

# Instructions for use and maintenance

## Electric heated hybrid vaporizer/smoker

Types: ANELVPSM-01ST / ANELVPSM-02ST / ANELVPSM-03ST/ANELVPSM-04ST



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## Applications

The device is used to produce:

1. **Vapor**
2. **Hybrid vapor with the smell of burning wood**
3. **Conventional smoke**

which is applied to bees during the beekeepers' visits to the apiary.

The device is designed to work:

- 1) As a **vaporizer** in combination with the **Vapor Pad vapor production material ref... AN1040VAP** , which produces vapor with the common method of heating vaping materials.
- 2) As a **hybrid vaporizer** in combination with the **Cool Smoke hybrid vaping material ref... AN1040CS**, an ANEL-patented formula that produces vapor with the smell of burning wood, making it more effective for bees.
- 3) As a smoker in combination with conventional smoking materials for their safe ignition with a closed device lid instead of using a match or lighter.

Both the Vapor Pad and Cool Smoke products contain substances that have been used for decades in various forms in beekeeping. Both products have successfully passed extensive tests, both in the laboratory and in apiaries, for their effect on bees or residues in honey.

Both VP and CS products contain extinguishing agents that prevent flame development. Their use, according to the instructions for use, is extremely safe and does not pose a risk of fire when they are used according to the instructions for use of the device. Even with the use of conventional smoking materials (e.g., pine needles), due to the fact that the materials are ignited in an entirely closed environment, it is safer than conventional smokers.

## Device description

The device consists of:

1. Bellow	7. Fuse box with 15A fuse
2. Fire chamber	8. Fire chamber air inlet
3. Nozzle	9. Velcro battery strap
4. Heat shield	10. Aeration grate A
5A. Battery adapter, female	11. Aeration grate B
5B. Heating element-resistor power adapter, male	12. Negative polarity contact pin with smoker body
6. Heating element (R1)	13. Grabber for Vapor Pads

## Accessories

**The battery (-ies) and chargers, which are not included with the device, are chosen when ordering the device and depend on the use and duration you wish to use the device. The device does not operate without a:**

14. Battery
15. Battery charger



high levels and exceed the capabilities of the extinguishing materials and there is a risk the material may ignite. Important! Li-ion type batteries are used. Do not discard them in the trash. They must be appropriately recycled at the end of their lifecycle.



#### How to choose a charger:

When ordering the device, you should choose a charger depending on the batteries you purchased and if you intend on charging these with 220V or 12V current. Two types of chargers are available:

- 1) 220V (for common household sockets). Its prongs are for European sockets. If you are located in another country you should buy an adapter.
- 2) 12V (with adapter for a car cigarette lighter socket).

Attention! Do not charge the batteries with a charger that has a different voltage. If your charger has a lower voltage than your batteries, then these will not charge satisfactorily and if the charge has higher voltage than the batteries, you will destroy the batteries (even with one charge); thus, there is a risk that the batteries may catch fire and even explode.



For the implementation of the heating mechanisms, ANEL may use bodies of conventional smokers from different manufacturers whose external appearance may differ.

The charger and batteries may have a different appearance.

Combining accessories, e.g., chargers, batteries, etc., from third party suppliers instantly renders the devices out of warranty; it may destroy and may be harmful for the use of the device (battery explosion, cause a fire, etc.). The exclusive use of ANEL accessories and parts is strongly recommended.

#### How it works

Inside the fire chamber is the power resistor which, depending on the use, heats the materials that you place in the chamber to produce vapor, hybrid vapor with the smell of smoke or conventional smoke.

The resistor is powered by the battery which is strapped to the back of the bellow.

As long as the battery adapter is connected to the resistor adapter, the resistor will be supplied with power.

To stop the resistor from working simply disconnect the adapter.

## Instructions for use

### Device preparation - testing (NOT USE)

#### Batteries-Charging-Testing

Lithium-Ion (Li-ion) batteries, which are equipped with a discharge protection mechanism and have the following features, are used:

- They stay charged for years.
- You do not need to wait until they drained completely to recharge.
- You prolong their lifecycle when they are stored when charged.
- Although they are able to withstand 1000 recharging cycles, their capacity diminishes slightly after 200-300 charges (they continue to be functional, but for a shorter duration).

Connect the charger to a suitable power socket and then insert the battery adapter to the charger adapter.

