

User Manual: Power-VACC/ Power-VACC Pro



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Power-VACC and Power-VACC Pro User Manual

This user manual is part of the Power-VACC and Power-VACC Pro device and an important part of the safe usage concept.



- Read the user manual carefully and follow the instructions –

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Explanation packaging symbols

eIFU:



This symbol indicates that a digital instruction manual is available for this this syringe. The digital instruction manual can be found under the following link: www.henkesasswolf.de/manuals/power-vacc/ or by scanning the QR code shown on the right side.



Recycling codes:

The recycling codes provide information about the material used and can be helpful for waste separation.



The letter abbreviation PAP identifies cardboard and paper.
PAP 21= Other cardboard



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1. About this User Manual

While reading the user manual you will see that it includes warning signs, to alert you to risks arising from incorrect usage of the product that could result in death, injuries or material damage. Always take careful note of these warnings! The warning signs are highlighted as shown on the right.



2. Transport and storage

Protect the product against external forces (e.g. impacts, shocks and knocks) at all times, including during transport.

Check the Power-VACC/ Power-VACC Pro for any transport damage before use.

Transport and/or store the Power-VACC / Power-VACC Pro in its original packing.

Store the Power-VACC/ Power-VACC Pro so that it is protected from sunlight.

In case of storage for longer than 12 months, follow the steps in this user manual (see Troubleshooting chapter) to start-up the device.

To avoid deep discharge of the battery, it should be fully charged once every 6 months.

Do not store the batteries at temperatures lower than 5°C.

Never store the Power-VACC/ Power-VACC Pro in a wet or humid condition (e.g. directly after cleaning).

3. General safety advice for operating and cleaning

-  Direct contact between the vaccine and/or rinsing fluid and the eyes and/or respiratory tract of the operator can be harmful. In these cases, seek immediate medical advice and show the vaccine information sheet.
-  Use the Power-VACC/ Power-VACC Pro for injecting **animals only**.
-  Keep children out of the operating area.
-  **Do not immerse the Power-VACC/ Power-VACC Pro in any liquid.**
-  **Do not autoclave the Power-VACC/ Power-VACC Pro.**
-  **Do not sterilize the Power-VACC/ Power-VACC in an UV box, nor any other sterilization device (i.e. EO-sterilization or gamma radiation).**
-  Do **not** point the **Power-VACC/ Power-VACC Pro** towards any part of your body or towards other people! In case of accidental injection of vaccine and/or rinsing fluid, seek immediate medical advice and show the vaccine information sheet.
-  Beware of the spike in the bottle holder. It is very sharp and may contain residues of the vaccine and/or rinsing fluid. In case of a spike wound, seek immediate medical advice and show the vaccine information sheet.
-  Wear safety goggles and a mask when using the Power-VACC/ Power-VACC Pro. Ensure goggles are clean for optimal vision.
-  Wear rubber gloves when cleaning the Power-VACC/ Power-VACC Pro.
-  Do not throw the battery into water. Protect the battery from water and humidity, which could cause it to leak and release hazardous substances.
-  Do not throw the battery into fire, nor heat the battery. It may explode and/or release hazardous substances.

- ⚠ Do not expose the battery to temperatures higher than 60°C. It may explode and/or release hazardous substances.
- ⚠ Only veterinary practitioners or operators / farmers instructed by an Power-VACC/ Power-VACC Pro user are permitted to work with the Power-VACC/ Power-VACC Pro.
- ⚠ Dropping the device while it is loaded with liquid may cause an unintended release and irreparably damage the device.
- ⚠ To prevent leakage, reduce the pressure inside the bottles by piercing them with a sterile needle prior to mounting a bottle on the device. Hold the Power-VACC/ Power-VACC Pro upside down when mounting a new bottle.
- ⚠ When expelling residual vaccine or rinsing fluid from the device, always position the needle into a bottle. Never inject into the air.
- ⚠ Operating the Power-VACC/ Power-VACC Pro for a longer period of time may induce cramps in the operator's hands. Regular breaks are recommended.

4. General description and information

4.1 Description

Power-VACC/ Power-VACC Pro provide an advanced solution for precise and efficient vaccine administration in veterinary medicine, including intradermal, subcutaneous, intramuscular, and nasal applications. The devices are robust, waterproof (IP56), enable quick injections, and offer comprehensive documentation via an app or an integrated display (Pro version only).

4.2 Packaging contents

Depending on the version of the device ordered, certain accessories may not be included in the delivery.

- Power-VACC/ Power-VACC Pro (1)
- Three Batteries (with safety caps) incl. Battery Charger and Mini-USB cable (2)
- Universal bottle collar Ø20mm (3)
- Universal bottle collar Ø30mm (4)
- Tubing adaptor (5)
- Tubing (6)
- Basket + Spare O-ring for 5ml and 2ml (7)
- 250ml bottle (8)
- Basket adapter (9)
- 2/5 ml cylinder incl. piston (10)



4.3 Operating requirements

Please read the user manual carefully before first use.

