



# Double Breast Vaccinator Manual



zoetis

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# 1. Introduction

The Double Breast Vaccinator, distributed by Zoetis in the U.S., has been designed as a modern, innovative and user-friendly device, which is easy to operate. Henke-Sass, Wolf GmbH, creator of the Double Breast Vaccinator, is a well-known manufacturer of medical equipment for human and for veterinary applications with more than 100 years of experience. Cutting-edge research and development methods, a state-of-the-art production plant in Germany and high-quality standards are a lasting guarantee of clear benefits to our customers' equipment needs.

The aim of this manual is to help you understand how to install and use your new equipment. Before using the Double Breast Vaccinator, please read this manual completely. For further information, please contact your Zoetis representative.

## 1.1 About this document

This user manual provides information to help support operation of the Double Breast Vaccinator.

- Read the user instructions carefully and follow the instructions for use.
- Keep the user instructions available anytime the device is in operation.
- Share the user instructions with all users of the Double Breast Vaccinator.

While reading the user instructions, note and observe the warnings on material damage, injury or death.

Warning Symbol	Meaning
 <b>DANGER</b>	<b>Imminent danger!</b> Nonobservance of these warnings can result in death or extremely severe injuries.
 <b>WARNING</b>	<b>Possible imminent danger!</b> Nonobservance of these warnings can result in severe injuries.
 <b>CAUTION</b>	<b>Dangerous situation!</b> Nonobservance of these warnings can result in minor injuries or material damage.
 <b>NOTE</b>	<b>Dangerous situation!</b> Nonobservance of these warnings can result in material damage.

## 2. Safety and hygiene

### 2.1 Characteristics

- Device works with one energy source – it only requires electricity.
- Display-guided chicken positioning gives real view of the chicken position.
- Easy cleaning – due to fewer tubes, switches and parts.
- Smooth, sealed surface allows proper disinfection to maintain biosecurity.
- Crucial parts are separated and therefore protected from dirt, dust or particles.
- LED touch screen to operate and use all functions of the device.
- Possible to switch on/off different alarm functions (e.g., batch counter, needle change).
- Bubble detector on vaccine tubes helps avoid false injection, helping to provide air bubble control.
- Measuring for dosage accuracy is not necessary due to preset dosage volumes.
- Easy needle replacement.
- Adjustable syringe position.
- Acoustic signal when injection is completed.

### 2.2 Intended use

The Double Breast Vaccinator is intended to be used as an automatic vaccination device. It should be used to inject poultry vaccines into layer or breeder type chickens of the appropriate age. The Double Breast Vaccinator should only be operated by veterinarians or operators who have been instructed by a veterinarian. The Double Breast Vaccinator and all its components are intended to be used within their chemical resistance. The Double Breast Vaccinator may only be used with vaccines tested for compatibility with the device by the device manufacturer, Henke-Sass, Wolf.

### 2.3 Unintended use

The device is not intended to be used for vaccinating any animals other than layer or breeder type chickens of the appropriate age.

### 2.4 Safety

- \* Read this manual completely before using the equipment.
- \* Only well-trained personnel should use the Double Breast Vaccinator.
- \* Follow the operation and cleaning/maintenance instructions carefully.

⚠ Always wear safety goggles when operating the device. In case of eye exposure to the vaccine, contact a physician and share the vaccine package insert with them.

⚠ For any maintenance or repair service, disconnect the device from the electricity supply.

⚠ For any maintenance activity, make sure to disconnect the vaccine vial.

⚠ Never place your finger or any other object in front of the syringe.

⚠ Never try to manipulate the device, especially its safety functions.

⚠ For any maintenance activity, make sure the device is not being operated.

⚠ Use only new parts, supplied by Zoetis, to replace defective parts.

\* Only healthy animals should be vaccinated.

\* Device must be checked in regular intervals, at least twice per year (low-voltage test).

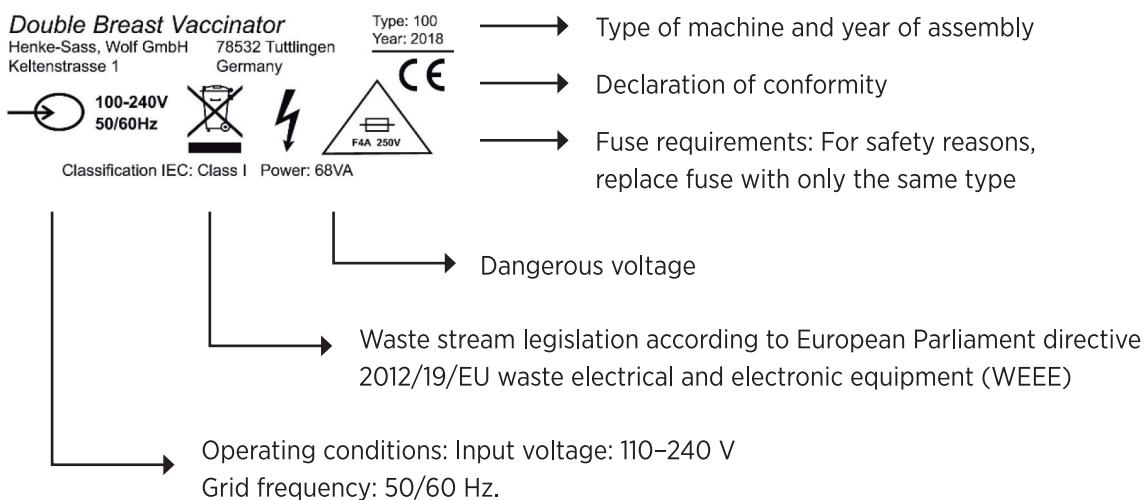
\* Place the device on a stable surface to operate.

\* For proper disinfection, please boil the syringe before first usage.

## 2.5 Transport and storage

- Protect the product against external forces during transport (e.g., impact).
- Check the device for damage before use.
- Store the device at ambient temperature between 32° F and 113° F.
- Store the device in conditions where the ambient humidity is lower than 80%.
- Do not store the device in moist or wet conditions.

## 2.6 Safety symbols and device label information



## 2.6.1 Fuse exchange

The fuse can be exchanged by opening the fuse fixture on the back of the device with a screwdriver. Replace a defective fuse with a new one, same type, and insert the fuse in reverse order. Lock the fixture with the screwdriver, hand tightened.



