Operation Manual

Big Series Breeding Machine

50039, 50041, 51074–51077, 51271–51274

Fudajo

IT´S ALL ABOUT PETS

Similar to image, may vary depending on model

Read and follow the operating instructions and safety information before use.

Technical changes reserved!
Due to further developments, illustrations, functioning steps, and technical data can differ slightly.

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Introduction

Thank you very much for buying this quality product. To reduce the risk of injury, we ask you to always regard a few basic safety requirements, when using this product. Please thoroughly read the operating manual and make sure that you have understood it.
Keep the operating manual for future reference.

Safety notes

Warning!
This device is not meant to be used by people (including children) with limited physical, sensory, or mental abilities and/or lack of knowledge, unless they are supervised by a person responsible for their health and safety or have been instructed by this person on how to use the device. Children need to be supervised to ensure that they do not play with the device.

Attention!

- Visually examine the device before every use. Do not use the device if the safety measures are damaged or worn. Never override safety measures.
- Only use the device according to the purposes in this manual.
- You are responsible for the safety in the working area. Always keep the working area clean and tidy, to reduce the risk of accidents.
- If the electricity cable or the electricity plug are damaged due to external influences, the cable must not be repaired, but needs to be exchanged. This work must only be carried out by a qualified technician.
- The rated voltage on the type label of 230 Volt AC needs to correspond to the existing mains voltage.
- The device must never be lifted, transported, or attached from its electricity cable.
- Ensure, that the electrical plug connection is in an area protected from flooding and humidity.
- Always pull the electricity plug before carrying out any work on the device.
- Avoid exposing the device to a direct stream of water or rain.
- The operator is responsible for the compliance with local safety and installation requirements. If you are not sure, ask a qualified technician.
- In case of a failure of the device, maintenance work may only be carried out by a qualified technician.
- Read all safety notes and instructions. Non-compliance with the safety notes and instructions can lead to electric shock, fire, and/or serious injury.
- Keep all safety notes and instructions in a safe place, which is always accessible.

Technical data

Temperature range of the display (°C)	0–99
Accuracy of temperature measurement (°C)	±0.1
Humidity range of the display (%)	0–99 RH (relative humidity)
Accuracy of the humidity sensor (%)	±3 RH
Functions	Adjustable temperature control Hygrometer to determine the humidity Humidity display Temperature display Automatic turning mechanism Turning-/ breeding display

Maximum number of eggs

Item number	Quail/pigeon	Chicken/duck
	eggs	
50039	48	
50041	96	
51074	48	12
51075	15	
51076	96	24
51077	48	
51271	144	36
51272	56	
51273	288	72
51274	112	

Surrounding conditions

Voltage (V) / **frequency** (Hz)	230 / 50
Relative air humidity (%)	Between 55 and 75
Surrounding temperature (°C)	Between 17 and 25

The right location

For a good result, place the incubator into a heated room. There should not be any major room temperature fluctuations inside it. Ideally, the room temperature should be between 17 °C and 25 °C.

Additionally, there should be a good ventilation in this area, especially if there are multiple incubators located in this room. There must be an efficient ventilation, as a natural air supply ensures that the developing embryos always have fresh oxygen.

Make sure that the incubator is placed on a flat, even surface and is not in direct sunlight. Place it on a solid surface, which is approx. 80 cm above the floor.

It is recommended to place the incubator far away from heating sources, drafts, and windows, to avoid harmful changes of temperatures. Additionally, the incubator should be placed with the included styrofoam packaging, which provides protection.

General information on breeding

1. How do the poultry eggs must be stored before placing them into the incubator?
Hatching eggs should not be kept longer than ten to twelve days. After that the success rate of hatching is very low. Store the eggs at a cool temperature (8–15 °C) and at a relative air humidity of 75 %. In case the hatching eggs were sent via post, they should rest for at least 24 hours before being placed in the incubator.
Important: The eggs should be stored lying and need to be rotated halfway around their longitudinal axis at least once a day.