4.4 Target species

The Power-VACC and Power-VACC Pro are suitable for a wide range of animals, including livestock, pets, and wildlife. They are ideal for routine vaccinations, disease prevention campaigns, and individual treatments, offering versatility for intradermal, subcutaneous, intramuscular and nasal applications.

4.5 Mode of action

Power-VACC and Power-VACC Pro have a piston with o-ring (8) and cylinder (6) with a connection for bottles (2) equipped with a draw-off spike, on which bottles can be mounted with different adapters. The cylinder can be positioned in different directions by opening the nut (7). Also it is exchangeable. Vaccination takes place through a needle when a needle is mounted to the Luer-Lock connection (1).

The Power-VACC has a Foil keyboard (5) with three buttons on the backside of the device which allows to change the volume of injection or change the mode of the device.

The Power-VACC Pro has a display (9) which shows several information and functions to choose from. The two buttons underneath the screen (9) operate its display.

Power-VACC and Power-VACC Pro come with three batteries and a battery charger (depending on your version ordered). Before use, insert the charged batteries into the battery slot (4) of the device.

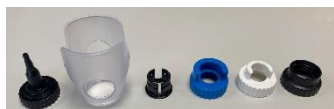
Operation of the Power-VACC and Power-VACC Pro begins with inserting a bottle of vaccine into the bottle holder (2) and pushing the trigger (3) to activate the injector. This will start the pump and vaccine is automatically drawn out of the bottle. The fluid, which is present inside the cylinder (6), is pumped out via the injection head.



Part	Description
1	Luer-Lock Connection
2	Adapter Connection
3	Trigger
4	Battery slot
5	Foil keyboard (Power Vacc)
6	Cylinder
7	Nut
8	O-Ring and piston
9	Display with buttons (Power Vacc Pro)

5 Bottle connection / disconnection

Prior to inserting the battery, connect a bottle (vial) of vaccine or rinsing fluid (see chapter 9 “Device Cleaning”) to the device by following these steps:



Depending on your needs use one of the supplied adapters.
Caution: The spike is very sharp as it has to puncture the bottle bungs of the vaccine bottles. Please avoid unintended contact with the tip of the spike.



Depending on the diameter and height of the bottle you can use a different collar to connect with the bottle as shown on the picture.



Pre-puncture the stopper of the vaccine bottle centrally with a sterile needle to avoid rubber particles being drawn into the spike of the vaccination device and eliminate the overpressure inside the bottle. Place the injector on a solid surface and push the bottle onto the spike using the pre-punctured hole.

CAUTION: Without pre-puncturing of the bottle stopper, rubber particles may be drawn into the device, leading to potential dysfunction by blocked valves and / or nozzle.



Connect the bottle to the device by screwing the collar onto the thread (clockwise) until it is tight. Please make sure to screw only the white collar, not the bottle itself. After completion of this step, check if the bottle sits tightly.



If using the tubing collar to connect a larger bottle via tubing, **prefill the tubing (!)** prior to attaching it to the tubing collar. Prefilling the tubing can help to prevent the formation of air bubbles in the system. The tubing adaptor for the bottle is not included in the Power Injector packaging.

When the tube starts to fill, kink the tube just before the end to prevent loss of vaccine. Then quickly connect the tubing to the adapter.



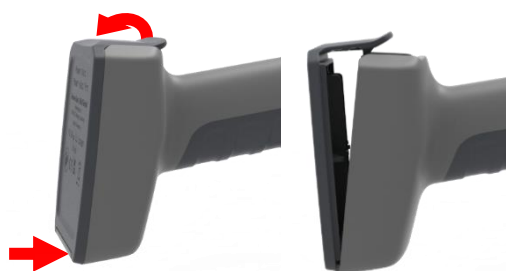


Attach the Click-in Bottle Mount to the bottle mount spike and fixate it with the basket by screwing it to the bottle attachment.

Turn the injector back into an upright position. Insert the batteries at the bottom of the handle. This step will activate the device (see next chapter).

To disconnect a bottle from the device, proceed in the reverse order. Always make sure to have the draw-off spike of the device pointing downwards when connecting or disconnecting a bottle. Otherwise, vaccine will be spilled over the device while a bottle is being connected to or disconnected from the bottle mount.

6 Device Start



Open the Battery slot.

First push at the edge of the battery cover in the direction of the arrow and then lift it up as shown in the second picture.



Insert the batteries in the right direction (pay attention to + and -). Before inserting the batteries, check them for mechanical damage. If any damage is obvious dispose of them properly. Make sure to use the correct battery model. **Please use 18650 Li-Ion PCB protected rechargeable 3,6/3,7V Batteries with a min. capacity of 2600mAh and min. continuous discharge current of 5,2A** to ensure full functionality according to the product's specifications.



Close the battery slot with the cover properly.