## 2.7 Items included



**Double Breast Vaccinator**  
Quantity: 1



**Electricity plugs for different countries**  
Quantity: 3



**Vaccine vial holder (including extension)**  
Quantity: 1



**Dripping chambers**  
Quantity: 5



**Syringes, volume 0.25 mL and 0.3 mL**  
Quantity: 1 each



**Allen wrench size 5**  
Quantity: 1



**Fixation clamp/screw clamp**  
Quantity: 1



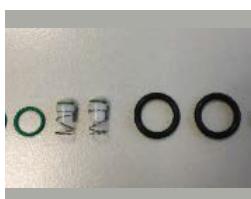
**Breast plate "Layer" type**  
Quantity: 1



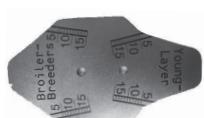
**Breast plate "Breeder" type**  
Quantity: 1



**Reusable needles 18G x 1"**  
Quantity: 12



**Syringe spare parts set**  
Quantity: 2



**Measurement tool**  
Quantity: 1



**Dosage measurement cup**  
Quantity: 1



**Lubrication oil**  
Quantity: 1

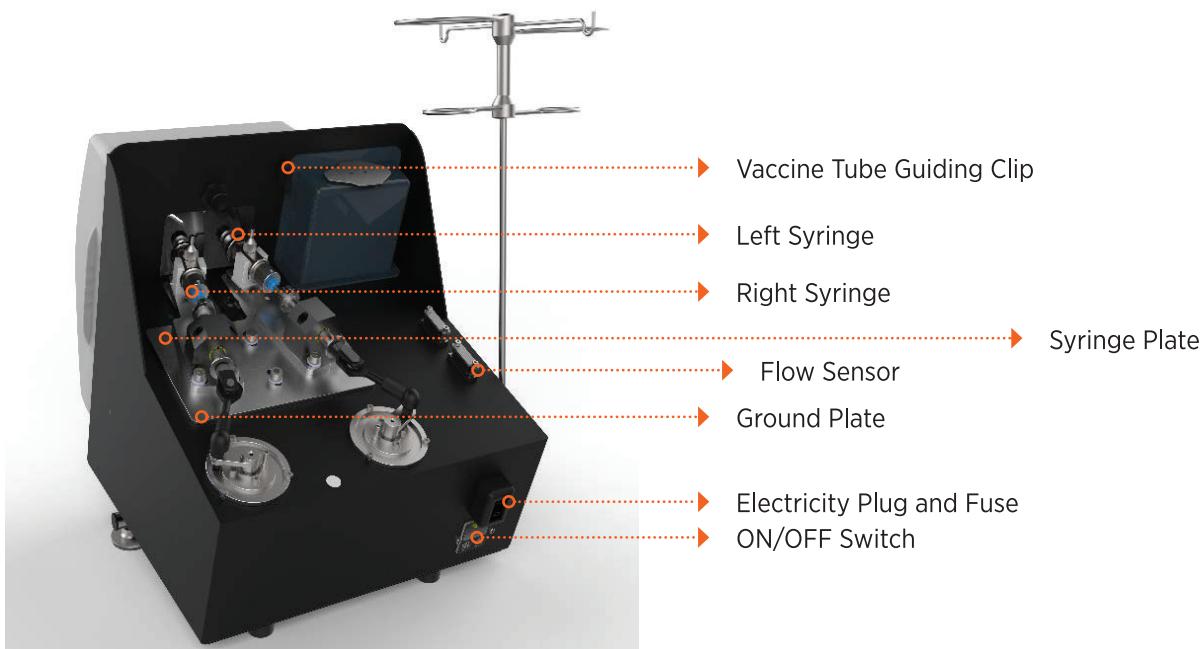
### 3. General information

All settings necessary to operate the device properly, such as adjusting the speed, injection pressure or energy intake, have been made by Henke-Sass, Wolf. Therefore, it is neither foreseen nor necessary to open the lower, sealed portion of the device. Opening the lower part of the machine will change functional settings and lead to malfunction or damage of the device. Please only adjust settings described in the user manual and do not open any undescribed part of the device.

#### 3.1 Front/side view



#### 3.2 Top/back view



### 3.3 Positioning

The Double Breast Vaccinator should be placed on a flat and stable surface at least 12 inches wide and 12 inches deep. It is recommended to affix the Double Breast Vaccinator to an appropriate platform using a screw clamp or an equivalent tool. This will prevent the device from moving or falling during the operation.

### 3.4 Power source

The device is operated by electric power only. Connect the device, using the appropriate power cord, to a power outlet. The machine works with an input voltage of either 110 or 240 volts at a frequency of 50 or 60 hertz.

- \* The device is equipped with a voltage transformer and will work properly without any adjustment needed, no matter if your local network voltage is 110 or 240 volts.
- \* The device does not need and cannot be connected to a pneumatic power supply.

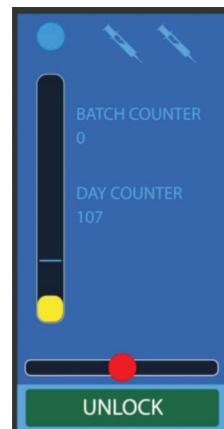
### 3.5 Correct chicken positioning

Position a chicken on the breast plate with its head up. The mold in combination with the device sensors and display will guide you on how to position the chicken properly.

See the display to easily find the perfect position to vaccinate the chicken.

In the operation mode, the display and the device sensors show how to position the chicken:

- Sensor for proper left/right positioning of the chicken
- Sensor for proper breastbone position of the chicken
- Sensor for correct upright position of the chicken



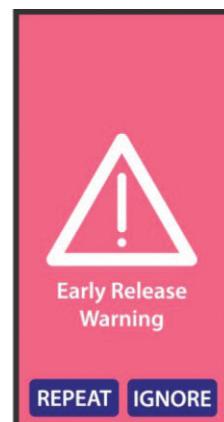
**All three sensor indications will turn green once the chicken is positioned correctly. At the same time, an injection is released and its administration will be confirmed on the display.**

### 3.6 Early release warning

When separating a vaccinated chicken from the breast plate before the injection has been administered properly, a warning appears on the display. To use this function, activate it as explained in Section 4.2.4.