For safety purposes, you should remove the battery from the smoker before connecting the charger (detach it from the Velcro strap by pulling gently) and place it on a fireproof surface (e.g., a plate) so as to mitigate the risk of ignition, explosion, etc.

If the charging indicator shows that the battery needs charging, wait until the indicator shows that the batteries are charged. Charging time depends on the battery capacity that you have chosen, the charger and the battery discharge level. A well-charged 6000mAh battery lasts 60' - 90' with the VPs and CS and suffices for more than 100 ignitions using conventional smoking materials.

Different capacity batteries are available depending on the time you wish to use the smoker. The larger the battery capacity (mAh), the longer its duration of operation and recharging time.

Charging time is calculated by dividing the mAh of the battery with the Am of the charger and dividing by 1000. Thus, a 2A charger charges a 6000mAh battery in 3 hours, while a 1A charger charges the same battery in 6 hours.

## Device

Ensure that the device and resistor are cold.

Open the lid (3) and remove any foreign materials from the fire chamber.

Make sure the aeration grates beneath the resistor (10-11) are open to allow air to pass through.

If the holes of the grates (10-11) are clogged, use a screwdriver of a smaller dimension to unclog the holes. The grate with the small holes (11) is placed on top of the grate with the large holes and **beneath the resistor**.

If necessary, gently clean the resistor with a brass bristle brush (careful, the resistor must be cold before you clean it).

Fasten the battery to the back of the bellow using the Velcro strap.

## Battery connection - device initiation:

Connect the battery and fasten it with the Velcro strap at the back of the bellow.

Connect the female adapter of the battery (5A) to the male adapter of the resistors (5B).

Without touching the resistor, check to see if it is producing heat, smoke or if the resistor is changing to a bright red color; if 1 of the 2 is happening, the resistor is working properly.

**Attention! DO NOT TOUCH THE RESISTOR it is very hot, and it will burn you**

## A. Use for the production of vapor in combination with the Vapor Pads (VPs)

### Prerequisites:

- **Purchase the appropriate battery according to the battery selection table**
- **Purchase the ANEL vapor production material - Vapor Pads (VPs) AN1040VAP**

### A1. Filling with VPs

Ensure that the battery is disconnected.

Ensure that the resistor is cold and clean.

Ensure that the device is cold.

Ensure that the grate with the small holes is beneath the resistor and on top of the grate with the large holes.

Open the lid of the device and place the Vapor Bee product inside with one of the two large surfaces resting firmly on the resistor and its entire length. A small gap should be left open after the resistor for the vapor to pass through.

You can use the special grabber that comes with the device to avoid getting dirty. Do not press hard on the VPs because you will cause the fluid to seep out.

Close the lid and proceed to preheating the device.

**CAUTION! Never place the VPs on a hot resistor; you may cause the materials to ignite. The heating should start after the VPs are resting on the resistor for the extinguishing materials to work.**

### A2. Vape preheating with VPs

Wait for 10-20'' for the resistor and the materials to heat up for the first time.

Start blowing slowly and steadily until you see a satisfactory amount of vapor coming out of the nozzle.

You are ready to start inspecting your beehives.

### A3. While vaping with VPs

The device will continue to produce vapor until the battery, or the vaping material runs out.

The VPs are designed to last for 90-180' and if the battery runs out you can connect the next one without removing the VPs.

**Important! Do not place more than one VP in the device.**

**CAUTION! Do not shake the device violently. If you want the VPs to have a better connection with the resistor, open the lid and press gently with the grabber.**

**CAUTION! When removing the grabber from the fire chamber, ensure that there are no hot residues on it. If there are, tap the grabber on the interior of the fire chamber and remove it only when you are sure it is free of hot or burning particles.**

#### A4. Renewal of VP vaping material

If the Vapor Pads stop producing vapor even though the battery is charged, this means that the **Vapor Pad** is no longer able to produce vapor and must be renewed.

Allow the device to cool down (5-10' depending on the ambient temperature and the batteries you are using).

After ensuring that the device has cooled down, open the lid of the fire chamber, once again check that there is no heat source inside and after making sure that there is no heat – with the help of the grabber that comes with the device – carefully empty the contents into an empty metal container that does not contain residues of flammable materials and leave there until it has cooled down completely. You can speed up the cooling with a little water.

Check the condition of the resistor, the fire chamber, and the battery and if necessary take the necessary action (see device preparation).

Renew the material and start using.

#### A5. After using the Vapor pads

Disconnect the battery adapter from the resistor adapter.

Allow the smoker to rest on a horizontal fireproof surface.