First place the small nipples of the cover into the holes of the device (1) and then snap the cover into position (2).

Make sure that the cover of the batteries is in the correct position to ensure you have a sealed device.

7 Description for the Power-VACC

If you have a Power-VACC Pro you can proceed to Page 12



Button	Description
1	Changing the Mode
2	Reducing the volume
3	Increasing the volume
4	Status of Mode
5	Battery level

Colours of Mode	Description
Blue	Priming Mode:
Green	Vaccination Mode
Violet	Changing Volume Mode
White	Rinsing Mode
Orange	Multi Dose Mode
Red blinking	Motor overheat (let the device cool down)

Colours of Battery	Description
Red blinking	Battery empty
Red	<20%
Orange	<60%
green	>60%

7.1 Starting up and priming of the Power-VACC



When the batteries are inserted correctly (right direction), the Mode on the Power-VACC Foil will show a blue LED. Make sure you have attached a bottle with injectable.

If you want to start the device first press the trigger button. The device will move the piston forward to the end position and to the start position (This is necessary to make a reference drive for the motor).



If you want to start to prime the device, first press the trigger button. The device will move the piston forward to the end position (This is necessary to make a reference drive for the motor). When pressing the trigger button again, the piston will move to 20% of the volume for easier priming of the cylinder. Press again and the device will start to prime the device. Check if all air bubbles were removed from the cylinder.



To proceed to the vaccination mode press the P button. The piston will move to the preset volume setting. You could start now with vaccination. The LED will show green for vaccination.

7.2 Changing Volume of the Power-VACC



Press the – or + button and the device will switch into the volume changing mode (violet).

For 2ml version pressing – or + will change the volume in 0,05ml steps. When holding the button it will move in 0,1ml steps.

For the 5ml version the change of the volume will be always 0,1ml.

Please see on the left side some examples of set volumes for the 2ml version how to read the set volume.

0.50 ml
1.00 ml

The edge of the piston will indicate the set volume not the red o-ring.

For the 5ml version the principle is the same. Please see the 1ml example for 5ml.

When you are in the volume changing mode every click changes the volume also when the plunger is not moving. Recheck the correct volume adjustments after the volume change via scale or single use syringe.

Press the trigger and you will come to the vaccination mode



7.3 Activation of the haptic feedback

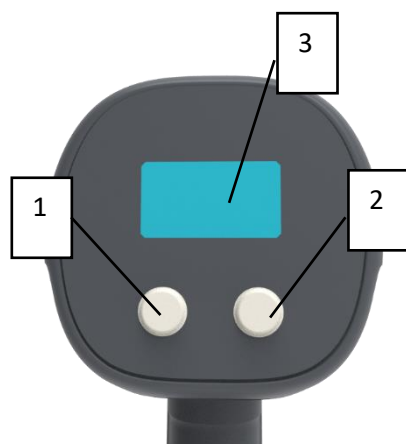


For activation of the haptic feedback press the P button and the + button simultaneously for one second. Now after every vaccination there will be a short vibration indicating the full administration of the dose.

For deactivation of this function press the P button and the + button simultaneously for one second.

8 Description of the Power-VACC Pro

If you have a Power-VACC please go back to Page 8



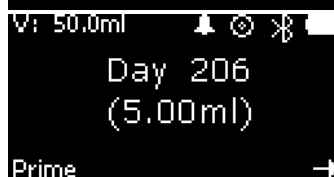
Description	
1	Left Button
2	Right button
3	Display



When the batteries are inserted correctly (right direction), the display will show the HSW Logo and afterwards the prime screen. Make sure you have attached a bottle with injectable.



If you want to start to prime the device first press the trigger button. The device will move the piston forward to the end position and to the start position (This is necessary to make a reference drive for the motor).

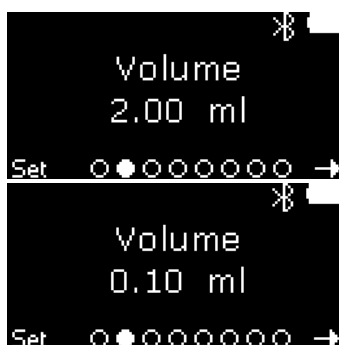


Your device is ready for usage.



To proceed to the menu pages push the right button. To get back to the home screen you must navigate through the menu pages by pushing the right button.

The dots at the bottom of the screen indicate the current menu page. On the first page of the user menu, the Day Counter is shown. To reset this day counter, push and hold the left display button for two (2) seconds.



On the second page, the volume can be adjusted. The currently set volume is shown in the center.

Push the left display button to choose the desired volume. When the device is set to a 2ml version the steps of changing the volume are 0,05ml. For the 5ml version it will be 0,1ml.

When the desired volume is set just press the trigger and the device will change the movement of the plunger.

