

# BASE PROTOCOL FOR EXHALE

A general set-up



## **Example object for this base protocol**

Normal sized bedroom. Please be aware that this is only a general protocol. Every bed bug case is different, so you might need to use more Exhales, or place them differently. We can be helpful if needed. Skatek is available to assist if needed ([christian@skatek.no](mailto:christian@skatek.no))

## **How to get best results**

- **The bed bugs need to be hungry for Exhale to work! They only need to feed once a week, so keep this in mind.**
- 1 Exhale aerosol per a normal sized bedroom.
- The treatment site has not been occupied by humans for a while, preferably several days.
- If there is air conditioning in the room you are treating, turn this off (the CO2 will disappear faster if AC is on)
- Exhale is not intended to attract bed bugs directly to the dispenser. Exhale helps to activate the bed bugs throughout the entire room/area.
- Place the Exhale on the floor, let it spray towards the most infected area, but not too close.
- You should leave the area/room where Exhale is operating after you have done the set up correctly. If there are people working there for extended periods while Exhale is operating, the bed bugs may become distracted or scared.
- Strategically place plenty of passive traps, not only for the bed legs, but also around in the room and next to the walls/skirting boards. Original ClimbUps are a good choice.
- You can also place double sided tape around in addition to the passive traps
- The site should be generally tidy for more efficient work and results

**N.B.** *As every bed bug case is different with a lot of factors at play (also the ones we can't control), the results will vary. Please follow the guidelines above, and use Exhale at multiple sites in the testing phase to get an overall impression.*

## **General rules**

- Do not face Exhale towards yourself at any point
- Use safety glasses while operating Exhale

***N.B.*** When you set an interval for the first time, Exhale will perform a test spray to ensure the device is working properly.

## How to set mode, interval and insert the Exhale Aerosol

Watch me for instructions: <https://www.youtube.com/watch?v=Y8y0ufZ4MBU>



## General stats when operating Exhale

Amount of sprays in one aerosol: Ca. 90

Example: Operativ 24h Modus

- 5min interval: Empty after 7,5 hours
- 10min interval: Empty after 15 hours (recommended)
- 15min interval: Empty after 22,5 hours
- 20min interval: Empty after 30 hours

**Example: Operativ Night Mode (Measured with 7 hours of darkness)**

- 5min interval: Empty after 1 night
- 10min interval: Empty after 2 nights (recommended, depending on how long you have the object available without occupants).
- 15min interval: Empty after 3 nights (recommended, depending on how long you have the object available without occupants).
- 20min interval: Empty after 4 nights

**Recommended settings on the Exhale dispenser**

***24H Interval:***

- Set the spray interval to 10 min.
- Exhale will now perform for 15 hours on one aerosol.
- You can safely leave the Exhale operating without supervision during evening/night time, so you can come back the next day to have a check.

*You might need 2 or more aerosols equal to 30+ hours in total, for more optimal findings. Do not change the Exhale position the first 15 hours during monitoring.*

***Night Mode (Highly Recommended if the occupant usually sleeps at night):***

*Only operates when it is dark*

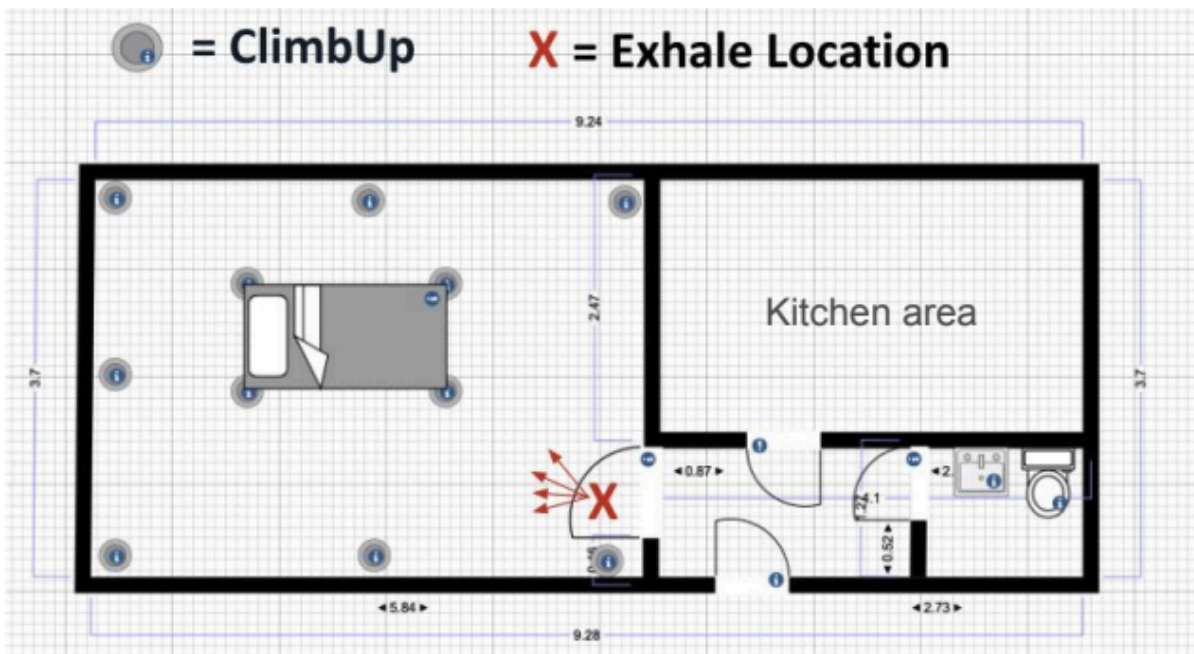
- Set the spray interval to 10 or 15 min (depending on how long you have the object available).
- Exhale will now perform for 2 or 3 nights on one aerosol (Estimated with 7 hours of darkness per night).
- You can safely leave the Exhale operating without supervision during evening/night time.
- Make sure it will be no lights or similar on in the room, then the sensor won't work.

