

IDAL 3G

IDAL 3G+



User manual

Table of contents

1. About this document	4
2. Transport and storage.....	4
3. General safety advice for operating and cleaning	4
4. General description and information	6
4.1 Scope	6
4.2 Purpose of the IDAL device.....	6
4.3 Contents of the packaging.....	6
4.4 Operating requirements.....	6
4.5 Target species.....	6
4.6 Working mechanism.....	7
5. Operating and cleaning.....	8
5.1 Preparing the IDAL device for vaccination	8
5.2 Vaccination.....	9
5.3 User Menu and Shot Counters.....	11
5.4 Stand-by and switching off	18
5.5 Cleaning instructions	18
6. Maintenance and repair	21
6.1 Nozzle service	21
6.2 Factory service	24
8. The battery and the charger.....	25
9. Troubleshooting	27
10. Technical Specifications	28
11. Disposal	29
12. UKCA – Conformity Marking.....	29
13. FCC Compliance Statement (US).....	29
14. IC Compliance Statement (Canada)	31
15. EC declaration	32

Original User Instruction

This user manual is part of the **IDAL 3G ,IDAL 3G+ and IDAL 3G+ update** and is essential for proper use, cleaning, and maintenance. Failure to properly adhere to the instructions in this manual can result in potential injury, property damage, or death and may void your warranty.



- Read the user instructions carefully and follow them -

1. About this document

In this user manual, you will see warning signs (icon on the right), informing you of a risk of injury or material damage. Always read and observe these warnings!



2. Transport and storage

Check the IDAL device before use for any damage to the device, case, or accessories.

Protect the product against damage during transport.

Transport and/or store the IDAL device in its original packaging.

Store the IDAL device away from sunlight.

Do not store the batteries at temperatures below 5°C (40° F). Do not expose the battery to temperatures higher than 60°C (140° F).

Never store the IDAL device when wet or humid (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 medical responder the vaccine or rinsing fluid's product information.
-  Use the IDAL device only for vaccinating pigs.
-  Keep children out of the vaccination area and away from the IDAL device and accessories.
-  Do **not** point the IDAL device nozzle 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 medical responder the vaccine or rinsing fluid's information sheet.
-  Use care around the spike in the vaccine vial holder area. It may contain residues of the vaccine and/or rinsing fluid. In case of a spike wound, seek immediate medical advice and show medical responder the vaccine or rinsing fluid's information sheet.
-  Do **not** operate the safety cylinder around the injection head with your hand when starting, vaccinating or cleaning.
-  Never stick fingers or any body part in front of nozzle area! There is a danger of accidental self-injection with vaccine or rinsing fluid. Seek immediate medical advice and show the medical responder the vaccine or rinsing fluid's information sheet.
-  Wear safety goggles and a mask when using the IDAL device. Ensure goggles are clean for optimal vision.
-  Wear rubber gloves when cleaning the IDAL device.

- ⚠ Do not throw the battery into water. Protect the battery from water and humidity.**
If it gets wet, it may leak and release hazardous substances.
- ⚠ Do not throw the battery into fire. 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 instructed by a veterinary practitioner are permitted to work with the IDAL device and vaccines.**
- ⚠ For use only with MSD approved intradermal vaccines for swine and MSD approved rinsing fluid. Always consult vaccine's leaflet before use.**
- ⚠ The use of unapproved vaccines, hormones, antibiotics or over dosage of the approved vaccine can lead to adverse health effects of the animals or subsequently of humans and can cause the device to not function as intended.**
- ⚠ Fitting a vial into the holder can cause a temporary buildup of pressure inside the vial. The excess liquid is released via an overflow tube located at the base in front of the handle, and will flow out a small hole located above the battery. Remove this liquid with a soft clean cloth. To prevent this leakage, pierce the vial prior to mounting with a sterile needle to reduce the pressure and hold the IDAL Device upside down when placing a new vial.**
- ⚠ Releasing the trigger of the IDAL device will immediately switch off all injection controls, preventing unintended injection.**
- ⚠ When expelling vaccine or rinsing fluid from the device, always position the injection nozzles on a cloth in a receptacle placed on a firm base. Never inject into the air.**
- ⚠ If the safety cylinders remain jammed around the injection nozzles after firing, immediately release the trigger of the IDAL device and contact your supplier.**
- ⚠ When operating the device for long periods, regular breaks are recommended to avoid cramps or uncomfortableness.**



- Wear Eye Protection -



- Use Hearing Protection -

4. General description and information

4.1 Scope

This user manual contains all information necessary for the use of both IDAL 3G (firmware 1.10 and older), IDAL 3G+ (firmware 1.11 and newer) and IDAL 3G+ update (firmware 1.17 and newer).

4.2 Purpose of the IDAL device

The IDAL device is used for the needle-free intra-dermal vaccination of pigs (IDAL = **I**ntra **Dermal **Application of **Liquids). Intra-dermal means "into the skin". Vaccines given with the IDAL must be approved for intra-dermal administration by MSD Animal Health.******

4.3 Contents of the packaging

IDAL Device	Battery Charger	2 Batteries	Rinsing Fluid (2 Vials)
			

Note: Before using the IDAL device for the first time, charge the batteries in the battery charger. Please read chapter 8 how to optimize the lifetime and durability of the batteries.

4.4 Operating requirements

The IDAL device may only be operated by veterinary practitioners or by individuals who have been instructed by veterinary practitioners.