When using the early release warning in combination with the batch counter, the device will be blocked if the sensors detect an early release. The operator will be asked to “ignore” the improper vaccination or to “repeat” the injection. The batch counter will count the failed injection directly in case “ignore” is selected. If “repeat” is selected, the injection will be counted after correct administration is completed.

- \* If the batch counter is turned off, this function will only indicate the “early release” once realized but will not request further action from the user.



### 3.7 Recommended needle size

For good vaccination results, the device should preferably be operated with reusable needles of size 18Gx1" (1.2 x 25 mm). For your convenience, use HSW-ECO® cannulas.



### 3.8 Vaccine vial position

The vaccine vials should be positioned on the vial holder that is delivered with the device. Positioning the vaccine vial at a higher or lower level may cause problems (e.g., leaking or priming failures). During breaks from operation, close the vaccine supply.

### 3.9 Vaccine preparation for administration

Please refer to the package insert accompanying the vaccine or consult your veterinarian for further information.

### 3.10 Dosage settings

On delivery, the device is equipped with two syringes, one each of 0.25 mL and 0.3 mL. Any other dosage setting requires replacement of the syringe with a syringe appropriate for a different dosage volume.

Upon request, Zoetis will supply you with 0.5 mL syringes.



\* It is not possible to adjust the dosage to other volumes without damaging the device.

### 3.11 Dosage testing

Use the measurement cup, which is packed with each device, for dosage testing. The priming function can be used to operate the syringes individually.

For more explanation, see Section 4.1.

### 3.12 Spare parts and consumables

For your convenience, the device is equipped with an assortment of consumables on delivery. Please find a list of all spare parts and consumables for continuous operation in this user manual, Section 8. In case of questions regarding the device, please contact Zoetis.

### 3.13 Single injection/double injection

During the initialization phase, the machine recognizes if it is equipped with one or two syringes. It also recognizes which syringe has been inserted. In case of using only one syringe, the second drive will not be operated. This initialization phase is carried out each time after the device cover is opened or closed.

### 3.14 Position sensors

\* The sensitivity of the sensors is preset in the factory and cannot be adjusted.

Do not, under any circumstances, manipulate the sensors. This causes malfunction and can only be readjusted in the factory.

The Double Breast Vaccinator function for injection release is based on three sensors. These sensors are adjusted to release an injection once their required workload is reached. Therefore, place a chicken in correct position until all three sensor indications on the screen turn green and an injection is released.

### 3.15 Breast plate type

The device can be used with two different sizes of breast plates:

- Layer, indicated with a “L” on the plate
- Broiler Breeder, indicated with a “B” on the plate.

A breast plate for young layers also is available to order separately.



#### Breast plate installation

The breast plate is held in place using the fixtures indicated. To attach the plate, align the connections on the breast plate with the fixtures on the device and move the breast plate toward the device.

#### Breast plate separation

To separate the breast plate, hold it on the left- and right-hand sides and pull it toward you.



### 3.16 Injection angle/depth adjustment tool

Each device is delivered with an internal adjustment tool.

It is located on top of the internal display protection.

The breast plate types are indicated on the measurement tool.

Insert the marked side according to the breast plate in use to find the right settings.



### 3.17 Cover

To remove the cover, hold it with both hands at the back of the device and lift it.

To close the cover, proceed in reverse order. At first, align the cover grooves with the front and then lower the back of the cover until it fits in place.

### 3.18 Air bubble sensor

\* Using a tube with an outer diameter larger than 0.16" will damage the sensors.

\* Using a tube with an outer diameter smaller than 0.16" will cause malfunction.

\* To ensure proper function, use the dripping chambers supplied with the device.

The air bubble sensors will detect either proper vaccine supply or air bubbles in the vaccine tube.

\* An air bubble warning also may be triggered when using a clear diluent. This can be resolved by adding a blue sterile dye to the diluent.

In case the air bubble sensor is not in use, turn it off as explained in Section 4.2.4 to prevent continuous warnings. All detections must be confirmed for further operation. Warnings will appear again after confirming until:

- A tube with vaccine is inserted into the sensor recess
- The air bubble sensor function has been turned off
- The air inside the tube has been removed.



# 4. First steps

The device has been completely assembled and packed by Henke-Sass, Wolf. Before starting to operate, unpack the device and its accessories. Check for damage. See if the materials, listed under Section 2.7, are complete before first usage. Contact Zoetis if the device is damaged or there are missing parts.

## 4.1 Preparation

Place the device on a stable platform (see Section 3.3). Affix it to the platform using the fixation bar and screw clamp provided or an equivalent tool.

The functions, explained in this section, will only be possible with a detached closure.

⚠ For safety reasons, always keep fingers away from moving parts.

⚠ Be aware of needles, syringes and vaccine dispensed at the front of the device.

Select the correct power plug and connect it to the device and the outlet. Remove the cover as explained in Section 3.17. Separate the breast plate from the device as described in Section 3.15.

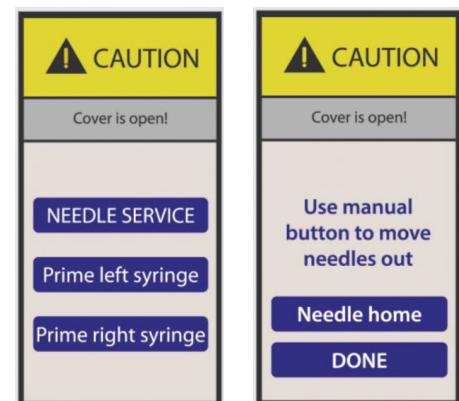
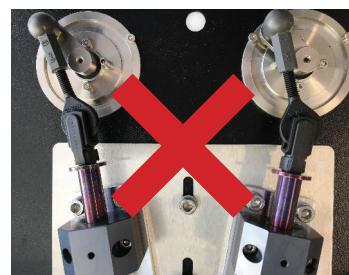
### Initializing

Turn the machine's main switch to position **“On.”** Touch **“Start reference”** on start screen. The machine checks its motor positions. When the warning sound stops, the reference drive has finished.

\* Each time you take out a syringe, please maintain the crank in the correct position, according to the picture at right. If it is not in the appropriate position, the reference drive won't be carried out correctly.