*Do not change the Exhale position the first 2 nights of operating.*

**TIPS:** You can also use a lamp with a timer facing the Exhale dispenser while having it on night mode, if you want to have more control over the spray intervals and length of the night. The sensor will make the Exhale not spray as long as it is noticing light when night mode activated.

## Placement

- Make sure the Exhale is facing the most infested areas in the room, but also give it enough space so it is able to spray CO<sub>2</sub> and pheromones in the whole room (*see example picture from a real case below*)



*In the case above, the bed was the most infested area, but there were also a lot of bed bugs found in the walls/skirting boards. We let the Exhale spray into the whole room, but facing the bed.*

**NB: Remember to place plenty of passive traps around in the room as shown in the picture above, to be able to monitor effectively.**



*You can also put two sided transparent tape around the Exhale, in case of bed bugs approaching the device. Red dots show Bed bugs caught during a case study.*

## **Source of sorting**

### ***Exhale Aerosol***

The Aluminium is sorted as metal

The ventill is sorted as plastic

The Spray nozzle is sorted as plastic (made of HDPE - high density polyethylene)

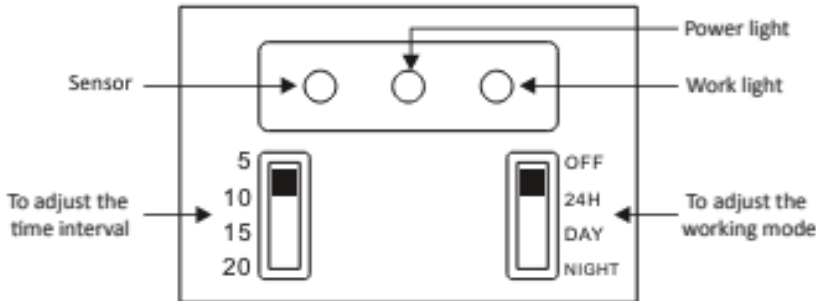
### ***Exhale Dispenser***

Hook off the inside electric device, and sort it as electric waste

Sort the remaining cover as plastic

**Dispenser user manual below ↓**

### User Manual



**Sensor:**  
The dispenser senses the light, will not flash.

**Power light:**  
After the dispenser is turned on, green light flashed every second.

**Work light:**  
When dispenser is about to spray, red light and green light flash.

### INSTRUCTIONS:

Step 1: Open the machine cover by pressing the grey top button

Step 2: Install two "D" batteries in the battery compartment

Step 3: Select the operating working mode

1. Adjust the working mode

- 24H Dispenser operates at selected spray interval for 24 hours. (Recommended)
- DAY Dispenser operates at selected spray interval in lighted conditions only. (eg: sunshine/light)
- Night Dispenser operates at selected spray interval WITHOUT lighted conditions. (eg: No light at night)

2. Adjust the time interval

5, 10, 15 or 20 minute intervals can be selected.

Step 4: Installing Exhale

Place the "neck" of the Exhale can at the snap position of the dispenser tightly. Gray metal part on Exhale needs to be placed above the metal holder in the dispenser.



**Note:** Before installing the can, make sure the hammer is in the "UP" position. If not, adjust the hammer to "UP" position by using a pen or key to push the hammer gently.

When Exhaled is installed, do not face the dispenser towards yourself or others. Once the working mode is changed, this will trigger the hammer and the first spray will be carried out.

In case of carelessness, please rinse with water immediately. In case of illness, visit doctor. More information about safety measurements when operating Exhale is found in the Safety Data Sheet.



Step 5: Setup is complete

Close the cover and place the dispenser in suitable location. If preferred, lock the cover by inserting the included lock into the hole found in the right side of the dispenser.