2. When is the incubator ready?

The incubator should run for **at least 24 hours before placing any eggs into it.** If possible, let the incubator run for a week without eggs. Thus, you will easily see if all parameters can be adjusted and work as required. Additionally, you will learn how the functions and the adjustments of the incubator work during this time. Nothing is more harmful to the eggs than the wrong incubator adjustments. If everything works accordingly in the testing period, the incubator can be cleaned thoroughly with a suitable disinfectant.

The intended humid and warm climate inside the incubator is a good breeding ground for bacteria and fungi. Not disinfecting the incubator enables the growth of these and poses a threat to the entire brood. **Thus: Before the first breeding and after every new breeding, thoroughly disinfect the incubator.**

You need to make sure that the disinfectant is suitable for the incubator material. Otherwise, the material can be attacked and the hatching process endangered.

Important notice on the parameters: Concerning the term “internal temperature” (“internal”), do not confuse the term “internal temperature” (inside the egg) with “internal temperature incubator.” The internal temperature within the incubator constantly changes up and down. The internal egg temperature thus is the average temperature of the temperature fluctuations inside the incubator.

3. Which temperature should have my incubator?

The required temperature depends on the individual animal species. Every animal species has its own requirements and also amongst poultry there are difference regarding the required temperature during the breeding process. Also, the required temperature depends on the incubator type.

An example based on a chicken egg:
With surface incubator (breeding on an even surface), the breeding temperature is measured on the height of the upper edge of the egg and should be between 38.0 °C and 38.3 °C. If a motorised incubator (breeding process on multiple stories on top of/next to one another) is used, the measured temperature should be at around 37.5 °C at any point of the egg.

An overview of various **poultry** types and the required breeding temperatures:

Type of poultry	**Breeding temperature** (°C)
Chicken	37.4–37.6
Duck	37.4–37.6
Pigeon	38.5
Goose	37.6
Quail	37.6–37.8

Note: A short drop in temperature whilst checking the eggs is usually not a problem for the embryos. It is different with temperatures exceeding the recommended one. These are harmful and even lethal and should be avoided at all costs.

4. Does my thermometer show an exact value?

Thermometers are not exact. Keeping the temperature constant can prove to be difficult, even with good thermometers. If you run a big incubator over a longer period, you can optimise the temperature, regardless of what the thermometer states.
After the first breeding process, the temperature can vary (higher or lower).
With poultry: If the hatching takes places in an early stage, the temperature should be lowered. If the hatching is delayed, it needs to be increased.

How to check the thermometer: Keep notes regarding the time of the brood, as these are a reliant aid. You will soon have the required routine to select the right adjustments and settings for a successful hatch.
Alternatively, an additional thermometer can be placed into the incubator so that you are able to perceive the various temperature differences and to accordingly readjust the incubator temperatures.

5. What must be the amount of humidity?

The required air humidity varies again depending on the brooded type of animal and needs to be changed during the breeding process.
Please inform yourself beforehand to know which requirements need to be met inside the incubator. Here are two examples:

Chicken eggs:
Day 1–18: 50–55 % air humidity
From day 19 on: 70–75 % air humidity

Quail eggs:
Day 1–14: 55 % air humidity
From day 15 on: 75 % air humidity

The air humidity is increased towards the end of the breeding with poultry eggs, it softens the hard membrane inside the egg. Without the increased humidity, the chicks cannot break neither through the membrane nor through the egg shell. Yet, the humidity should not be increased too much either, as the chicks might drown.

Note: The humidity is monitored with a so-called hygrometer. It is nearly impossible to keep the humidity as exact as the temperature, especially in small incubators. Just try to keep it as exact as possible.
The temperature is the significant criteria. Even a small deviation (e.g., a couple of degrees) can ruin the breeding process or lead to a bad result.

