48	Bot60
Volts:	120 VAC	120VAC
Amps:	4	4.2
Hertz:	50/60 Hz	50/60 Hz
Maximum Treatment Time:	12 hours	12 hours
Weight:	32 lb	40 lb
Dimensions:	56x18x18 inches	67x18x18 inches
Number of Lamps:	4	4
Lamp Wattage:	75 watts	95 watts
Temp range: 0-55 degrees C	0-55 degrees C	0-55 degrees C
Humidity:	5%-95% noncondensing	5%-95% noncondensing
Altitude:	0-2000 meters	0-2000 meters



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TROUBLESHOOTING

1. If the lights do not turn on within one minute of when button A of the remote is pushed:
 - a. Try the second remote.
 - b. Verify the LED light is lighting on the remote when you press the A button. If the light is not lighting, replace the batter with a (CR2032 3V) battery.
 - c. If the LED light on the remote lights up when the A button is pushed, check to make sure the power source for the light is working. Plug the light into a different 120VAC outlet.
 - d. Verify no one is activating the motion sensors. The motion sensors will flash red when they are activated. The bulbs cannot activate for 30 seconds after the motion sensors are activated.
 - e. If lights on tower still do not turn on within one minute of when remote button A is pressed, contact BrightBot, Inc. (773) 758-4258 for further instruction.
2. If one light in the tower does not turn on:
 - a. Verify the UV-C germicidal tower is unplugged.
 - b. Verify light is in socket correctly.
 - c. Verify bulb is functional by replacing bulb.
 - d. If unit still not working correctly, call BrightBot, Inc. (773) 758-4258 for further instructions.

WARRANTY & PRODUCT REGISTRATION

Brightbot UVC towers have a 1-year warranty covering components used during normal operation. Brightbot warranty does not cover bulb breakage or loss of remote controllers.

BrightBot systems are designed to provide UV-C energy. UV-C only sanitizes areas in a line-of-sight fashion. Shadowed areas will not be sanitized. No warranty or responsibility is taken by BrightBot in regards to the process or efficacy of the unit as BrightBot has no control over the use of the system. BrightBot makes no claims to the actual log reduction of pathogens as it can vary depending on environment and use.