

VMVAPORIZER Instructions Manual

4 Things you need to have:

The Vaporizer requires 7 amps 860watts.

1. **Generator.** We recommend the Honda EU2000i, 16.7amps.
2. **Air Compressor.** Any 1-2 gallon (maximum 7amps if used with the honda generator).
3. **Air filter.** We recommend the Motor Guard M-30. (use toilet paper rolls as replacement filters).
4. **Respirator mask.** Organic acid charcoal respirator mask. (we recommend the 3M brand).

1. Safety first.

-Put on all safety equipment; chemical respirator mask, thick leather gloves, goggles and an appropriate beekeeping suit.

2. Preheating and connecting the cords.

- The vaporizer will take about 10-12 minutes to preheat depending on weather conditions. While preheating keep the black air knob OFF, all the way clockwise, just make sure the **red ring** is pushed UP into the unlock position.
- Connect the electrical cord and air hose to the vaporizer.
- Set the air compressor to 80 psi
- When plugged in the vaporizer is constantly ON (heating).

3. Using the black airflow knob.

- The black air knob is a fine needle adjustment valve.
 - Open it as soon as the 12 minute preheating time has passed.
- Never leave the vaporizer plugged in (heating) past 12 minutes without the black air knob ON - this will over heat the vaporizer and may cause breakdown or operating problems.**
- Note; the red ring needs to be pulled up to UNLOCK the black knob.
 - Open the black air knob (counter clockwise) just enough to push the vapor out the front.
 - When treating hives open the air knob slightly MORE to allow the forced air to push vapor effectively into the hive.

4. Loading oxalic acid.

- There is no "exact" oxalic acid dosage.
- Once the vaporizer is preheated for 10-12 minutes, hold the vaporizer up (**70-80 degree angle**) with the red sticker facing up.
- Use the provided plastic tube to load the oxalic acid.
- Fill the plastic tube with oxalic acid about 3" from the tip** and drop it right into the vaporizer from the top end (where the control box is).
- At this point you will hear the oxalic acid boiling. Once it stops boiling, you're ready to treat-- this takes about 15 seconds depending on how hot the vaporizer is.

WARNING: THE VAPORIZER WILL BECOME VERY HOT WHEN THE OXALIC ACID IS DROPPED INTO

THE VAPORIZER--PLEASE WEAR THICK LEATHER GLOVES.

-IMPORTANT: Once the load of oxalic acid ends (the 3" of oxalic acid that was loaded into the vaporizer) you may or may not need to wait for it to heat back up to the boiling temperature before your next load.

Here are 3 things you will always be looking for when loading the oxalic acid:

- 1. If the oxalic acid is NOT boiling when loaded, the vaporizer is NOT hot enough.**
- 2. If the oxalic acid IS boiling when loaded then the vaporizer is hot enough for treatment.**
- 3. If the oxalic acid IS boiling when loaded but the vaporizer is dripping liquid from the front, the vaporizer is TOO HOT. Open the air for 10-15 seconds to cool it down and throw in 1 more load of oxalic acid.**

-Waiting to heat back up can take from 15-20 seconds after each load depending how much air went through the vaporizer.

-This is one of the reasons for the air filter: the Motor Guard M-30 filter we recommend is needed to eliminate moisture in the air (air + water creates cold air). When the filter is used it reduces the cold air and because of this it will greatly reduce the time it takes to heat up between loads.

5. Treating the hives.

-Once oxalic acid has been loaded and 15 seconds passed and it's done boiling then hold the vaporizer right to the entrance of the hive at about a 30-40 degree angle and open the black airflow knob to push the vapor into the hive. (Remember to set the air compressor at 80 psi.)

-A full treatment is when the vapor starts to escape from the top lid of the hive.

-We recommend to giving an extra 4-5 seconds of oxalic acid AFTER you see the vapor starting to escape the from the top lid. **There is almost no risk in overdosing with oxalic acid, so it's always better to give more than less.**

-Depending if you have single or double hives, it will take about 6-12 seconds to treat a hive.

6. Treatment cycles.

-If NOT broodless: A 4 week treatment, each treatment 5 days apart.

-If broodless: 1 week treatment will show good results. Sometimes a 2nd treatment may be needed.

7. Storing the vaporizer.

-When you're done for the day, open the black air knob all the way (counter-clockwise) to let the vaporizer cool down, this usually takes about 20 minutes (make sure it's cold enough to transport/store).

-Note; if you're moving between yards then there's no need to cool the vaporizer down all the way, just unplug

the vaporizer keep it in a safe place while moving, then power it back on and wait for it to heat back up to the point where it boils the oxalic acid. Always have the air slightly ON while moving between yards. Reheating time is about 2 minutes between yards. Depending how much time passed.

8. Cleaning before each use (must be completely cold).

A. There is no need to clean the vaporizer while in use, only if buildup of oxalic acid happens at the tip of the vaporizer, then you can use your hive tool to punch a hole through the build up.

A full clean with the metal rod is only needed before your next treatment cycle.

The oxalic acid will not destroy or corrode the fully stainless steel design while stored away.

Please use only the provided metal rod to clean the vaporizer from the oxalic acid.

B. Insert the metal rod into the vaporizer from the top end (near the control box) of the vaporizer and move it back and forth to knock down any oxalic acid crystals that build up inside. (use a flashlight to look inside from the top end to get an understanding where the oxalic acid builds up.)

As a tip, it does not need to be sparkling clean, just knock down the majority of the acid and that is enough to operate.

C. Flip the vaporizer upside down and shake out any oxalic acid.

NOTE: never flip the vaporizer upside down while hot, this can easily clog the air injectors.

Once cleaned and emptied, you can now start with STEP 1.

Please contact us for support.

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