4.5 Target species

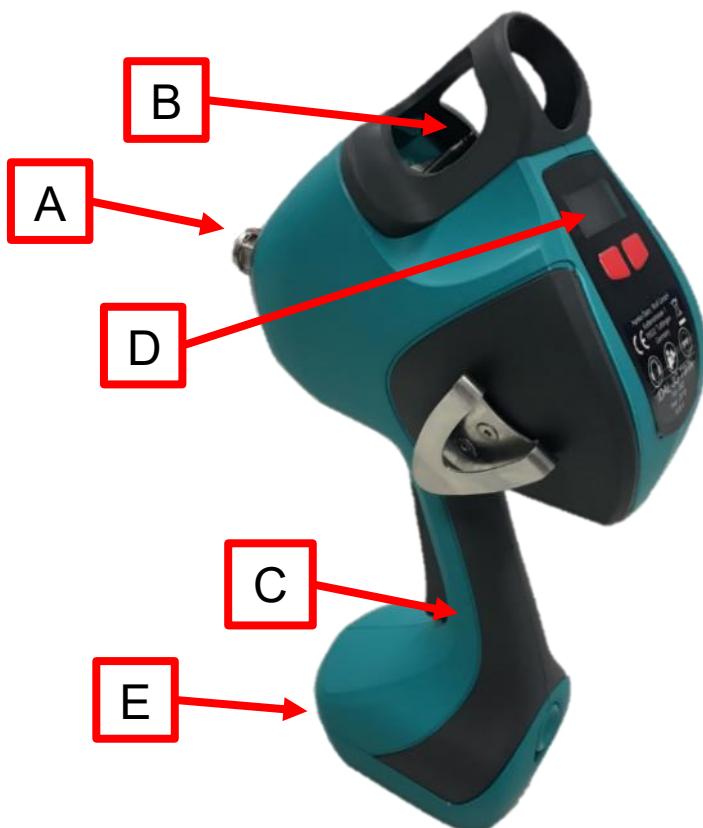
⚠ The IDAL device should **only be used for vaccinating pigs**. It should not be used in other species. The functionality of the IDAL device should only be tested on surfaces mentioned in this user manual (e.g. a sponge or a thick cloth in a receptacle).

4.6 Working mechanism

The IDAL Device has a bottle holder equipped with a spike (B) on which a vial can be mounted. Vaccination takes place through the injection head or nozzle (A). The injection head is fitted with a mechanical safety cage and safety trigger (C) to prevent against accidental discharge.

Several counters are integrated in the IDAL Device. The display screen (D) is operated by the two red buttons located underneath it.

The IDAL device comes with two batteries and a battery charger. Before use, insert a charged battery forward into the base of the IDAL device (E).



5. Operating and cleaning

The following steps should be performed in sequence.

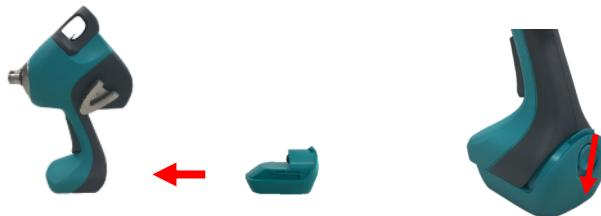
⚠ The "rinsing mode" (low pressure) can immediately switch to the "injection-ready-mode" (high pressure). Be aware!

5.1 Preparing the IDAL device for vaccination

During storage, the IDAL device must contain rinsing fluid. In order to prepare for vaccination, it is highly recommended to perform several rinsing cycles with rinsing fluid before the use of vaccine.

Step 1: Inserting the batteries

- Approximately 2 hours before intended vaccination, place the batteries in the battery charger and ensure they receive a full charge.
- Insert a charged battery into the base of the IDAL device.
- Note: holding one of the display buttons down while inserting the battery and booting up will reset the language to English. Note it does not matter if the left or right button is held down.



Step 2: Inserting the vaccine vial

- Turn the IDAL unit upside down. Insert the vaccine vial into the holder with the spike. Ensure that spike is inserted through the centre of the rubber seal (bung) of the vial, and twist vial back and forth slightly on the spike to seat the vial.
- Push the vaccine vial all the way over the spike. The vial will be adequately held in place by the rubber bung.



Step 3: Expelling the rinsing fluid

- Depress the trigger to activate the motor.
- In the absence of vaccine fluid, '**No Vaccine Detected**' will appear on the display of the IDAL device.
Note Firmware versions 1.11 and newer may have a different but similar message.
- Keep the trigger pressed continuously.
- Rinsing mode will automatically expel the rinsing fluid at low pressure out injection head, while gradually drawing vaccine from of the vial into the device. You can expel the rinsing fluid into a suitable container or can. Since the pumped out fluid can contain residues of vaccine, please ensure correct disposal of the expelled liquid.
- The pump will stop automatically as soon as the sensor in the injection head detects vaccine.

! Caution !
No vaccine
detected.

Step 4: priming the IDAL device for vaccination

- When IDAL is filled with vaccine, a running pig is shown on the IDAL display. The IDAL device is now primed and ready for vaccination.



Note the trigger can be released at this point, but the device will not vaccinate unless BOTH the trigger and the nozzle cage is pressed onto the skin of the pig.

Step 5: setting the counters

- If required, the day counter or bottle counter can be set to "0" (see section 5.3).

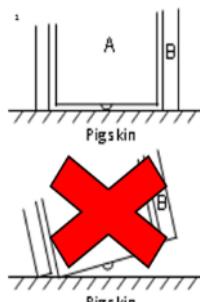
5.2 Vaccination

Before vaccinating, ensure that the IDAL Device is primed correctly (please see chapter 5.1 Preparing the IDAL device for vaccination).

