

# VERBA®

*The perfect feeder*

## Variomix

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Advice on grouphousing of sows

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## General

The Variomix is equipped with a rod and a sensor. If the rod is moved up through the nose of the pig, the sensor will detect the sensor rod, after which it will send a signal to the VVC (Verba Feed Computer). The VVC checks whether a waiting time has been set in the VVC and dispenses a portion of feed immediately or after the set waiting time has elapsed. Because the VVC is equipped with a feed curve that can be set in advance, the correct feed delivery per group of pigs per day is ensured. The waiting time and dosage of portions spread over the day ensures optimal absorption and digestion in the stomach of the pig. This creates a satisfied feeling and the pigs are calmer. Parts such as sensors, circuit boards and cylinders of the Variomix can easily be reordered in the verba.nl webshop: <https://verba.nl/shop/>

## Installation manual

When the Variomix is placed and connected, there are various points of attention that require extra attention. Install the Variomix on the basis of the following points:

### Variomix automatic feeder:

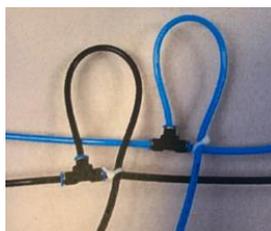
- The Variomix must be installed 100% level.
- Attach the Variomix for piglets and fattening pigs to the floor with 4 mounting angles. Attach the Variomix for sows with 2 mounting angles to the floor and with 2 bolts in the rear wall. The Variomix must be 100% fixed to the floor and wall and may not be mounted "floating".
- The Variomix itself is not an attachment point. Make sure pen fences stand on their own.
- Check that the sensor rod of the Variomix does not come into contact with the sensor. There must be a distance of 2 to 4mm between them, as set at the factory.
- For liquid feed: Make sure that the feed pipe is placed deep in the Variomix funnel and does not end above the funnel. Because the pipe opening in the liquid feed remains in the funnel, it improves hygiene and prevents any bacterial growth.

### VVC Verba Feed Computer:

- Check if the voltage is 220 Volt.
- Do not place the VVC above a heating source or in a damp or drafty place.
- The amount of cables supplied is geared to a standard placement of the VVC in the middle of the house. Cables can be delivered afterwards if it deviates from standard construction.
- Make sure that the pigs can never reach the cabling.
- Connect the Variomix as shown in the connection diagram in the Verba Feed Computer Manual.

### Air installation:

- Provide clean, but above all dry air
- Provide 1 main air line 6 - 7 bar in the central corridor and 1 main air line 3 - 4 bar which can be branched off per section. Make sure the compressor and these main air lines have enough diameter / capacity for all feeders. Ask your (air) installer
- You can connect a maximum of 8 Variomix feeders per branch to the branch of the high and low pressure pipes in the central corridor to the department.
- Connect the blue 6 - 7 Bar air line to the top connection of the cylinder and the black 3 - 4 Bar air line to the bottom connection of the cylinder. It is important that the pressure of the bottom connection must never fall below 3 bar. This is to keep the cylinder high in the closed position. If the pressure drops below 3 bar, the Variomix will empty!
- Prevent moisture in the pipes. Moisture in the pipes will invalidate the warranty. We strongly recommend a compressed air dryer after your compressor.
- Do not place air lines underground. This will certainly give moisture in pipes.
- Make sure that the pipes remain open and do not become too narrow, so that a regular air flow is and remains possible.
- To prevent moisture in the cylinders, we recommend laying the air lines with a loop upwards to the cylinder. See image below:



## **Periodic maintenance and inspection instructions**

For proper operation and the best results of the Variomix, careful work is required. It is important that you regularly carry out and check accompanying matters.