Important: The air humidity changes just like the season.
If the breeding is carried out in January and February, it is very difficult to keep the humidity at the desired level, as the external humidity is rather low (depending on the location).
In June and July, the external humidity usually is higher, leading the humidity in the incubator to be higher than desired. To avoid these problems, change the water surface in the incubator: To increase the humidity and thus the water surface, place an additional container with water/a few small moist sponges inside the incubator. Alternatively, the eggs can be sprayed with fine water mist. To reduce the humidity, decrease the water surface and use smaller containers.

6. How long is the incubation time?

Poultry type	**Incubation time** (days) [normal deviation: 1–2]
Chicken	20–21
Duck	28
Pigeon	18
Goose	30
Quail	16–18

7. Poultry eggs: When should I start to turn and at what frequency? From which moment onwards do they not to be turned any longer?

The incubator does not have an automatic turning mechanism; thus, the eggs need to be turned by hand. The embryos are very sensitive during the first days; therefore, shakes should be avoided. This also means that the eggs should only be turned from the fourth day onward. The easiest method of assistance is to carefully mark the egg on two opposite areas, to see to which area the egg needs to be turned to. It is recommended to turn the eggs 5 times a day with a minimum of 90°.

Additionally, the incubator should stay closed within the first three days of breeding, if possible. This allows for a better climate.

Important: During the last two to three days of the breeding process, the eggs must not be turned any longer. As the chicks are finding a hatching position, thus the position must not be changed any more.

8. What is to be paid attention to during the last days of the breeding process?

During the last two or three days before hatching, the poultry eggs must not only not be turned any more, but also the entire incubator needs to stay closed. The humid, warm atmosphere needs to stay consistent during the last days of the breeding, to soften the egg membrane and enables the hatching process.
Note: Most chicks do not cope with a complete collapse of the climate.

9. Poultry eggs: What happens after hatching?

Congratulations, your chicks have hatched! Have a little patience, as the freshly hatched chicks should stay in the incubator for approx. 24 hours longer, to be able to recover and dry off.

Important: Remove the water container. Otherwise, humidity is too high for the chicks and there is the danger of the chicks drowning. Although, the breeding chicks still need the humidity to hatch. This means that you must develop a feeling to choose the best option for both statuses.

If chicks still in the hatching process start pecking the egg from the inside, but have difficulties getting through the eggshell, you can provide a starting aid by carefully opening the eggshell a little bit. It is important to be cautious, not to provide this aid too soon. A lot of times, a wrong humidity can be the reason of which as the egg membrane can dry and get stuck to the chick before it is able to get out of the egg. Thus, the chick cannot turn any longer and hatch.

Note: There must be a sufficient fresh air flow, as the young animals can otherwise suffocate in the closed container. If an integrated air hole is available, it will ensure for fresh air.

Operation

Before the eggs are placed into the incubator, do the following:

1. Open the packaging and check the content on integrity.
   Note: The incubator should stay in the styrofoam packaging. On the one side, this helps to save energy, on the other side the eggs are protected from external influences. If there are no holes for the according connections and switchboards, these need to be added. Carefully use a sharp knife or small saw.
2. Open the lid of the incubator and remove all included parts, except for the turning mechanism.
3. In the lid of the incubator, besides a thermometer and a air humidity sensor, there is a connection point for the turning mechanism cable. Connect the turning motor cable in the lower bit of the incubator into the connection point to connect the electrical circuit.
   Attention! It is important **not** to connect the three cables in the lid of the multi-storey incubators (item no. 50041, 51273 and 51274) with one another! Otherwise, a short-circuit can occur! Two of the cables (in this case the two yellow ones) belong to the upper/lower turning mechanism and the third cable (in this case the red one) is the connection to the central ventilation. This means that every cable inside the lid needs to be connected to the lower part of the incubator.