To ensure an effective injection technique, the injection head (A), must be placed flat against the pig's skin.

Vaccination takes place by pushing the injection head flat against the pig's skin as shown in the picture.

Note: a small residue of vaccine may remain on the pig's skin. This is normal when vaccinating intra-dermally but has no detrimental effect on vaccine efficacy.

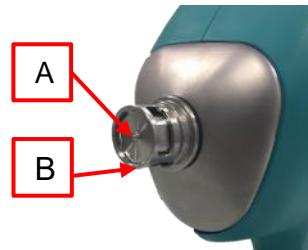


Step 1: Activate the device

- Press the trigger of the IDAL device and keep it pressed.

Step 2: Press against pig

- Push the front of the injection head (A) against a pig's skin. The safety cage (B) will move backwards. The injection dose is now automatically discharged and the vaccine is quickly injected into the skin. Each injection dose contains 0.2 ml of vaccine.
- An injection is only possible by pressing the trigger AND pressing the nozzle cage against the pig's skin at the same time.



Step 3: Remove nozzles, release trigger

- Remove the nozzle from the skin of the pig that has just been vaccinated. Release the trigger. The safety cylinder will spring back to its original position.

Step 4: Repeat as necessary

- Push the trigger again. Then place the nozzle onto the skin of the next pig. The safety cylinder moves backwards, and the injection is repeated.
- Remove the nozzle from the skin of the pig that has just been vaccinated. Release the trigger. The safety cylinder once again moves back into its original position.

By releasing the trigger between vaccinations, controls are switched off. This safety feature will prevent accidental vaccination. If the IDAL is loaded (running pig) but the trigger is released, the device is in stand-by.

By keeping the trigger continuously pressed, the IDAL device automatically reloads itself for the next vaccination. The next pig can now be vaccinated by pressing the nozzle against its skin in the same fashion.

After administering a vaccination, a small residue of vaccine may be visible on the pig's skin. This is normal with intra-dermal vaccination and does not affect vaccine efficacy.

⚠ Never leave the device in 'ready for vaccination' mode for an extended amount of time.

⚠ Rinse the device after every vaccination session (see section 5.5.1).

5.3 User Menu and Shot Counters

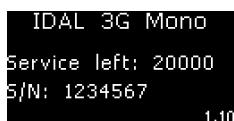


When the battery is inserted, the MSD Animal Health logo is shown on the display...



REV. 1.17

Pressing both display buttons during the logo displays a QR code. Scanning this link with your phone links to a training video.



... followed by device name, number of shots left until next service, serial number, and firmware revision information. Depending on the firmware revision on the device, this screen might differ slightly.
This information is shown for 2 seconds.

Only firmware version 1.11 or newer:



The Welcome Screen will remind you to rinse the device before use. Press on '→' to confirm that you've performed a proper rinsing. On certain models, after 1.2 seconds it will continue to the main home screen.



The next screen will ask if you want to start a new session. Please press 'no' or 'yes' to continue.
Pressing 'yes' will close out the previous session and begin a new one. Pressing 'no' will continue with the previous session.

Firmware Version 1.10 or older:



The **Initial Screen** will show the current status regarding position sensor (on/off), Day Counter and battery.

Press 'Menu' to show the **Day Counter**.



The day counter records the number of vaccine doses delivered in a specified period (e.g. per day). This counter can be reset at any time. The day counter can record up to 9,999 counts.
To reset the Day Counter, press "Reset" for at least 3 seconds.

Press 'Next' to show the **Bottle Counter**.



The bottle counter shows the number of doses given with the actual vial. The bottle counter must be reset manually with each new vial to check the amount of the doses in the vial.

To reset the Bottle Counter, press "Reset" for at least 3 seconds.

Press 'Next' again to show the **Service Counter**.



The service counter indicates the total number of vaccine doses given with the IDAL device since the last service. To reset the Service Counter, press "Reset" for at least 3 seconds.

Please make sure, that Service Counter is only set to 0 after proper IDAL Service is done (please see chapter 6.1 for more information).

Press 'Next' again to show the **Total Counter**.



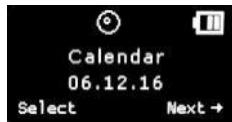
Press 'Next' again to show the **Position Sensor**.



The position sensor can be activated ('On') or deactivated ('Off') by selecting "On/Off".



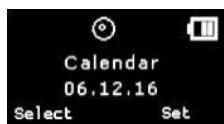
Press 'Next' again for the **Calendar** (format: DD.MM.YY).



To set the calendar, press 'Select' for 3 seconds until the command 'Next' changes to 'Set' and the first element is flashing. You can switch between 'Day', 'Month' and 'Year' by pressing 'Select'. The changeable value begins to blink and can be changed by choosing 'Set'.

Once the values have stopped blinking, the displayed date can be confirmed by pressing 'Set'.

Note that certain firmware versions do not allow updating of the calendar.



Press 'Next' to show the **Clock**.



To set the clock, press 'Select' for 3 seconds until the command 'Next' changes to 'Set' and the first element is flashing. You can switch between 'Hour' and 'Minute' by pressing 'Select'. The changeable value begins to blink and can be changed by choosing 'Set'. Once the values have stopped blinking, the displayed time can be confirmed by pressing 'Set'.

Firmware Version 1.11 or newer:



The Initial Screen will show the IDAL 3G Logo, Day Counter, current Position Sensor and Bluetooth Status (on/off) and battery.