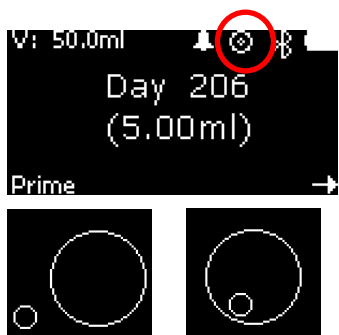


On the third page, the Vial Level Indicator can be controlled. This indicator will give a haptic warning (via the haptic motor and in the display there will be a warning to check the vial) once you have 2 doses left inside the connected bottle. This allows for a better overview on when to change a bottle during the vaccination session. To activate the vial level indicator, choose the size of the bottle / canister you want to mount by pushing the left display button (0ml, 20-50ml (intervals of 5), 50-500ml (intervals of 50) and 500-5000ml (intervals of 500). All bottle sizes above 200ml ideally are connected via tubing.

For resetting the vial counter hold the device upside down for min. 5 seconds and the position sensor will detect the change of the bottle.

CAUTION: The vial level indicator is a simple counter that needs to be set up according to the bottle size mounted to the device. It counts backwards from the set volume to zero, the current counter reading is shown in the top left of the display.

On the fourth page, the Position Sensor can be controlled. Push the left display button to disable (Off) or enable (On) the position sensor. Recommended setting is "Position Sensor On". (Disabling is only recommended when using the tubing adaptor supplied with the device and having vaccine delivered via tubing.)



This sensor allows for continuous control of the correct holding position of the device (see picture on the left). Once the injection is done and before allowing liquid to be drawn into the device the position sensor will check if it is held upright in order to avoid drawing in air.

If the device is held in the correct angle (see picture on the left), which is indicated by the small circle being inside the big circle, liquid from the attached bottle will be drawn in.



On the fifth page, the haptic feedback can be controlled. Push the left display button to disable (Off) or enable (On) the haptic feedback which will confirm the injection.

On the sixth page, the volume of the mounted cylinder can be changed. Depending on the mounted cylinder choose 2ml or 5ml by pushing the left display button for min. (4) four seconds. After the change of the cylinder setting the device needs to do a reference drive. Press the trigger and the piston will move to the end position and then to the starting position. Make sure to change the cylinder and piston of the device.

The seventh page shows the Total Counter, which counts the total number of injections. This counter cannot be reset as it is a key indicator for the age of the device.

The eighth page the Dose Mode can be controlled, Push the left display button to switch between single or multi dose mode. More information please see chapter 12 Multi Dose Mode/ Single Dose Mode.

On the last page, the serial number e.g. 4500000 and the software version is shown. Push the right display button to return to the "Settings" page of the user menu. Push the right display button again to reach the home screen of the user menu.

If the device is used within some special cases (a small needle, high volume 5ml and more than 500 injections in a row) it could be that the motor gets too hot. The system recognizes this and lets the motor cool down to a temperature where the motor will not get damaged.

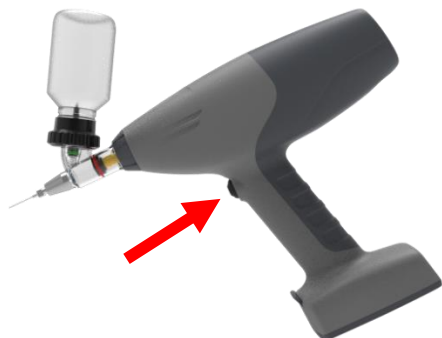
9 To fit the needle



Attention:For your safety: Leave the protective cover (only on disposable needles) on the needle until ready for use. Insert needle onto Luer Lock fitting and secure the needle clockwise. Disconnect the needle twisting the opposite way.

10 Injection of the injectable

Before starting the injection make sure you have connected a bottle of injectable and all air is removed from the cylinder before starting the injection.



When the cannula is inside the animal press the trigger for injection.

11 Prime-Mode

When the device is initialized and you choose the prime mode in the menu you will have a different option for the priming. This option helps you to get the air out “saving” some injectable.



To remove air from the cylinder when there is only a little air in the cylinder (see picture), press the mode button (P) or press the left button to enter the priming mode.



If you hold the device when the needle pointing upwards, the plunger will move only in small steps by pressing the trigger button. When all air is out hold the device in a normal position and press the mode button (P) or finish and you will come back to the vaccination mode.



Or when holding the device in that position the plunger will move to a position half of the cylinder.

From that point the plunger will move forward and backward by pressing the trigger till all air is out of the cylinder.

When finished press (P) or the left button to finish the prime mode.

Fast movements help to remove the air bubbles.

12 Multi Dose Mode/ Single Dose Mode

The Power-VACC / Power-VACC Pro provides two configurable injection modes depending on the desired workflow and the selected injection volume:

The Single Dose Mode, the device draws **only the selected volume** from the mounted cylinder for **each injection**, and refills the cylinder immediately after every injection.