### Maintenance:

- Cleaning is essential for a long life of the Variomix and an accurate feed dosage. Clean the Variomix after each round of fattening pigs or piglets. Clean the Variomix sow group housing at least every 3 months. Especially clean the valve regularly and make sure that it is dry when the feed bunker is filled with feed.
- Make sure that no water or moisture gets into the electrical box. The top of the Variomix and the sensor may only be cleaned with low pressure water.
- Regularly clean the sensor rod at the bottom of the eating area. Check that the distance between the sensor bar and the sensor is between 2 and 4 mm.
- Check regularly for any moisture in the air lines. Moisture is disastrous for the operation of the Variomix and for the lifespan of the cylinders.

### General important requirements after installation:

- When using liquid feed, the feed must be homogeneous and certainly may not be unmixed. If the feed will be unmixed, the Variomix will become clogged and it will not dispense any more feed. To test, take a cup of well-mixed liquid feed. If there is no layer of liquid on top after 3 hours then it is fine. If the feed does drop, it is not good and you should consult with the feed supplier or nutritionist.
- With pellet feed, the length and thickness are important to keep the feed dosage optimal. For example, the length of the grain may not be longer than the thickness of the grain. Too long or too thick granules can block the feed opening or cause inaccurate feed dosing. Granules may be a maximum of 6mm thick and a maximum of 6mm long.
- Make sure the portion weight is correctly set on the VVC. Regularly check the weight of the dose with a scale and measuring cup. Measure how many grams are dispensed per 10 strokes and adjust your data in the VVC if necessary. It is recommended to re-weigh with each feed delivery.
- Always make sure that the number of animals matches what is stated in the VVC. If an animal fails, adjust the group size. If this is not set correctly, the Variomix funnel will empty too quickly or overflow.
- Make sure that the Variomix is set to 24 hours, so that food is available all day long and never let the containers run out completely. This misleads the feed curve.
- Make sure there is fresh and clean drinking water nearby.

## Troubleshooting

In the event of malfunctions and defects, proceed as follows:

- First check the points on the previous page "maintenance and inspection instructions"
- Check whether there is sufficient pressure on the air lines and cylinders. Older pressure gauges may differ!
- Check if the air line is open. If not, open it
- Check whether the air line is moisture-free. If not, dehumidify it and let it dry
- Check if the cylinders and valves are working properly. This can be tested manually on the valve with a screwdriver
- Check whether the power is switched on (are all fuses / fuses intact or the group or ground fault has not switched of)
- Check whether the sensor rod is 2 to 4mm from the sensor.
- Check whether a light lights up in the VVC feed computer on the printed circuit board when the sensor rod comes in front of the sensor on the Variomix. If it does not light up, disconnect the voltage from the relevant sensor. If the light does not light up when the sensor is moved after reconnecting the voltage, check the cables, printed circuit board and the sensor.
- Check that the glass fuses in the VVC are not broken
- Remove the electric plug of the VVC from the wall socket and push it back after 5 minutes
- If there is still a fault, have the VVC measured by a local installation company. Every recognized installation company has equipment for this
- If it is not solved yet, please contact the installer who installed the system for you
- All parts can be delivered afterwards regardless of the age of the Variomix feeding troughs. Webshop address: <https://verba.nl/shop>

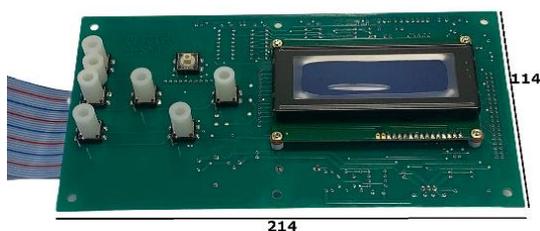
Cylinder 050 long model 50mm 10223390:



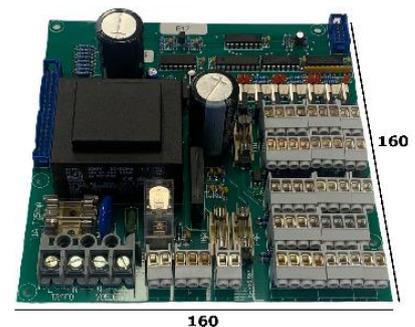
Cylinder 025 short model 25mm 10223388:



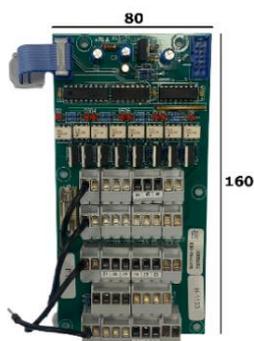
Door print card V00-1013:



Bottom print card V00-1012:



Expansion print card V00-1011:



Sensor with cable V00-1441



## Advice for Variomix for sows in group housing

When you switch from boxes to group housing, we give you the following advice. Switching from boxes to sow group housing requires the necessary attention and good management from the pig farmer in the beginning. We would like to help you with this in order to make this transition as smooth as possible.

1. The biggest change for the sows that come into the group for the first time is learning to interact and tolerate each other. A big change in group housing is no longer eating simultaneously.
2. The first requirement for a good start with group housing is therefore to learn to accept the sows among themselves and to learn how to eat at an early stage.
3. In order to keep the sows calm during the start-up, it is therefore a must to give a little more feed during the first days, and thus to work with slightly shorter waiting times for the Variomix. Sows that do not feel hungry will accept each other more quickly.
4. Provide sufficient light for at least 10 hours a day.
5. When switching from boxes to group housing, it is always better to feed the first round more, the sows move more and the results of the first round will show how the second round should be fed.
6. Use the same food as in the boxes for the first 2 to 3 rounds. Taste and energy changes, simultaneously with the start-up of sow group housing, can have major consequences.
7. After the sows have become acclimatized for the first time, reduce the feed. This generally means setting the feed curve from day 1 to 5 kg per sow and setting the break point 2 on day 15 to 3.50 kg (note these are examples and not exact data) in this way the sows will easily get used to the system.
8. With the switch from boxes to group housing you will certainly look at your sows differently and you will notice the differences in the sows a bit more. You will also begin to see differences that you may not even notice at first. The age difference of the sows in sow group housing is also more noticeable, and this has become clearly visible, especially in (small) stable groups. Do nothing else with it, just keep an eye on the health of your animals. There are always differences in the physique of the sows and you can and should not try to do them. You can learn to deal with it.
9. Sows (especially older ones) that come into group housing for the first time will often run less well, this is due to the muscle pain that the sows get from moving several times, you do not have to do anything with this if it stays that way.
10. Sows in group housing live with less stress and if they can eat freely but limited, they will build up a free condition over time, which results in coarser and finer sows, this is a normal phenomenon and will only affect the performance of the sow because they usually feel more comfortable. So also better results for you.
11. Do not be critical during the first round, and do not remove sows too quickly, because especially with older sows, once back in the box means never back in the group, they never get used to group housing again. It is better to see if the health of the animal remains good. The second round often improves the condition.  
Keep in mind that group housing is a major changeover for some sows.
12. Preferably create a stable group before the 7th day after insemination.
13. Never work with 2 different systems in a group housing together. The sows will never get used to or learn a system. This is always at the expense of the productivity of the sows and that costs you a lot of money.
14. If the sows come back to the boxes for a while (for example 24-28 days) and start to eat simultaneously again, they will have to get used to full feeding during the first days.
15. Always try to keep a breed (type) of sows together in the group, if that is not possible try to keep the sows in approximately equal numbers per breed (type), per group, some breeds of sows are less close to each other and in the group it can therefore cause stress, even if it does not always manifest itself in fighting. Stress is often the first and biggest cause of bad results. Stress always costs money and annoyance. It is sometimes even better in this situation to make smaller groups and split them if possible.
16. Create well-organized stable groups. Clear groups are easier to control, work easier and faster. We advise 40 weaning sows, will be 2 groups of 20 sows.

17. Stable groups are an advantage in all forms, especially because a ranking process does not occur every week and therefore there is much less stress for the animals, but there is also much less work and they are more transparent.