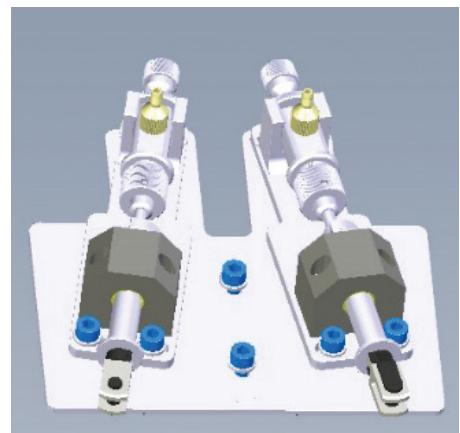
### Install a needle:

- Touch **“Needle service”** on screen.
- Press the manual button to move the syringes to the front.
- Unscrew the needle nut and insert a needle into the nut.
- Screw the prepared needle nut onto the syringe.
- Align the needle so the long side of the tip is facing to the outside of the device.
- Repeat the needle installation on the second syringe as explained above.
- Touch **“Needle home.”** The syringes will retract into the machine.
- Touch **“Done”** to return to the setup screen.



## Adjust the needle angle/length:

- Attach a breast plate to the device.
- Touch “**Needle service**” on screen.
- Press the manual button to move the syringes out.
- Use the adjustment tool to measure the proper settings.
- Touch “**Needle home**” to release the syringe for adjustment.
- To adjust the injection angle, loosen the screws marked in green.
- To adjust the injection depth, loosen the screws marked in orange.
- After adjustment, lock the screws, hand tighten with an Allen wrench, size 5.
- Touch “**Needle service**” on screen and press the manual button.
- Use the adjustment tool again to measure if the adjustments are correct.
- If adjustments are not correct, touch “**Needle home**” and repeat all previous steps.
- If adjustments are correct, touch “**Done**” to return to setup screen.

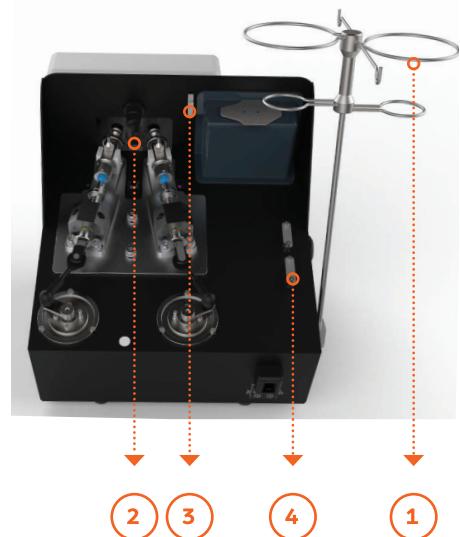
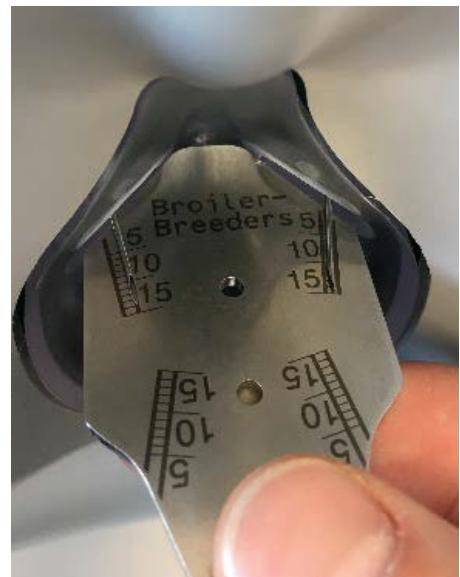


## Priming the syringe:

⚠ Be aware of vaccine dispensed from the front of the syringes!

## Machine-supported priming:

- Take a vaccine bottle and pierce it with a sterile needle before inserting drip tube.
- Place the bottle in the vial holder. ①
- Connect a dripping chamber to the vaccine bottle.
- Attach the vaccine tube to the syringe. ②
- Open the flow control and ensure a free liquid flow.
- Guide the vaccine tubes through the tube-guiding clip. ③
- Guide the tubes through the flow sensor and close the sliders. ④
- Touch “**Prime left syringe**” on preparation screen.
- Push the manual button to simulate one injection and repeat this step until syringe is primed.
- Touch “**Done**” to return to setup screen.
- When working with both syringes, repeat this action with “**Prime right syringe**.”
- Afterward, close the lid and take care that the tubes are not jammed.



## 4.2 Operation settings/display functions

All functions explained in this section will only be possible with the closure attached to the device. It is necessary that the breast plate is attached before the device shifts into operation mode to avoid an imbalance of the force sensor.

### 4.2.1 Home screen

After installation of the closure, the device returns to **home screen mode**, showing the following:

- Number of syringes in use (only after first injection)
- Batch counter
- Day counter
- Sensor load for proper positioning of the chicken:



- Sensor for left/right positioning

- Sensor for breastbone position

- Sensor for correct upright position of the animal

Most of the device settings can be changed to suit user preferences and operational requirements using the display. To make changes, press “**UNLOCK**” for two seconds.

### 4.2.2 Counter settings

**Day counter:** Indicates the number of vaccinated chickens since last reset.

To reset this counter to zero, take the following steps, in order:

UNLOCK

DAY COUNTER

DAY COUNTER RESET?