The device will stop producing vapor in 1-2' and will completely turn off in 5-10'.

Ensure that the device has turned off completely and is cold.

Open the lid and make sure that there are no vapor particles inside.

Open the lid, remove the VP with the grabber and place it in a metal fireproof container.

Turn the device upside down with the lid open to remove any moisture residues (moisture may be created inside the device especially in damp and cold climates) or liquids that seeped out after excessive pressure when placing the Vapor Pad on the resistor.

The **Vapor Pad** materials are stated on their packaging, please recycle properly.

Proceed to the chapter on Transfer-Storage.

### B. Use for vapor production with the hybrid vaping material - Cool Smoke:

#### Prerequisites:

- **Purchase the appropriate battery according to the battery selection table**
- **Purchase the hybrid vaping material - Cool Smoke, ref...AN1040CS**

#### B1. Filling with Cool Smoke

**Ensure that the battery is disconnected.**

**Ensure that the resistor is cold and clean.**

**Ensure that the device is cold.**

**Ensure that the grate with the small holes is beneath the resistor and on top of the grate with the large holes.**

Open the lid of the device and place enough Cool Smoke inside to cover the resistor at a maximum depth of 2-3 cm (200-300gr), the quantity corresponds to a measuring cup (comes in the CS package).

Close the lid and proceed to preheating the device.

**CAUTION! Never place the Cool Smoke on a hot resistor. The heating should start after the CS is resting on the resistor for the extinguishing materials to work.**

#### B2. Smoking preheating:

Connect the battery adapter to the resistor adapter and wait 1-5' depending on the battery you are using.

Start blowing slowly and steadily until you see a satisfactory amount of smoke coming out of the nozzle.

You are ready to start inspecting your beehives.

### B3. When smoking with Cool Smoke:

The device will continue to produce vapor until the battery, or the vaping material run out.

The recommended amount of Cool Smoke lasts for an inspection of 1-2 hours depending on the batteries you are using.

**TIP:** *Shake the device at regular intervals to shift the material around the resistor.*

### B4. Renewal of Cool Smoke material:

If there is not vapor production or the vapor being produced is yellow – even though the battery is charged – this means that Cool Smoke is no longer able to produce smoke and must be renewed.

Allow the device to cool down (5-10' depending on the ambient temperature and the batteries you are using).

After ensuring that the device has cooled down, open the lid of the fire chamber, once again check that there is no heat source inside and after making sure that there is no heat and there are no smoke particles, carefully empty the contents by turning the device upside down and keeping the lid open with a metal container that does not contain residues of flammable materials and leave there until it has cooled down completely. You can speed up their cooling with a little water.

Check the condition of the resistor, the fire chamber, and the battery and if necessary take the necessary action (see device preparation).

Renew the material and start using.

The Cool Smoke materials are stated on their packaging, please recycle properly.

### B5. After smoking with Cool Smoke:

Disconnect the battery adapter from the resistor adapter.

Allow the smoker to rest on a horizontal fireproof surface.

The device will stop producing vapor in 1-2' and will completely turn off in 5-10'.

Ensure that the device has turned off completely and is cold.

Open the lid and make sure that there are no vapor particles inside.

Holding the lid open, turn the device upside down and empty the CS residues into a metal fireproof container.

The **Cool Smoke** materials are stated on their packaging, please recycle properly.

Proceed to the chapter on Transfer-Storage.

## C. Use with conventional smoking materials (pine needles, etc.)

When using conventional smoking materials, the device differs with conventional smokers only with respect to the ignition of the smoking materials. In all other respects, it works like a conventional smoker and the appropriate care should be taken.

### C1. Filling with material

Open the lid.

Place the appropriate amount of burning material inside the fire chamber; the material should be dry and free of plastics, synthetics, or metals. The amount depends on how long you want to use the smoker. Make sure all the materials are in contact with the resistor.

Do not compress the materials too much as air should be able to circulate.

Close the lid.

**CAUTION!** Always place the materials, close the lid, and then heat up the resistor. On the contrary, the materials' gradual contact with the resistor may lead to a flame which can be transmitted from the materials on the resistor to the materials at the highest point of the smoker or even outside the device resulting in a fire being cause.

### C2. Ignition

Connect the battery adapter to the resistor adapter. Depending on the type of material, their moisture, and the battery type that you are using, the ignition time varies from a few seconds to a few minutes.

Start blowing slowly and steadily until you see some smoke coming out of the nozzle.