Press 'Counters' to show the **Day Counter**.



The day counter records the number of vaccine doses delivered in a specified period (e.g. per day). This counter can be reset at any time. The day counter can record up to 9,999 counts.

To reset the Day Counter, press "Reset" for at least 3 seconds.

Press 'Next' to show the **Bottle Counter**.



The bottle counter shows the number of doses given with the actual vial. The bottle counter must be reset manually with each new vial to check the amount of the doses in the vial.

To reset the Bottle Counter, press "Reset" for at least 3 seconds.

Press 'Next' to show the **Service Counter**.



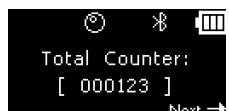
The service counter indicates the total number of vaccine doses given with the IDAL device since the last service.

To reset the Service Counter, press "Reset" for at least 3 seconds.

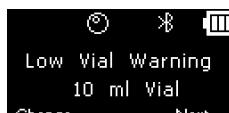
Once "Reset" Button is pressed, the device will respond with vibration (haptic feedback).

The Service Counter must only reset after proper IDAL Service is performed (please see chapter 6.1 for more information).

Press 'Next' to show the **Total Counter**.



The Total counter indicates the total number of vaccine doses given with the IDAL device. The Total Counter can record up to 999,999 vaccinations.
This counter cannot be reset.



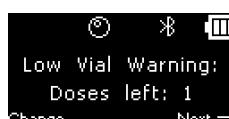
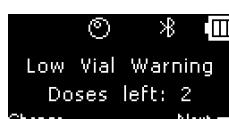
Press 'Settings' on the initial display to display **Low Vial Warning** setting.

Low Vaccine Warning provides notification when there is a low level of fluid left in the vaccine vial.

Depending on the vial size you are using, press 'Change' to set 'Low Vial Warning' to '10 ml Vial' or '20 ml Vial'.

If you do not wish to receive a warning when fluid level is low, please press 'Change' to set status to 'Disabled'. Reset the Low Vial Warning Counter after inserting a new vial.

When the IDAL is primed (pig is running), the Counter can be reset by pushing "reset" or by holding the IDAL Device upside down for at least 3 seconds.



If Low Vial Warning is set to either vial size, the next screen allows you to set the number of doses before end of vial to receive warnings [1,2,or 3]

Press 'Next' to show **Haptic Feedback** information screen.



The "Haptic Feedback" function will let the device vibrate noticeable in case of important messages.



To activate or inactive "Haptic Feedback" press "On/Off"

Press 'Next' to show **Bluetooth** information screen.



Press 'On/Off' to activate/deactivate Bluetooth on your device.

In case Bluetooth is activated ('On') you will find a Bluetooth symbol at the top of the screen.

In case Bluetooth is deactivated ('Off') the Bluetooth symbol at the top of the screen will disappear.

Press 'Next' to show **Session screen**.



Session Screen

The last 10 sessions can be reviewed. In each session, you can review the vaccinations performed, rinses, and drops.

Press 'Next' to show the set **Language**.

- Note: holding one of the display buttons down while inserting the battery and booting will reset the language to English. It does not matter if the left or right button is held down.



To change to another language, press 'Change' until the preferred language is displayed.

You can choose between several different languages.

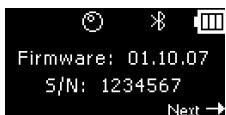
To return to the English language, press the left red button ('Change') until the 'Language: English' appears again.

If a foreign language is set accidentally and you are 'lost' in the menus:

After 30 seconds, the device will automatically return to the rinsing reminder. From this screen, press 7 times on the right red button and then press the left button once until the preferred language is returned.

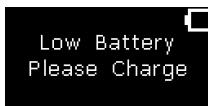
- Note: holding one of the display buttons down while inserting the battery and booting will reset the language to English. Note it does not matter if the left or right button is held down.

Press 'Next' to display the **Firmware version** and **Serialnumber** of the device.



Pressing 'Next' returns to the main menu.

Information and Warning Screens when using the device



If the **battery is too low**, the display will show the corresponding information screen. Please replace the battery with a fully charged one.



The **position detection** is shown during drawing up of vaccine and/or rinsing fluid. It indicates the position of the vial in the holder of the IDAL device.

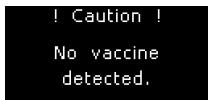


If the IDAL is in the right position, the small circle is inside the large circle and the IDAL begins to load. This function helps to reduce possible air inside the system. Make sure, that the correct position is kept while loading vaccine into the device.

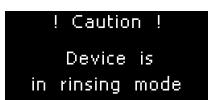


If the IDAL is primed with vaccine, the display shows a **running pig**. The IDAL device is now ready for vaccination.

With firmware version 1.11 or newer, you will also see the vial level information on top of the screen if low vaccine warning is activated in the settings.



If the sensors inside the device detect rinsing fluid, '**No Vaccine Detected**' is shown on the display.



Depending on the firmware version, the messaging on screen might differ slightly.



Device maintenance is required after 20,000 shots, or 50,000 doses with the new extended life nozzle (see chapter 6.1).

When maintenance is necessary, the message '**Nozzle Service**' (Firmware 1.09 or older) or '**Service due**' (Firmware 1.11 or newer) appears on the IDAL display. Please see chapter 6.1 for more information.

With firmware 1.11 or newer a corresponding service symbol reminder will be displayed next to the running pig when the device is ready for vaccination.

Choose the appropriate nozzle type (20,000 or 50,000 shots) from the menu. If your IDAL does not show this menu with both nozzle types, contact your MSD representative.