OK/CANCEL

**Batch counter:** Indicates number of chickens vaccinated since last reset.

When setting batch counter to zero, its function is automatically shut off. To operate the batch counter at a desired setting, take the following steps, in order:

UNLOCK

BATCH COUNTER

ENTER “BATCH SIZE”

“DEL” TO CORRECT

“DIS” TO CORRECT

OK/CANCEL

**Needle counter:** Indicates the number of injections given since last reset. To see and operate this counter, take the following steps, in order:



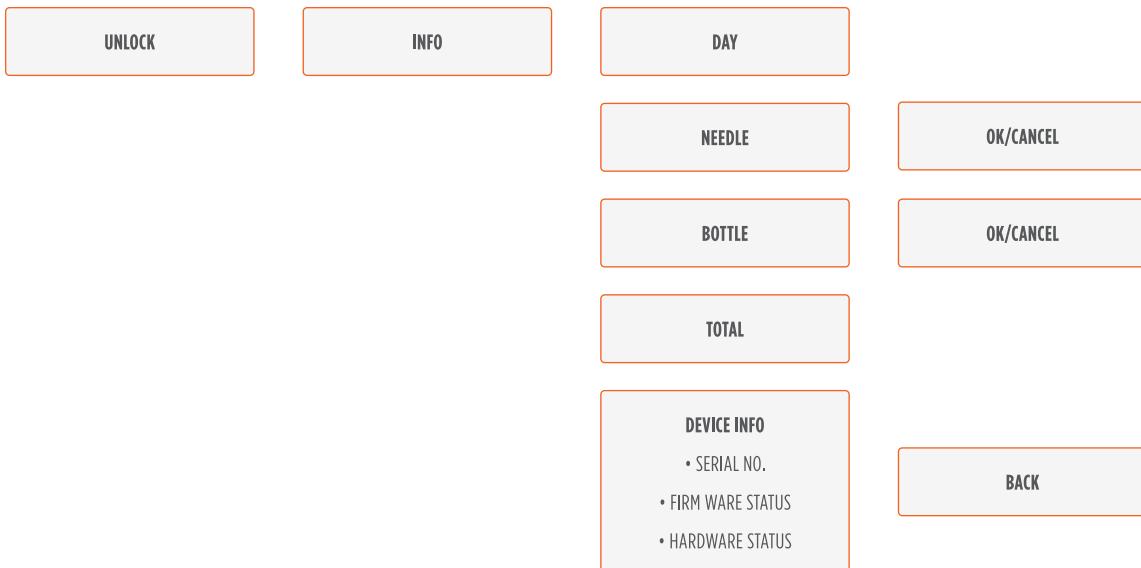
After 1,000 injections, the needle counter will request a needle change. This will be indicated on the touch display. To stop this information, touch OK. Change the needle and reset the counter to zero to continue operation. Without a reset, the counter will count the next 1,000 injections until the warning appears again.

**Bottle counter:** To see and operate this counter, take the following steps, in order:



#### 4.2.3 Info screen

This screen offers, in addition to the information about the counter, some basic device information. To see this information, take the following steps, in order:



**Total counter:** Indicates the total number of injections given with the device.

**Serial no.:** Indicates the serial number of the device.

**Firmware Rev:** Indicates the software status.

#### 4.2.4 Setup screen



**Vaccination sound:** Will emit a sound if this function is turned on.

**Batch counter sound:** Will emit a sound if this function is turned on.

Indicates “Batch is full” on the display.

**Air bubble detection:** Detects air inside the vaccine supply if this function is turned on. Install tubes properly to prevent unnecessary warnings. Ensures all air bubbles are out of tubes before starting operation. Indicates “Air bubble warning” on the display if air has been detected. Check the vaccine supply is supporting proper function. Touch “OK” to accept the warning and continue operation.

**Early release warning:** Will emit a sound if the chicken is released too early.

It is possible to either repeat the injection or ignore the warning.

**Force sensor:** Choose the sensor sensitivity according to the type of chicken.

**Language:** Choose the language according to your preferences.

**Needle service:** Use this function to exchange the needle during operation.

This service is only available after first injection.

# 5. Operation

After following all steps explained in previous sections, the device is ready to use.

\* The first injection after preparing the device will be administered in slow motion to check all internal settings. After the first injection, the device will work at its normal speed.

During operation, the display shows the home screen, which helps guide proper positioning for chicken vaccination. Remember: The three sensors must be at an appropriate level to release the injection. Once this level is reached, the sensor indicators will turn green.

Hold a chicken with the head facing upward and position it to the breast plate in front of the device. The breastbone will enter the concave mold. For support, see the display to find the perfect positioning.

- Sensor for left/right positioning
- Sensor for breastbone position
- Sensor for correct upright position of the chicken

Once all sensors turn green, an injection is released and the proper administration is confirmed on the screen.

## 5.1 Early release warning

A warning appears on the display if a chicken is separated from the breast plate before the injection has been finished. For more information, see Section 3.6, especially when using the batch counter in combination with the early release function.

## 5.2 Air bubble warning

In case of air bubbles inside the vaccine supply, or if a vaccine vial is empty, the air bubble sensors will emit an air bubble warning. This must be confirmed by the user to continue. For further actions, refer to Section 3.18.

# 6. Cleaning

For best disinfection results, this process should take place under sterile conditions. Operators responsible for cleaning and disinfecting the device and its components must wear single-use gloves, disposable coveralls, safety goggles and a disposable mask.

- \* Immersing the device in any liquid will damage or destroy its components.
- \* Do not use aggressive cleaning compounds, such as carbon tetrachloride, trichloroethylene, thinner, acetone or similar solvents, to clean the device. Using these compounds will cause irreparable damage.

## 6.1 Housing part cleaning

Clean all external parts of the device with mild soap or detergent. The device is designed to be waterproof.

1. Turn the Double Breast Vaccinator off.
2. Disconnect the device from the electricity supply.
3. Separate the upper closure from the device.
4. Remove needles from the syringes.
5. Separate the syringes from the device.
6. Wipe all surfaces with clean water to help remove contaminants.

## 6.2 Housing disinfection (without syringe)

Disinfection is required after each vaccination session, when moving the device or its components to different locations and whenever a potential contamination threat must be prevented.

If the device has been cleaned as described in Section 6.1, start at Step 6.

1. Turn the Double Breast Vaccinator off.
2. Disconnect the device from the power supply.
3. Separate the upper closure from the device.
4. Remove the needles from the syringes.
5. Separate the syringes from the device.
6. Depending on the disinfectant used, spray the device thoroughly — with gigasept® FF, for example. Consult the disinfectant manufacturer guidelines for specific disinfectant exposure timespan needs.

7. Wipe the device and all its components with distilled water.
8. Dry all parts of the Double Breast Vaccinator with compressed air.
9. Allow all parts to dry completely.

### 6.3 Recommended cleaning detergents

- Drinking water
- Distilled water
- Mild disinfectant
- Commercial disinfectants at recommended concentrations:
  - Meliseptol®
  - Meliseptol® Foam pure
  - gigasept® FF

### 6.4 Disassembling and cleaning the syringe

1. Separate the syringes from the device, then close and disconnect it from the vaccine supply. Flush the syringe with warm water to wash away all cross-contamination.
2. Disassemble it as shown below.