When there is sufficient smoke, disconnect the battery from the device

You are ready to use the device.



### C3. After smoking with conventional smoking materials:

Allow the smoker to rest on a horizontal fireproof surface. Ideally, block the smoker nozzle with a wet cloth or paper to stop oxygen from entering the fire chamber. The device will extinguish in 10-30'.

Ensure that the device is at room temperature before transferring or storing it away (Chapter on Transfer-Storage)

### Transfer- Storage for all uses (Vaping-Smoking):

Before transferring the device, you should make sure both the interior and exterior of the device are at ambient temperature and that there are no heat sources inside or outside the device.

When transferring and storing the device, the battery should be disconnected from the circuit. If there is a power supply, the body of the smoker may short circuit with other objects.

For greater safety, remove the battery from the Velcro strap and store it in a place where there is no chance of its adapter coming into contact with metal objects.

Your device is ready and safe for transfer.

During storage you can replace the battery to the bellow's Velcro strap; however, with the adapters must always be disconnected from the device.

Keep the device away from children.

**CAUTION! Never transfer or store the device with the battery being connected to the device**

### Maintenance-cleaning instructions

You must empty and clean the smoker after every use. Moisture can alter the burning mass which can corrode or destroy the resistor.

#### Fire chamber

Ensure that the battery is disconnected from the device.

Wait until you are sure that the device is not hot externally and internally.

Then, turn the smoker upside down with the lid open for the residue to fall out.

The device is not washed-cleaned with water. It contains electric circuits in its interior that must not come into contact with water.

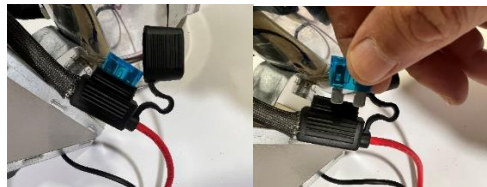
You can use a dry-damp cloth to clean its surface.

It is only natural that the resistor will acquire a dark-black color from the burning process.

In order for the resistor to transfer the appropriate temperature to the materials being used it must be clean. Use a metal brush or a piece of wood and rub gently without pressing hard on its surface.

If smoker fuel pieces are stuck on the resistor, try following the device preparation instructions before trying to detach them as it is likely that the pieces will detach on their own. If there is a large piece that must be removed for the fuel materials to rest on the resistor, be very careful not to use a metal object other than the metal brush, as this may damage the resistor.

**Fuse replacement:** The electric circuit is protected against a short circuit with a 15 A fuse. If the battery is charged, but after connecting the resistor the latter does not activate, disconnect the battery from the resistor and check the condition of the resistor by opening the lid of the fuse box (9). If necessary, replace the fuse. If the problem continues, contact ANEL or the reseller.