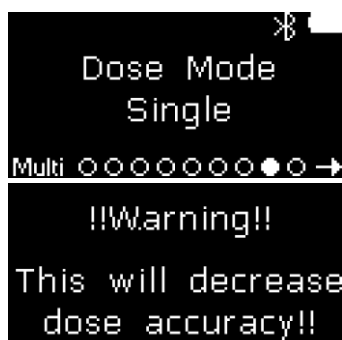
- This mode is suited for applications requiring high precision and frequent substance changes.
- Refilling occurs after every injection, regardless of the total cylinder capacity.

The Multi Dose Mode, the device draws the selected volume per injection but **continues injecting without refilling** until the entire cylinder volume is used.

- The system automatically tracks how much volume remains and refills only when the cylinder is fully emptied.
- This mode is ideal for serial or mass applications using the same substance.

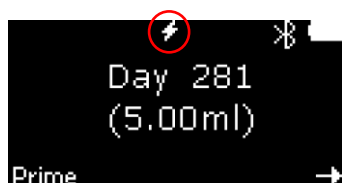
12.1 Activation of the Multi Dose Mode for the Power-VACC Pro

To activate the Multi Dose Mode on the Power-VACC Pro:



For activating the Multi Dose Mode press the left button for two second. After that a Warning screen will appear, see below.

When changing between the modes there is the message that this will decrease the dose accuracy slightly.



The small lighting symbol (circled red) shows that the Multi Dose Mode is activated.

12.2 Activation of the Multi Dose Mode for the Power-VACC

Mode selection is **only possible via the HSW Connect App**. The setting must be configured before use and cannot be changed from the device itself. Please check the App, connect your device and go to Device settings. Change there the Dose Mode and the needed dosage.

When the Multi Dose Mode is activated the LED shows an orange light. Changing the Volume in this mode is only possible via the App. When pressing the + or - Button at the device you will automatically switch back to the Single Dose Mode.

13 Turn off the device

The device will go to a standby mode after 1 hour of not using. To wake up the device just press the trigger button.

- ⚠ This standby mode still consumes some battery and we recommend to always make sure after usage to remove the batteries from the device.



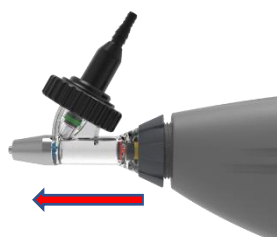
Open the battery slot and take out all batteries and the device will be switched off.

14 Positioning the cylinder

If you want to use the injector with a different positioning of the cylinder this will be possible with a small adjustment.



Unscrew the nut counterclockwise while holding the cylinder.



Once loose, you can adjust the barrel position as required. To tighten, hold the barrel in position and tighten the barrel collar.



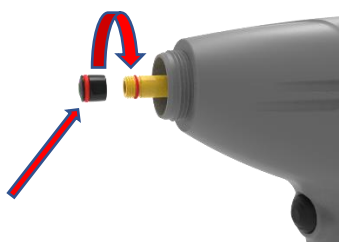
- ⚠ Important! When using the syringe as a bottle mount the spike and bottle must always face upwards. With a draw off set up, the tubing collar can be upward or downward facing.

15 Changing cylinder and piston

If you want to change the volume of the device you can exchange the cylinder and piston of your device. Please follow carefully the steps below.

 Remove the batteries from the device

Remove the mounted cylinder by turning the nut till it is free moving and then pull the cylinder from the piston.



Hold the piston tip and turn it counterclockwise to release it.



Take the other piston and mount it clockwise onto the thread hand tight.

 Don't mount it with a tool.



Lubricate the O-ring and then mount the new cylinder.



Make sure to change the cylinder setting in the menu. Press the left button till the device does an automatic restart. Your device is now set to a new volume. For the Power-VACC you need to use the App to tell that it is a different cylinder. This is necessary for the reference of the motor.

16 Device Cleaning

16.1 Rinsing

- ⚠ The cleaning procedure mentioned hereafter should be carried out **directly** after **each** vaccination session.



To clean the fluid path (Spike, inlet valve, cylinder, plunger and outlet valve), mount a bottle of Isopropanol or soap solution to the device and set the volume to the highest volume and do 10-20 rinsing cycles to remove all residues by pressing the trigger.

For the Power-VACC press the – and + button at the same time for 2 seconds for the rinsing mode. The device will set the volume to the highest possible and will rinse the device 10 times automatically. You can cancel the process by clicking the P button.

For the Power-VACC Pro press both display buttons at the same time for 2 seconds for the cleaning mode. The device will set the volume to the highest possible and will rinse the device 10 times automatically or you can cancel the process by clicking the left button.