\* Be aware of small parts and handle all components with care.



3. Each component should be washed in a solution of mild detergent (e.g., rinsing fluid with a pH >5 and <8). Take care to properly clean the seats of intake and exhaust gasket seals. A nylon brush can be used.
4. Rinse all components with warm water again.

## **6.5 Syringe disinfection**

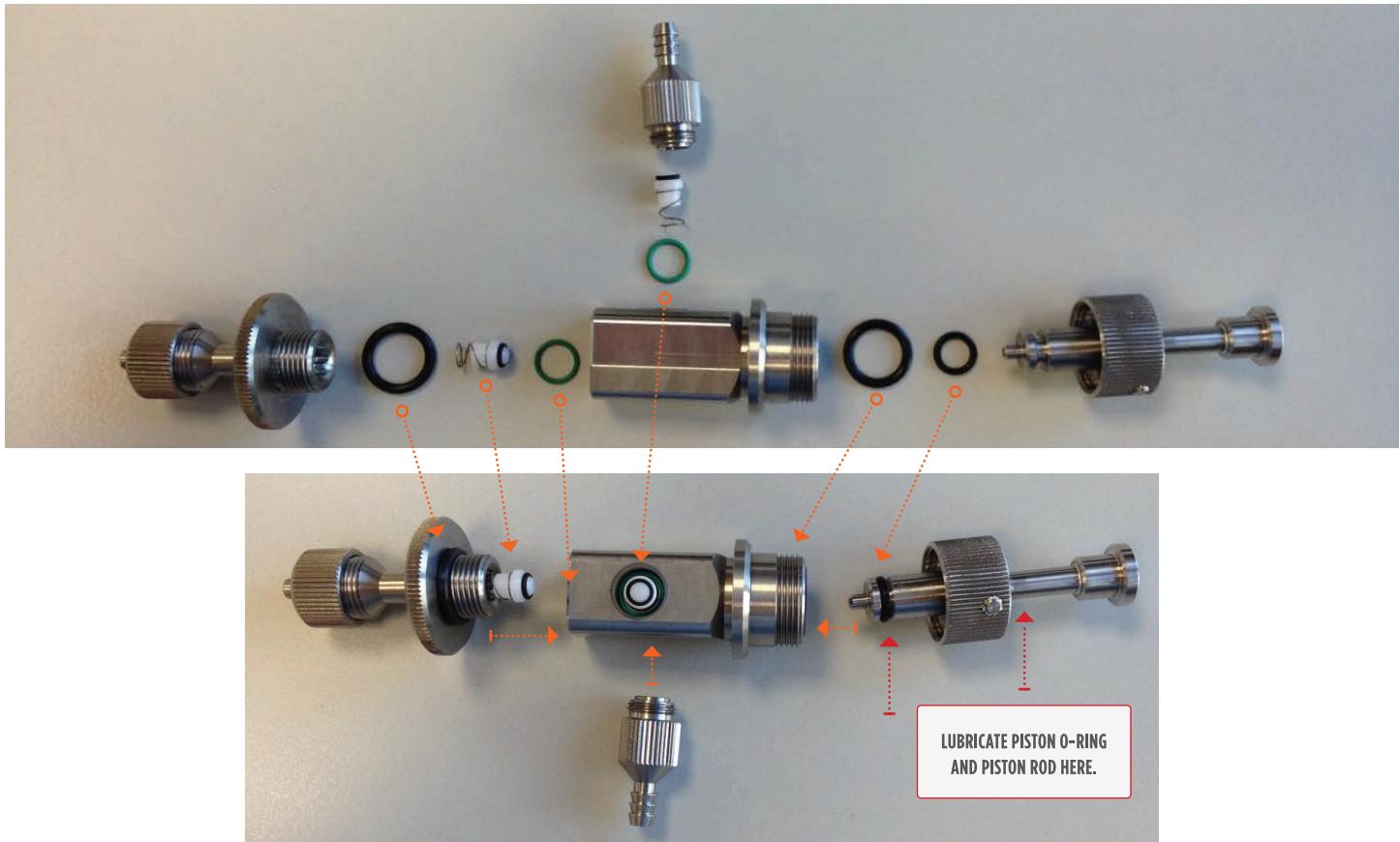
1. Put all parts of the disassembled syringe in a pot.
2. Fill the pot with water and boil all components for 20 minutes.  
**\* Take care that no washer or O-ring touches the bottom of the pot. The bottom of the pot can reach more than 248° F, which may destroy these parts.**
3. After boiling, rinse the syringe with distilled water.
4. Dry all parts with compressed air.  
**\* Moisture within an assembled syringe may cause corrosion!**
5. Replace all spare parts, such as O-rings and valves, with new ones.
6. Apply a drop of oil to the O-rings and piston rod.
7. Reassemble the syringe as explained in Section 6.7.

## **6.6 Recommended detergents for cleaning the syringe**

- Drinking water
- Distilled water
- Ethanol at a concentration lower than 30%
- Commercial disinfectants at recommended concentrations:
  - Meliseptol® Foam pure or gigasept® FF

## 6.7 Reassembling the syringe

After cleaning and disinfecting the syringe, reassemble it as follows:



After inserting all parts:

- Screw the inlet valve into the main body of the syringe. Ensure that the cone valve is upright.
- Screw the outlet into the main body. Ensure that the cone valve is upright.
- Screw the plunger into the main body.