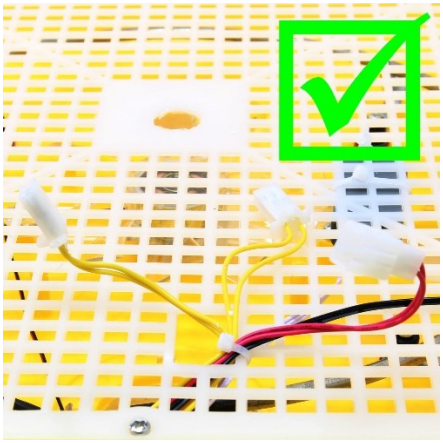


Fig. 1: **Right:** The three cables are **NOT** connected with each another.

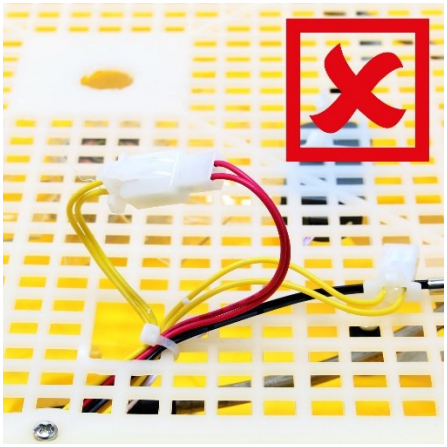


Fig. 2: **Wrong:** Turning motor and ventilation are connected, a short circuit will damage the incubator.

4. If all cables are connected properly, check the compliance of the operating current, stated on the device, with the used mains voltage. If it complies, the device can be closed via the lid, and the electricity can be switched on. The device will now start to heat up to the temperature which can be seen on the control panel.
6. The incubator needs to run empty for at least 24 hours without interruption. In this time, you will be able to get accustomed with all the incubator functions. Check whether all parameters can be set without a problem and learn how adjustments are changes, e.g., turning of the turning mechanism (please see section **"Display, function buttons and basic settings").**
7. Check the individual values by means of an additional thermometer and hygrometer. If necessary, calibrate the values. Test how to keep the desired air humidity at the right level/how much water is required to stay in the desired range.
8. If the incubator works without a problem, and you are accustomed with the functions, unplug the incubator and clean it from the inside and the outside with a suitable disinfectant.

Adding the eggs

1. As soon as the incubator has been cleaned, water can be filled into the incubator grooves. Please note, that the humidity needs to be lower at the beginning of the breeding process and higher towards the end. Thus, only fill a little bit of water into the grooves at the beginning. The incubator has a small hole on the side (see fig. 3), through which some water can be added if required (too low humidity). This allows for the lid to stay closed during the breeding.

Fig 3: Opening for water refill

Note: Please regard the individual requirements of each animal species. Do not fill too much water into the incubator, as it is difficult to remove it once the breeding has begun, and can lead to a negative hatching result. Ideally, you have already at the beginning found out how much water needs to be filled in.
Note: If the humidity is too low, even though both groves are filled with plenty of water, additional containers with water can be placed into the incubator. Please assure that neither the eggs nor the holders get wet. Do not let the incubator stand open for too long when placing the containers, as this can have a negative impact on the hatching results.

2. After having adjusted the desired incubator parameters, the eggs can be placed into the designated insert. Please ensure to place the tip of the egg downwards and that the day display marks 0.
3. Frequently check the incubator temperature and humidity on the control panel, and if required, alter them. Also be aware of the water level inside the grooves; they should always be efficiently filled.
   Important: The insert should not be wet! Otherwise, the hatching results can be negatively impacted!
4. Towards the end of the breeding process, the eggs must not be turned any more. The automatic turning mechanism then needs to be switched off. Thus, either switch the turning frequency or turning duration to 0; it is also possible to put both onto 0 (please see section **"Display, function buttons and basic settings").**

   Alternatively, the electrical connection between the turning motor and the lid can be interrupted by separating the cables.