After 100,000 shots, maintenance in an approved service point is necessary. The message '**Factory Service**' appears on the IDAL display.

Please see chapter 6.2 for more information.

If you have used a mixture of 50,000 and 20,000 dose nozzles, the maintenance interval might not appear at exactly 100,000 doses. See chapter 6.2 when this message appears.



Only Firmware Version 1.11 or newer:

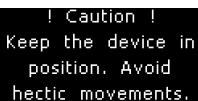


If '**Low Vial Warning**' is activated, the device will warn you once you can only perform 3 / 2 / 1 more vaccinations before the vial is empty (depending on your settings). You will also receive haptic feedback (if activated) and a corresponding warning symbol will be displayed next to each running pig.

Monitor vial filling level closely and ensure the vial is not emptied completely. A little rest of vaccine should remain inside the vial when replacing it with a new filled vial to ensure a continuous flow of vaccine. This will save vaccine doses!

Hold the device upside down when changing to a new vial for at least 3 seconds. This will automatically reset the low vaccine vial counter. This function is only enabled when you reached a critical number of shots (depends on warning settings – see low vial warning screens above).

Or - after changing to a new vial - press 'Reset' for a few seconds to reset the low vaccine vial warning to 0.

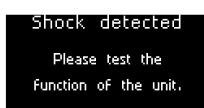


In case you held the device upside down and the Low Vaccine Level Counter set itself to 0 unintentionally, press on 'Restore' for 3 seconds. This will restore the previous number of shots in the counter.

When operating, it is recommended to **move the device in a smooth** in and out motion (to avoid air bubbles in the system).

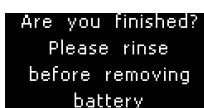
Whenever the device registers jerky or hectic movements, it will display a corresponding warning.

With firmware revision 1.17 the hectic movement warning can be turned on and off.



If the device detects a strong hit against another object or a fall onto the ground, it will display the following warning '**Shock detected**'.

Please check device function to ensure proper vaccination quality.



In case no trigger or button is pressed for more than 30 seconds, the device will automatically switch to the **Rinsing Reminder** Screen and will ask you to rinse before removing the battery.

Press any button or trigger to leave this screen.

5.4 Stand-by and switching off

Stand-by:

If the trigger is released and no display button is pressed for **30 seconds**, the display will switch OFF automatically. The device is now on stand-by.

To turn the display ON again, simply press any display button or the trigger.

If no action is taken for a further 10 minutes, the device will go into “power saving mode”. In order to reactivate the device, simply press the trigger.

In firmware version 1.11 or newer, the display will show a rinsing reminder screen when in stand-by mode.

⚠ *In order to switch off the IDAL completely, the battery needs to be removed. Without removing the battery, the IDAL will remain on stand-by and battery will be drained.*

Switch off:

When storing the IDAL device, remove the battery to switch off the device completely. After removal of the battery, the IDAL device can be cleaned externally. Ensure the battery pack does not get immersed in any liquid.

5.5 Cleaning instructions

To ensure that the IDAL device continues to operate correctly, it is extremely important that it is **cleaned internally and externally after each vaccination session!**

5.5.1 Cleaning the IDAL device internally

After vaccination, the interior fluid path and valves inside the IDAL device must be cleaned with rinsing fluid. Rinsing mode will perform this function automatically when rinsing fluid is inserted into the IDAL. **Only** use the vial of rinsing fluid supplied by MSD Animal Health (see label).

⚠ If the IDAL device is not properly cleaned internally, residues of vaccine will dry inside the interior fluid path of the IDAL. The fluid path and nozzle may become blocked as a result.

Note: A vial of rinsing fluid can be used adequately approximately 3 times. Using a vial more than 3 times can cause leakage from the vial while mounted on the IDAL or the rinsing fluid can become turbid. Turbid rinsing fluid may cause dysfunction of the IDAL device. Vaccine vials must be discarded after one use, even when there is vaccine left.

Clean vent tubes by pulling up and pushing down the vaccine vial on the spike until rinsing fluid comes out of the vent tubes above the battery.

Step 1: Put device on stand-by

- Release the trigger and do not press any other button for at least 30 seconds.

Step 2: Remove vaccine vial

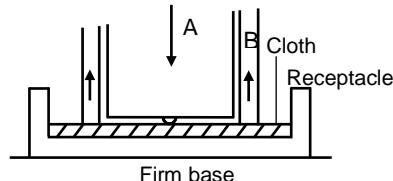
- Remove the vial of vaccine from the holder on the IDAL device.

Note: At this time there is still vaccine inside the internal fluid path of the IDAL device. Before cleaning can take place, all vaccine must be removed from the internal fluid path.

Step 3: Expel remaining vaccine and flush tubes with rinsing fluid

⚠ Remaining injection doses are released **under high pressure** to discharge the vaccine that is still present in the internal fluid path before filling the internal fluid path with rinsing fluid.

- Turn IDAL unit upside down, and place a vial of rinsing fluid into the bottle holder with the vial rubber stopper (bung) on the spike. Make sure that the spike enters the centre of the rubber bung. Press the vial containing rinsing fluid fully down over the needles. The vial is adequately held in position by the rubber bung of the vial. Twist the vial back and forth slightly to seat it onto the spike.
- Place the injection head (A) squarely on a cloth in a receptacle on a firm base and press down so that the safety cylinder (B) is depressed. An injection dose is discharged.
- Repeat injecting onto the cloth until the IDAL device changes into the pump phase.
- Keep the trigger depressed and the injection head positioned on the cloth. The IDAL device now automatically starts to pump and the rinsing fluid leaves the internal fluid path via the injection head at low pressure.
- Keep doing this until "**No vaccine Detected**" or a similar message about rinse mode appears on the display. This means the injection head detects rinsing fluid instead of vaccine.
- Allow the IDAL device to pump at least another 10 times to properly flush the internal fluid path clean.