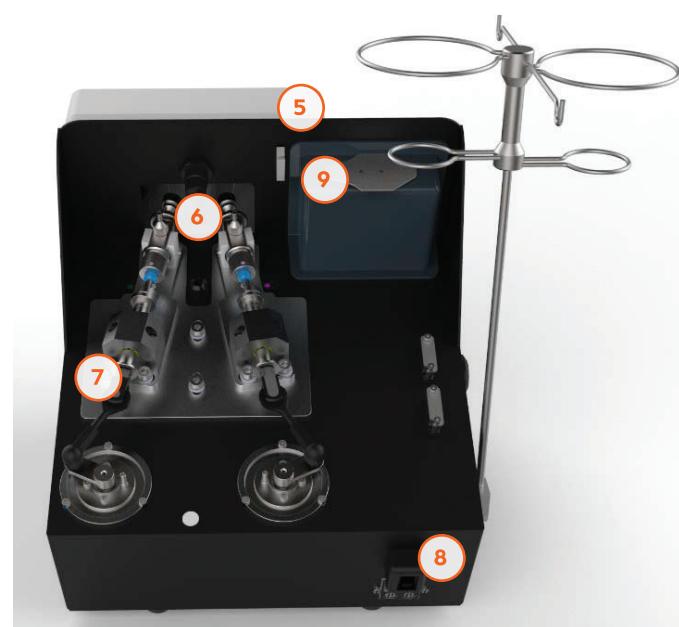
## 7. Service recommendations

In addition to suggested cleaning processes, it is recommended to change certain parts according to the list below:

Item No.	Description	Content	Pieces/set	Replace after
45023565	<b>Spare parts set</b>			
		O-ring 7 x 1 mm	2	100,000 shots
		O-ring 6 x 1.5 mm	1	100,000 shots
		O-ring 10 x 2 mm	2	100,000 shots
		Cone valve includes spring and O-ring	2	100,000 shots
45023566	<b>HSW-ECO® Luer Lock reusable needle (18G x 1")</b>		12	1,000 shots
45023567	<b>Dripping chamber</b>		1	Every day

## 8. Spare parts and accessories

No.	Description	Item Code
1	Closure	45023572
2	Layer breast plate	45023575
2	Broiler-breeder breast plate	45023576
3	Vial holder	45023573
4	Vial holder extension	45023580
5	Cable clip	45023579
6	Syringe 0.5 mL	45023569
6	Syringe 0.3 mL	45023568
6	Syringe 0.25 mL	45023570
7	Adjustment plate	45023578
8	Fuse F 4.0A 5 x 20 mm	45023577
9	Injection depth/angle adjustment tool	45023574
	Syringe spare parts set	45023565
	HSW dripping chamber	45023567
	Reusable needles HSW-ECO® Luer Lock 1.2 x 25 mm/18G x 1"	45023566
	Measuring cup 10 mL	45023582
	Lubrication oil	45023583
	Needle nut	45023571



# 9. Needle adjustment recommendations

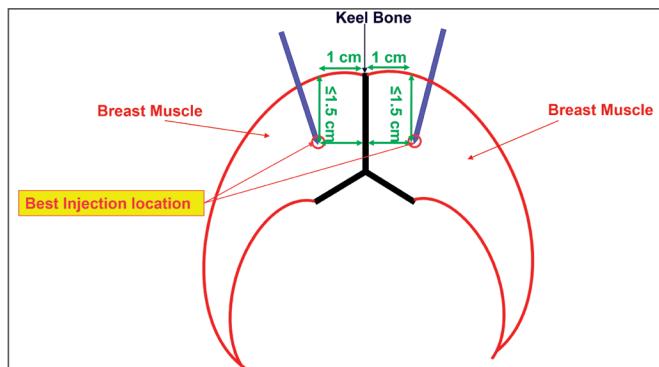
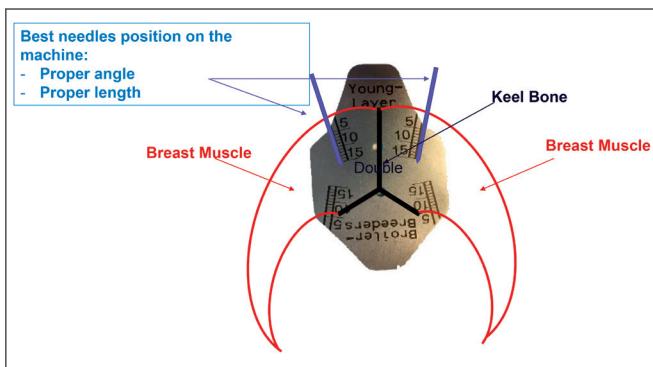
Commercial layer birds older than 11 weeks have bigger breast muscle, meaning wider and deeper breast muscle mass. Based on this, it's recommended:

## For birds older than 11 weeks:

- Use the wider angle, the outer line of the adjustment tool
- Apply a deeper injection, 13 to 15 mm

## Needle adjustment suggestion for birds older than 11 weeks:

- Proper needle angle
- Proper needle length



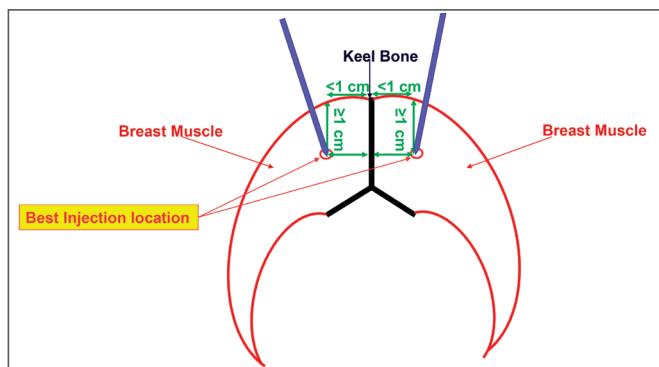
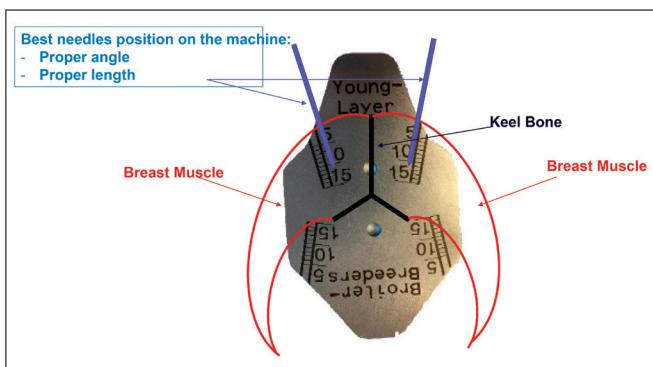
## For birds younger than 11 weeks:

Use the wider angle, the outer line of the adjustment tool

- Apply a deeper injection, 13 to 15 mm

## Needle adjustment suggestion for birds younger than 11 weeks:

- Proper needle angle
- Proper needle length



# 10. Troubleshooting and repair

Refer to the following troubleshooting topics to inform repair needs and help return to proper device operation.