16.2 Cleaning of the device

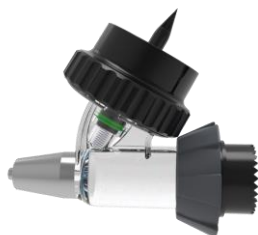
- ⚠ Prior to cleaning your device, **remove the battery (!)** at the bottom of the handle.
- ⚠ For the cleaning of the device, remove the used bottle / tubing adapter.
- ⚠ The below mentioned cleaning procedure should be carried out after **each** vaccination session.
- ⚠ The device is **splash water resistant** according to IP protection class 56. **Do not immerse the device in any liquid.**
- ⚠ Don't use high pressure / steam cleaning devices to clean the device.



When **cylinder is mounted** and the **battery slot is closed** you can clean the device under running water.



- ⚠ Please let the cylinder mounted for the cleaning, because without the cylinder, liquid could enter via the plunger opening and will destroy the electronic.



Dismount the cylinder from the device. Suspend the cylinder including the valves and nozzles in a container of water and boil for up to 20 minutes.

16.3 Membrane for Cleaning of the device

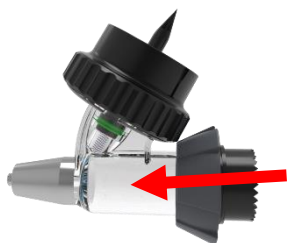
 Don't peel the Membrane of the device, this will lead to an unsealed device.

Water and wind are not let through, but air and moisture vapor are. This film is definitely breathable for inside the device to the outside.

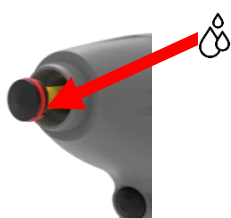


17 Maintenance

Attention! If you detect that the syringe draws air after the described cleaning, it is possible that a valve is stuck in the front metal attachment. The valve can be released by knocking slightly the front of the syringe against an object, e.g., the edge of a table, and afterwards rinsing the syringe with warm water.



Remove plastic barrel from the handle by turning the nut. Lubricate piston and inside the barrel with 100% pure oil, cold squeezed or equivalent vegetable oil.



Do not use mineral oil, silicone, WD-40, glycerine or alcohol. Petroleum based products harden the piston



After every 10.000 Injection we recommend to exchange the O-Ring from the piston. Depending on your injectable this could be also possible at an earlier stage.

Order number 2ml O-Ring: 3602030080

Order number 5ml O-ring: 3605030080

18 Spare Parts

HSW Cat. No.	Description	Picture
8300064001	Front part 2 ml, we recommend to exchange after every 25.000 injections	
8300064078	Front part 5 ml, we recommend to exchange after every 25.000 injections	
8300063576	Piston 2ml	
8300063583	Piston 5ml	
3602030080	O-Ring 2ml, we recommend to exchange after every 10.000 injections	
3605030080	O-Ring 5ml, we recommend to exchange after every 10.000 injections	
81402799	Basket	
8300056118	Snap bottle holder for spike	
8300034708	Bottle Mount Rubber Disc (standard)	
8300061637	Bottle Mount Rubber Disc XXL (for continuous use with threaded PET bottles)	
3600203033	Set Draw-Off-Caps Ø20 + 30 + 33 mm (for connection of tubing with vial)	
8300016988	Threaded Bottle Adapter for Standard PET Threads	
8300019267	PET bottle 250ml (w/o cap)	
8300017876	PET bottle cap (white screw cap)	
8300024134	Universal bottle adapter 20mm	
8300024136	Universal bottle adapter 30mm	

8300035585	Tube connection for spike	
8300063836	Charger incl. cabel	
8300064460	Li-Ion-Akku 18650-2600mAh PCB protected	
8300063992	Battery cover	
8300036437	Silicone vent valve	
8300063958	pressure compensation element	

19 HSW Connect App

The HSW Connect app allows users to customize smart vaccination devices, manage relevant device data and reports, access support and updates, and check functionality through on-demand diagnostics.

QR Codes:



The HSW Connect App has four major functionalities:

1. Customization and Control:
 - Customization of device settings based on needs and preferences
 - Display of sensor values and adjustment of settings (depending on the device)
2. Data Management and Reporting:
 - Transmission and management of device data (e.g., number of vaccinated animals, doses administered, vaccine used)
 - Creation and export of transparent reports via email
3. Diagnostics and Maintenance:
 - On-demand self-diagnosis to check device functionality
 - Remote software updates for the device
4. Support and Documentation:
 - Direct access to user manuals and support
 - Direct service contact option

To learn more on what sort of failure occurred, download the HSW Connect App for iOS or Android. Run a self-diagnosis by starting the App, connecting the App to your device and thereafter pushing the button "Run diagnosis" in the App.

20 Battery charging

Battery

Please use a 18650 Li-Ion PCB protected rechargeable 3,6/3,7V 18650 Li-Ion PCB protected rechargeable 3,6/3,7V Batteries with a min. capacity of 2600mAh max. continuous discharge current of min. 5,2A to make sure you reach the product specifications.