⚠ When the IDAL device is not being used, the internal fluid path should be filled with rinsing fluid for storage. This will prevent the internal fluid path from drying out.

Step 4: Completed

- Remove the injection head from the sponge or the cloth.
- Remove rinsing fluid vial from the IDAL Device.
- The internal cleaning of the IDAL device is now completed.

5.5.2 Cleaning the IDAL device externally

⚠ The IDAL device is waterproof for splash water (according to standard IP 54) and can be rinsed off under the tap max. 3 bar.

The IDAL device can be cleaned using a cloth or tissue and commercial disinfectants at recommended concentrations (e.g. Virkon S, Meliseptol®, Meliseptol® Foam pure, Wofasept®, Gigasept® FF).

Note if these disinfectants are prepared improperly, they can cause corrosion or other damage leading to faulty operation and possible injury or property damage. Always prepare the disinfectants properly per instructions.

⚠ Do not immerse the device in water!

⚠ Do not use steam or high-pressure cleaners for cleaning or disinfection!

Step 1: Switch off the IDAL Device

- Remove the battery from the base of the IDAL device to switch off the device.

Step 2: Point downwards

- Hold the IDAL device pointing downwards (as when vaccinating) to avoid liquid entering the mechanical system.

Step 3: Rinse

- Rinse the injection head under the tap. With your other hand on the safety cylinder rotate the safety cylinder to remove any residue of vaccine between the injection head and the safety cylinder [1].



- Then hold the IDAL device slightly slanted and rinse the needle and the holder clean [2].

⚠ Ensure that no water can enter the battery housing in the handle!



Step 4: Disinfect, Dry & store

- Lightly shake the IDAL dry to remove all loose water.
- To disinfect the device:
 - If using disinfectant, prepare disinfectant per the instructions on the label.
 - Spray a cloth and use the wetted cloth to wipe the IDAL device.
 - DO NOT spray the device directly!
 - Do not wipe battery connector.
 - After letting the disinfectant sit for the appropriate amount of time per directions on the label, rinse immediately per label, starting at step 3 above.
- Take the IDAL device from under the tap and dry it carefully.
- Once it is completely dry, store the IDAL device in its original packaging.

6. Maintenance and repair

6.1 Nozzle service

Maintenance of the IDAL device is required after 20,000 shots, 50,000 shots with extended life nozzle or a defined time. Extended life nozzles will be marked as shown.



When maintenance is necessary, the message "Nozzle Service" will appear on the IDAL display.

For maintenance, the injection head (available separately) need to be changed by using a torque-calibrated wrench.

⚠ Always remove battery before doing Nozzle service!



⚠ Only perform Nozzle service in a clean environment and with clean hands to avoid contamination of the technical components.

⚠ Before starting with Nozzle Service, please ensure proper internal cleaning of the device. In order to do so, please rinse the Device with Rinsing Fluid (approx. 15 Rinsing Cycles)

⚠ After proper cleaning make sure, that no liquid is inside of the Device. In order to do so, please rinse the Device approx. 10 times without any fluid vial before starting with Step 1.

⚠ During the Nozzle Service make sure, that no vial of Diluvac Forte or Rinsing Fluid is placed in the bottle holder of the device.



Step 1: Remove old nozzle

- Wash hands and put on clean gloves.
- Unscrew the injection head with a 16-mm-wrench.
- In order to do so, lay the device on the side and hold it with one hand.
- If the wrench does not hold the injection head properly, rotate the safety cylinder a bit.



⚠ As soon as nozzle is dismounted: Ensure that the exposed tip of the IDAL device is protected from dirt. Ensure that the device is held with the head facing downwards so that no liquid can flow back in the system.



⚠ Always hold the head downwards after the nozzle is removed. Fluid that gets inside the piston area and flows backward into the device can damage the internals of the device

Step 2: Cleaning piston rod

- Clean the tip of the piston rod and the thread in the device with a tissue or a cotton stick
- This will help to get rid of old abraded rubber particles from the previous nozzle which might lead to blockages of the new nozzle



Step 3: Lubricate the piston rod and o-rings

- Lubricate the tip of the piston rod using a drop of Diluvac Fort or White Oil on a fingertip
- Remove the spring of the nozzle



- Lubricate the o-rings of the nozzle assembly using a drop of Diluvac Forte or White Oil on a fingertip
- Fit the spring to the nozzle again



Step 4: Place new nozzle

- Put the new nozzle on the tip of the IDAL Device and press it down slightly.
- Ensure that the nozzle is pressed down until the thread of the nozzle engages all of the thread of the IDAL Device before you tighten the nozzle assembly with a wrench.
- It may help to turn the nozzle the opposite way gently about $\frac{1}{2}$ turn until you feel the threads "click". They are now lined up and you can tighten the nozzle assembly onto the IDAL unit.



Step 5: Tighten the nozzle

- Tighten the new injection head using a 16-Nm torque wrench (16 mm).



Step 6: Check the nozzle

- Check if the nozzle assembly is sitting correctly and if the safety cylinder around the injection head is moveable (can it be rotated and pressed down?).