## Motor position timeout due to blocked syringe or piston

- Lubricate piston O-ring (for water-based vaccines)
- Check syringe movement
- Check crank position
- Check condition of plunger



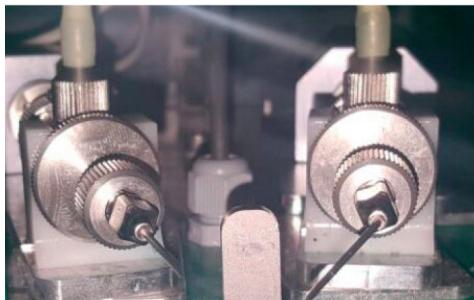
## Cap sensor warning indicates the capacitive sensor is constantly activated

- Check if capacitive sensor is dirty
- Check proper position of breast plate



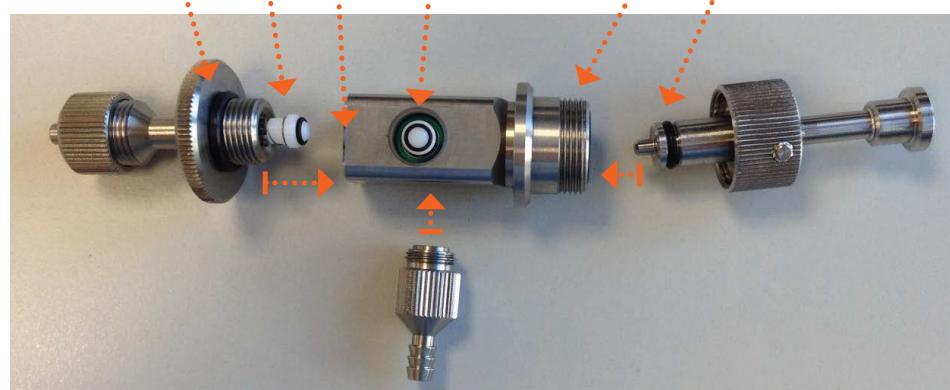
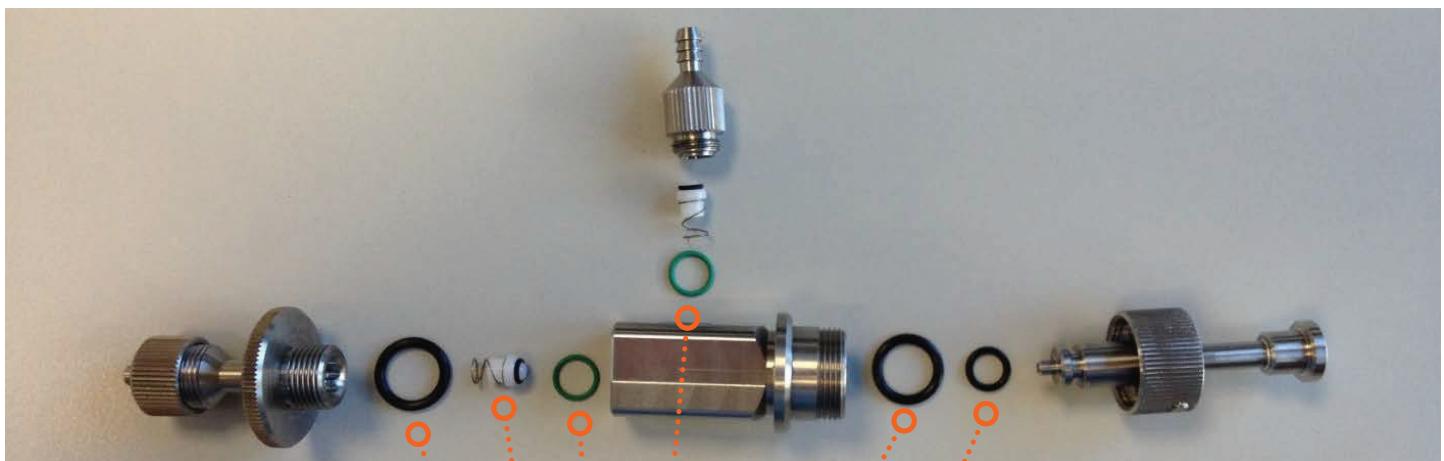
## Pressure sensor is difficult to push or activate

- Turn on the device with the breast plate already attached



### Bent needles

- Check needle length and angle
- Remove birds properly after vaccination (no early release, no dropping)



### Dosage is inaccurate or there are problems priming the system

- Check proper installation of valves
- Check vaccine temperature
- Check dripping chamber
- Clean or replace O-rings and valves

## **Display does not react**

- Turn on the device and simultaneously press manual button

## **Air bubble sensor does not work**

- Check tube diameter of dripping chamber (4mm)
- Check vaccine vial
- Check tube position

## **Broken or damaged parts, such as the following, indicate a major repair may be required:**

- Display
- On-/off switch
- Sensors
- Other

## **Repair support**

For issues not resolved through troubleshooting and operation guidance included in this manual, call the help desk for remote expert support (800-849-3629).

Sharing a video of the device issue with your Zoetis service contact can help diagnose and determine repair steps.

For devices that are part of a vaccine agreement, the Zoetis service contact will provide access to a shipping return label and the device needing repair should be sent to the Zoetis office in Durham, North Carolina. If available, a loaner device will be issued free of charge.

For purchased devices, the customer is responsible for any costs incurred for repair, including shipping, labor, parts, etc.

**Zoetis is dedicated to providing insightful technical support that responds to your business needs. We are here to serve you so your focus is where it needs to be.**

Customer Service representatives are available from 8 a.m. to 5 p.m. Eastern time.

**Customer Service: 855-702-1036**

**Email: [gporders@zoetis.com](mailto:gporders@zoetis.com)**

**Device repair and maintenance support: 800-849-3629**

### **Submit a product inquiry**

For additional assistance and to report an adverse event or product complaint, please call us during normal business hours at **888-ZOETIS1 (888-963-8471)**.

**[zoetisUS.com/poultry](http://zoetisUS.com/poultry)**

U. S. Poultry Headquarters  
1040 Swabia Court  
Durham, NC 27703-8481

Phone: 800-849-3372

Contact your Zoetis representative for availability.