Recommendation:

- Keppower 18650 Akku 2600mAh (P1826J)

Alternative:

- Keppower 18650 Akku 3400mAh (P1834C)
- Keppower 18650 Akku 4000mAh (P1840C)
- Panasonic NCR18650 PF 2900 mAh PCB Protected
- XTAR 18650 3500 mAh protected (XT18650-3500)

The batteries of the Power Injector are rechargeable Lithium Ion (Li-Ion) batteries. The battery should be slotted into the opening in the base of the Power Injector:

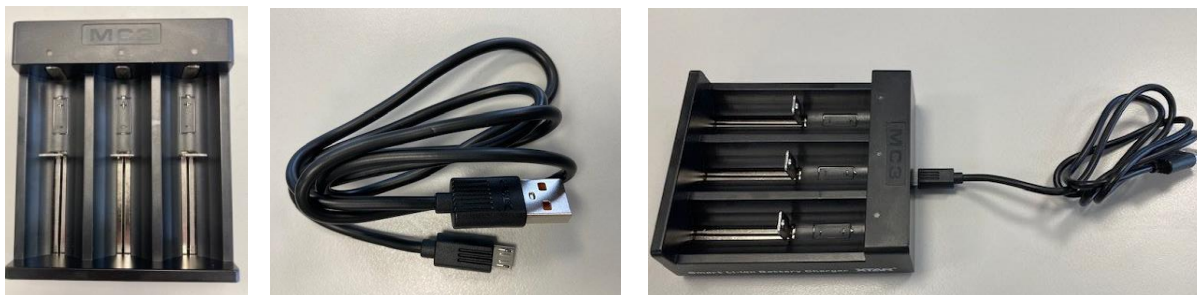


The cover will hold the batteries in position.

- Use only appropriate batteries. The use of other batteries can lead to injuries and fire hazard.
- Do not expose the battery to mechanical shocks.
- Stop using the battery if it becomes abnormally hot, or if discoloration, deformation or abnormal conditions are detected during use, charge or storage.
- Replace the battery when its running time between charges becomes much shorter than usual.
- It is recommended that batteries are not recharged before falling below 50% loading capacity.
- Never store empty batteries as this could damage them and make them unusable.
- Never send/ ship defective batteries to any destination. Instead, please dispose of them correctly.

Charger

Charge the battery using only the charger supplied. Connect the battery to the charger and connect the charger to an USB electric socket. When connected correctly, the charging process will start automatically (see pictures).



- Check the charger regularly for damage, especially the connection cable and the housing. Do not use damaged battery chargers.
- Always grasp the plug, not the cable, when removing the mains plug from the socket.
- Faulty electrical installation or too high mains voltage can lead to electric shock. Only connect the battery charger to an easily accessible socket, so that you can quickly disconnect it from the power supply in the event of fault.
- If you charge the battery improperly, the battery, battery charger and the Power Injector may be damaged. Charge the battery at an ambient temperature between 0°C and 45°C.



LED lights red:
Battery is empty and charging.



LED lights green:
Battery is fully charged.

- The battery charger is not waterproof!
- Operate the battery charger indoors only!

21 Troubleshooting

Prior to sending a device for repair, always try the below mentioned steps in case of any technical issues with your device. In addition, the FAQ section in the HSW Connect App provides answers to the most commonly asked questions.

Problem	Cause	Solution
Air detection.	- Incorrect handling of the device - tilting the device directly after initiating the loading procedure of a new dose. - Generally deactivated position sensor (e.g. after use with tubing adapter). - Bottle change. - Air in the tube –only with tube application. - Cleaning – if the device is not cleaned thoroughly, the spring/valve can become dirty and cause air to enter the system through the front valve - Ventilation valve is not in the correct position. - O-Ring is used too long and air can enter the system via the sealing. - Storage over longer period of time (12+ months)	Make sure the bottle is screwed on correctly The black rubber sealing is in place when using the tube adapter or the thread adapter. Check if the ventilation valve is in position Check the outlet valve and clean it with warm soapy water or use some vinegar. Check if the inlet valve is moving if this is glued to the valve seat release it with a very thin wire In general, try to point the device horizontally or slightly downwards when drawing in liquid, while pointing it upwards at a 45° angle when ejecting / rinsing liquid. If the device is pointing upwards when ejecting the liquid, removing the air will be easier as air will rise upwards.
It is not possible to unscrew the bottle adaptor from the thread of the device.	Vaccine has leaked into the thread and dried.	Try normal cleaning procedure. Do not try to loosen it with a tong / pipe wrench, because it would break the bottle holder off the device.

22 Dismantling

The Power-VACC and Power-VACC Pro device may only be dismantled by authorized service engineers. In case of unauthorized dismantling, the device will lose its warranty.

 Do not open the Power-VACC and Power-VACC Pro device by yourself due to health and safety risks!