Step 7: Flush

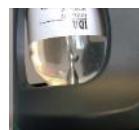
- Turn the IDAL Device upside down.
- Fit a rinsing fluid vial into the holder and rinse until a clean and continuous jet is coming out of the nozzle.



Step 8: Check functionality

- If the nozzle is not operating properly (no clean, continuous jet of rinsing fluid is coming out), please observe the following guidelines.

- The IDAL Device will need approx. 15 rinsing cycles to fill the empty system with liquid completely.
- Check for bubbles coming from the spike inside the vial. Rising bubble are a good sign that the device is able to suck in liquid correctly.



In some cases, no rinsing fluid is coming out even after 15 and more rinsing cycles.

Reasons for this can be: Air in the system:

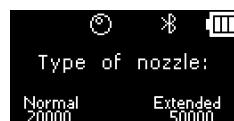
To release air out of the system, hold the device with head pointing downwards when device is drawing fluid out of the bottle and hold the device with the head pointing upwards when the device is squirting out fluid. Repeat this movement several times.



- If a nozzle is still not operating properly (no clean, continuous jet of rinsing fluid is coming out) even after following above mentioned guidelines, please repeat Nozzle service.

Step 9: Reset Service Counter

- After successful completion of nozzle service, reset the service counter.
- Starting from the main menu (Current status), select "Menu" and then press "Next" twice ("Service counter") (please see section 5.3)
- Press button "Reset" for at least 3 seconds.
- Select 20,000 or 50,000 dose nozzle. If this screen does not show, contact your MSD representative.
- The counter returns to "0".



6.2 Factory service

After 100,000 shots, maintenance in an approved service point is necessary. The message "Factory Service" will appear on the IDAL display.

The IDAL device has to be sent to an approved service point.

Please contact your supplier to arrange this.

Note if you have used a combination of 20,000 and 50,000 dose nozzles this message may not appear at exactly 100,000 doses.

If repair is required, the IDAL device should be sent to an approved service point.

Please contact your supplier to arrange this.

Note: Repair or maintenance by unapproved service points will lead to a loss of warranty!

- ⚠ Unauthorized opening of IDAL devices or battery packs may cause improper device function or catastrophic and/or unpredictable failure and may result in personal or property injury or death!
- ⚠ Any repairs or modifications to the electrical system may only be carried out by qualified electricians of the manufacturer.

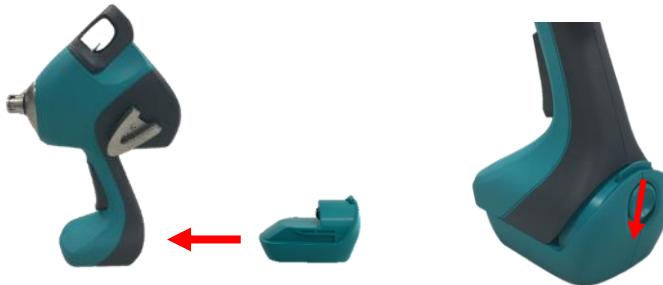
The IDAL device may only be dismantled by approved service points.

- ⚠ Do not open the IDAL device due to health and safety risks!

8. The battery and the charger

Battery

The battery of the IDAL device is a rechargeable Lithium Ion (Li-Ion) battery. At least 1,200 injections can be administered by using a fully functioning and charged standard battery. An extended life battery is also optionally available. It can last several times the standard battery life. See your MSD representative for more details.



The battery slides into the opening in the base of the IDAL device.

A fastening button holds the battery in position. The battery can be removed from the base by pushing down the button at the back of the battery and by pulling out the battery.

- ⚠ Use only the appropriate batteries in the IDAL 3G Device. 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 the battery becomes abnormally hot, order, discoloration, deformation, or abnormal conditions is detected during use, charge, or storage.

- ⚠ Replace the battery when available battery life becomes much shorter than usual.
- ⚠ It is recommended that the battery is only charged when the "**charge battery**" warning appears on the display. Never store empty batteries!

Charger

Charge the battery using only the charger supplied. Connect the battery to the charger and connect the charger to an electric socket. When connected correctly the charging process will start automatically.

- ⚠ Inspect 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 IDAL 3G Device may be damaged. Charge the battery at an ambient temperature between 0°C and 45°C.

The LEDs have the following functions:

LED lights orange: Battery is empty and charging	
LED lights yellow: Battery is partly charged and still charging.	
LED lights green: Battery is fully charged.	

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

9. Troubleshooting

The device displays error codes. These are additionally underlined with the text "Please connect via app". Further information can be found in the app...

Fault	Cause	Solution
Injection is not possible.	Dirty nozzle.	Clean nozzle (see 5.5.2)
	Malfunctioning nozzle.	Perform Nozzle Service (see 6.1).
	Improper vaccination method.	Place injection head squarely on the animal skin (see 5.2)
Liquid is seeping away at the bottom to the front of the handle.	When fitting a vial into the bottle holder there may be slight excess pressure inside the vial. Excess liquid is discharged via an overflow hose and will appear at the base at the front of the handle. This has no impact on the injection process.	Remove the liquid with a soft clean cloth. Release pressure from vial prior fitting it to the holder. Hold the device upside down when inserting new vials.
When cleaning internally after 10x actuations, no rinsing fluid comes out of the injection head.	Motor is not working.	Return the IDAL device to MSD Animal Health.
	Vial(s) not properly positioned inside the bottle holder.	Remove the vial(s) and re-position it / them on the needle inside the bottle holder.
The safety cylinder around one nozzle remains jammed following vaccination.	Contamination of the nozzle(s).	Clean the IDAL device.
	Possible damage to the nozzle(s) or to the safety cylinder.	Release the trigger immediately, remove the battery and perform nozzle service (see 6.1.) or return the IDAL device to MSD Animal Health
A vial falls out of the holder.	Inadequate mounting of the vial onto the needle.	Position a new vial into the bottle holder.
A lot of vaccine on the skin of the animal and no puncture visible (as mentioned in chapter 5.2, it is normal that a small residue of vaccine will remain on the pig's skin).	Air inside the tubing system.	Rinse the device with rinsing fluid. During the pump process, hold the device down, during the rinsing process, hold the device up. Repeat this procedure 10 times.