## Instructions for safe use

- The body of the smoker (2) and its base, the lid (3) and the point where the resistor enters the fire chamber (6) are extremely hot, do not come in contact with these parts without protection.
- When the device is hot only touch the bottom or the lid from the special handles and even then check the temperature levels first.
- Always wear heat resistant gloves during use (leather beekeeping gloves are suitable).
- The CS and VPs are designed to work safely when the smoker is in a horizontal to 45° angle in the forward position. Do not tilt the device beyond this angle, either forward or backward, as very hot particles may fall out of the air inlet or the nozzle.
- Do not place more Cool Smoke or Vapor Pads in the fire chamber than is recommended. The excess amount blocks the smoke while there is a risk of overheating and exceeding the safety limit of the materials' non-flammable characteristic resulting in pyrolysis and instantaneous flame that may cause a fire.
- The device and materials have undergone extensive safety tests with absolute success. Nevertheless, consideration must be given to the possibility of the device being exposed to unforeseen conditions (unintentional contact with flammable materials, e.g., gasoline, etc.). If a flame appears for any reason, place the smoker on a horizontal fireproof surface without pressing the bellow. To extinguish the flame faster, cover the nozzle (e.g., with wet paper or cloth). The smoker will put itself out in 5-30 minutes.
- Avoid bringing metal into contact with the battery or charger terminals. You will cause irreparable damage to the charger, and you may destroy the batteries.
- The vapor-smoke residues are very hot and can cause burns or a fire when they come into contact with flammable materials. Avoid any contact with body parts or flammable materials until they have cooled down.
- Use suitable batteries only. Batteries with different characteristics may destroy the resistor, the circuits, and the smoker and/or exceed temperature safety levels resulting in a flame or fire. Smaller batteries will produce insignificant or no smoke.
- When in operation, the resistor is extremely sensitive. Do not apply powerful force as you will damage it.
- The resistor reaches high temperatures and there is the risk of severe burns; therefore, avoid any contact with body parts or flammable materials when it is hot.
- If you notice bare - damaged wires in the circuit of the charger or device, do not use them and return them for repair to the reseller, or to ANEL.
- Always use the suitable chargers with the appropriate adapters. Unsuitable chargers may destroy your battery or not charge properly.
- In the event that you have followed the preparation instructions (battery charging and testing, resistor operation), but vapor-smoke is not produced, contact the ANEL's technical support department or your reseller.
- The device is not waterproof; it is not allowed to come into contact with water. If it gets wet, blow with compressed air in all places, open the fuse box, remove the fuse, and blow there too. Operate the device again only when you are absolutely sure that all its parts are dry. There is danger of a short circuit.
- The device, batteries and charger are not manufactured to withstand falls and collisions. A fall or collision may destroy parts or all the device and accessories, therefore handle it with care.
- If a problem arose from a fall or collision to the device, batteries, or the charger.
- Batteries are attached to the smoker with a Velcro strap. If the Velcro is damaged or worn, the battery may not secure well and detach from the device and hang from the adapter, thus establishing the device unsafe. If the Velcro of the battery casing is worn, contact the reseller or ANEL for a new one.
- The device has points that may injure you if you use it with bare hands. Always use beekeeping gloves when handling the device.
- The batteries must be charged in a controlled environment because the event of material failure, over voltage, etc.; there is a risk of self-ignition and fire and the risk of burning materials being displaced. When charging these batteries place them on a fireproof surface.



## Safety information

To prevent any injury to yourself or others and to not damage your device, read the information that follows before using the device.

**Warning: Prevent electric shock, fire, and explosion.**

**Do not use power cable or adapters that are damaged, or loose electrical sockets.**

**Do not touch power cables with wet hands and do not disconnect the charger by pulling the cord.**

**Do not bend or damage the power cable. Do not short circuit the charger or battery.**

**Do not expose the charger or battery to falls or collisions.**

**Do not charge the battery with chargers that have not been approved by the manufacturer.**

**Do not use your device while it is charging and do not touch your device with wet hands.**

**Do not use your device during a thunderstorm.**

The device may malfunction and there is a high risk of electric shock.

**Do not use a Lithium Ion (Li-Ion) battery that has been damaged or is leaking.**

To safely discard lithium-ion batteries, contact the closest authorized repair center.

**Use and discard batteries and chargers with caution.**

- Only use batteries that have been approved by the manufacturer and chargers that have been specifically designed for your device. Incompatible batteries and chargers may severely damage your device.
- Do not throw batteries or devices in fire. Apply all the local rules when discarding used batteries or devices.
- Never place batteries or devices on or in heating appliances, such as microwave ovens, electric cook tops or radiators. Batteries may explode if they overheat.
- Do not break open or puncture holes in batteries. Do not expose batteries to high exterior pressure because this may result in an internal short circuit and overheating.

### Safety information

For your own safety please read the following information before using the device.

#### **CAUTION:**

**THIS DEVICE IS NOT A TOY AND CHILDREN MUST BE SUPERVISED SO THAT THEY DO NOT PLAY WITH THIS DEVICE.**

- If you would like to clean the exterior of the smoker, do so after removing it from the power socket.
- Do not place in water; clean it using a dry or damp cloth. NOT A WET CLOTH.
- **WARNING:** Do not use chlorinated detergents (bleach, etc.) or toxic products for cleaning.

CAUTION: If the cable is damaged or destroyed, do not attempt to start the device or to repair the cable. Contact the reseller or the manufacturer.

#### **Protect the device, batteries, and chargers from damage**

- Avoid exposing the device and the batteries to extremely low or extremely high temperatures.
- Extreme temperatures can harm the device and lower the chargeability and life span of the device and batteries.
- Avoid bringing batteries into contact with metal objects because this can cause a connection between the + and - terminals and lead to temporary or permanent battery damage.
- Do not use a damaged charger or battery.

Protection from external environmental conditions.

- Do use the device during rain or in a wet environment.
- The charger has an IP 20 protection rating.
- The rest of the device does not have any protection against the ingress of water and solid or dust, IP 00.

If the device is used outdoors, then protection measures need to be taken against the ingress of water and solid or dust.

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