23 Technical Specifications

Power-VACC/ Power-VACC Pro

Model: 102 G1-A and 102 G1-B

Weight: 960 g (incl. three battery cells)

Dimensions: 260 x 75 x 280 mm (with assembled battery)

Battery

Voltage: 3.7 VDC

Capacity: 2600mAh (9,62Wh)

Type: Lithium-Ion rechargeable Cell

Weight: 47 g

Charger

Protection Class: 2

Type: Lithium-Ion battery charger

Input Voltage: 5VAC, 50-60 Hz

Input Current: max 3 A 1x 2A/2x 1.5 A/3x 1A

Compliance statements

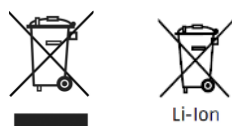
CE, RoHS, FCC & IC certified

24 Disposal

The Power-VACC and Power-VACC Pro device, batteries, accessories and packaging should be sorted for environment-friendly recycling.

Do not dispose of power tools and batteries/rechargeable batteries into household waste!

Applicable in the EU



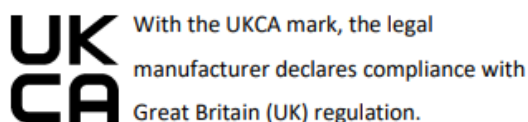
Old appliances must not be disposed of with household waste!

Batteries and rechargeable batteries must not be disposed of with household waste!

According to the European Guideline 2012/19/EU, power tools that are no longer usable, and according to the European Guideline 2006/66/EC, defective or used battery packs/batteries, must be collected separately and disposed of in an environmentally correct manner.

25 UKCA – Conformity marking

With the UKCA mark, the legal manufacturer declares compliance with Great Britain (UK) regulation.



26 EC declaration

	Konformitätserklärung / Declaration of Conformity	Seite / Page 1 von 1	
		Produktgruppe / Product group: Power-VACC and Power-VACC Pro	
		Revisionsstand / Revision status: --	Revisions-Datum / Revision date: 07.04.2025
		Alle Rechte vorbehalten. Angaben an Dritte nur mit Genehmigung von GULBU/GSM. All rights reserved. Copies for third parties only by permission of GULBU/GSM. Tous droits réservés. Des copies à des tiers seulement avec la permission de GULBU/GSM.	

Wir, die HENKE-SASS, WOLF GmbH, Kettenstrasse 1, 78532 Tuttlingen erklären in alleiniger Verantwortung, die Übereinstimmung mit den folgenden Richtlinien:

- EMV-Richtlinie 2014/30/EU
- Niederspannungsrichtlinie 2014/35/EU
- Maschinenrichtlinie 2006/42/EG
- Maschinenverordnung 2023/1230/EU
- Funkanlagenrichtlinie (RED) 2014/53/EU
- Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten

We, the HENKE-SASS, WOLF GmbH, Kettenstrasse 1, 78532 Tuttlingen declare in our own responsibility the conformity to following directives:

- EMC-Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- Machinery Directive 2006/42/EG
- Machinery Regulation 2023/1230/EU
- Radio equipment directive (RED) 2014/53/EU
- Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Diese Konformitätserklärung ist gültig für folgende Produkte:

This Declaration of Conformity is valid for following Products:

HSW Power-VACC
HSW Power-VACC Pro

Die Produkte stimmen mit folgenden Normen überein:

The products are conforming to following standards:

- EN ISO 12100
- EN 55032
- EN IEC 61000-3-2
- EN 61000-3-3
- EN 61000-4-2
- EN IEC 61000-4-3
- EN 61000-4-4
- EN 61000-4-5
- EN 61000-4-6
- EN IEC 61000-4-11
- ETSI EN 301 489-1 v2.2.3
- ETSI EN 301 489-17 v3.3.1

Tuttlingen, den 07.04.2025

Ort und Datum der Ausstellung
Place and Date of issue


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T-00002_V1.4_Konformitätserklärung

Seite 1 von 1

27 FCC Regulatory Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

FCC RF Radiation Exposure Statement

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter
2. For body worn operation, this device has been tested and meets FCC RF exposure guidelines. When used with an accessory that contains metal may not ensure compliance with FCC RF exposure guidelines

Contains FCC ID: R7TAMB2621

28 Industry Canada (IC) regulatory information

The device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt (RSS)(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Caution: Exposure to Radio Frequency Radiation

1. To comply with the Canadian RF exposure compliance requirements, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
2. For body worn operation, this device has been tested and meets RF exposure guidelines when used with an accessory that contains no metal. Use of other accessories may not ensure compliance with RF exposure guidelines.

Contains IC ID: 5136A-AMB2624

29 SRRC Compliance Statement (China)

Power-VACC (102 G1-A):

CMIIT ID: 25J99X25X927

Power-VACC Pro (102 G1-B):

CMIIT ID: 25J99X25B192

This product has been tested and complies with the relevant regulations set forth by the State Radio Regulation of China (SRRC). The product meets all necessary requirements for operation within China's wireless communication standards, including frequency bands and transmission power limits.



**Please contact Henke-Sass, Wolf GmbH if
you need any assistance or spare parts.**

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