FAULT	Cause	Solution
<u>IDAL device Display</u>		
"Nozzle Service"	The service counter records 50,000 shots: a service is required.	Perform Nozzle Service. Please see Chapter 6.
"Factory Service"	The service counter records 100,000 shots a service in an approved Service Centre is needed.	Contact MSD Animal Health.
"Send to repair"	Repair is needed.	Contact MSD Animal Health.
"Charge battery"	The battery has to be charged. Vaccination is still possible.	Fit a charged battery into the IDAL device and recharge the empty one.
"Battery Off Please Charge"	The battery has to be charged. It is no longer possible to vaccinate. After 3 sec. the device will be turned off.	Fit a charged battery into the IDAL device and recharge the empty one.
"Load Process is too slow"	Weak battery.	Insert a fully charged battery.
	Nozzle defective.	Perform "Nozzle Service" (see Chapter 6)
	Repair is needed.	Contact MSD Animal Health.
"Shock detected"	The device detected was hit or a dropped.	Please check function of the unit and in case you are unsure if function is given, please contact MSD Animal Health.
"Language set incorrectly"	By mistake....	During starting up when the MSD logo is shown press on display Button

10. Technical Specifications

IDAL 3G Device

Modell: 301

Weight: 1060g

Dimensions: 315x188x96mm (with battery)

Battery

Voltage: 10,8 VDC

Capacity: 2500mAh (27,3Wh)

Type: Lithium-Ion rechargeable Cell

Weight: 240 g

Charger

Protection Class: 2

Type: Lithium-Ion battery charger

Input Voltage: 100-240 VAC, 50-60 Hz

Input Current: max 0.9 A

Japanese Radio Law Compliance

This device is granted pursuant to the Japanese Radio Law.

This device should not be modified (otherwise the granted designation number will become invalid).

11. Disposal

The IDAL device, batteries, accessories and packaging should be sorted for environmental friendly recycling.

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

Applicable in the EU



Li-Ion

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.

12. UKCA – Conformity Marking



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

13. FCC Compliance Statement (US)

Contains FCC ID: R7TAMB2621 →BLE radio module

FCC ID: 2BLRO-301A →15B

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

Caution: 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

14. IC Compliance Statement (Canada)

Contains IC: 5136A-AMB2621

This device complies with Industry Canada licence-exempt RSS standard(s).

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.

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.

15. EC declaration

	Konformitätserklärung / Declaration of Conformity	1 von 1 Produktruppe / Product group: IDAL Revisionenstand / Revision status: D Revisions-Datum / Revision date: 23.08.2021
Alle Rechte vorbehalten. Ausgabe an Dritte nur mit Genehmigung von GLS/LSGM. All rights reserved. Copying for third parties only by permission of GLS/LSGM.		Tous droits réservés. Des copies à des tiers seules sont autorisées avec la permission de GLS/LSGM.

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

- Richtlinie 2014/53/EU (RED)
- Maschinenrichtlinie 2006/42/EG
- Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten

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

- Directive 2014/53/EU (RED)
- Machinery Directive 2006/42/EG
- 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:

IDAL 3G
IDAL 3G+

Die Produkte stimmen mit folgenden Normen überein:
The products are conforming to following standards:

EN ISO 12100:2010; ETSI EN 301 489-1 V2.2.3 (2019-11); Draft ETSI EN 301 489-17 V3.2.0 (2017-03); ETSI EN 300328 v2.1.1
Für das Ladegerät/ For the charger: IEC 60335-2-29:2002 +A1:2004 +A2:2009; EN 61000-6-3:2007 + A1:2011; IEC 61000-6-1:2016

Diese Konformitätserklärung ist gültig bis 30.04.2025.
This Declaration of Conformity is valid until 30.04.2025.

Tuttlingen, den 23.08.2021

Ort und Datum der Ausstellung
Place and Date of issue


Michael Herzog
Director Regulatory Affairs
Chief Executive Officer

HENKE-SASS, WOLF GMBH
Kelternstrasse 1
78532 TUTTLINGEN
GERMANY
Tel. +49(0)7462/9466-5000

Firmenstempel
Company Stamp

**HENKE
SASS
WOLF**

Please contact your local MSD partner or Henke-Sass, Wolf GmbH (manufacturer of the IDAL® device) directly if you need any assistance or spare parts.

Henke-Sass, Wolf GmbH
Kelterstr. 1
78532 Tuttlingen; Germany

Contact Persons:

Lena Bacher-Zdravkovski
Tel. +49 (0)7461 / 9466 – 206
Fax: +49 (0)7461 / 9466 – 5208
Email:
Lena.Bacher@henkesasswolf.de

Melanie Keller
Tel. +49 (0)7461 / 9466 – 223
Fax: +49 (0)7461 / 9466 – 5208
Email:
Melanie.Keller@henkesasswolf.de