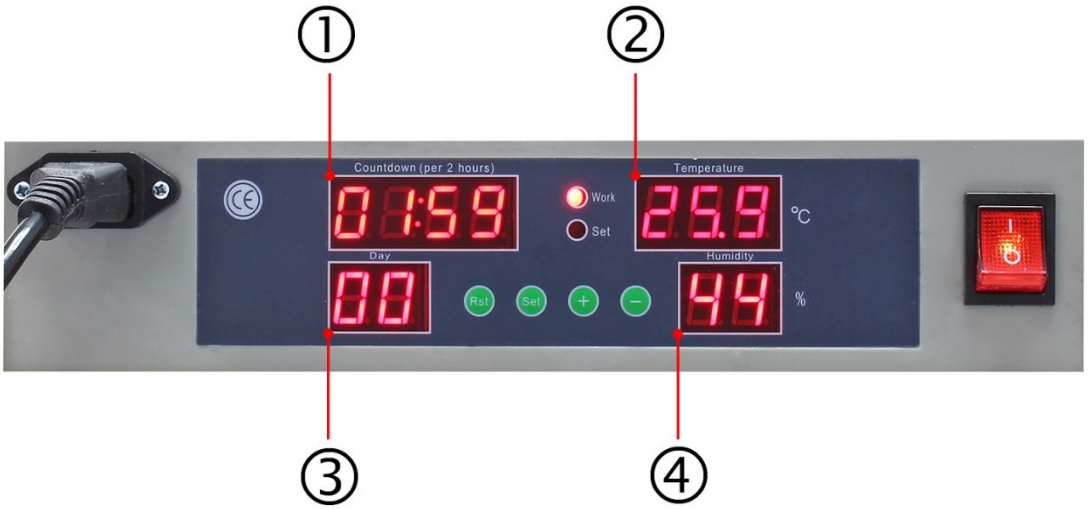
   It is also possible to remove the turning mechanism entirely by opening the incubator, separating both turning motor cables and lifting the turning mechanism out of the incubator. Afterwards, the eggs can be carefully placed back onto the wire insert. Spray the eggs with warm water and store the eggs carefully, yet quickly, so that the humid, warm climate is preserved.

   Important: Please note that the incubator should not be opened towards the end with more sensitive types of birds; therefore, it is recommended not to manually disconnect the electricity supply to the turning motor but to just change the settings accordingly.

5. If the turning function has been switched off and the eggs are not being moved any more, it is important to keep the humidity high. During the hatching process, the lid should remain closed. Water can be added with a jug to avoid the eggshells from drying out.

   When the chicks are hatched, you will need to ensure that they cannot drown, whilst potentially still breeding chicks still need to hatch.

Display, function buttons, and basic settings
(for incubators with item no. 50039, 50041, 51077, 51271, 51272, 51273, 51274)



The connection for the electricity plug is on the left outer corner of the control panel.
On the right outer corner, there is the on/off switch. It is important that the electricity plug is completely plugged in before operating the on/off switch. If the on/off switch is glowing, the incubator is switched on and ready for use.
Besides the four displays (1–4), there are four more buttons which the incubator is operated by (see **"Function buttons description")** and two small lamps that glow while the heater is heating ("work") or when adjustments are being made ("set").

Display 1 shows the turning frequency in [hours:minutes].
Display 2 shows the temperature in degrees Celsius.
Display 3 shows the day.
Display 4 shows the humidity percentage.

Function buttons description
(for the incubators with item no. 50039, 50041, 51077, 51271, 51272, 51273, 51274)

These incubators have four buttons that are required for operation. The buttons and their combination possibilities will be further described in the following. Before turning the on switch on, ensure that the plug is undamaged and connected properly with the according place.

The buttons are positioned as follows from left to right (green and round) in the centre of the operating panel: “rst” (reset), “set,” “+” and “–.”

1. **“Rst” (Reset): This button allows for the turning to be carried out manually.**
   - Push the buttons once shortly: The device will turn the eggs for the time set in display. After that, the counter will reset itself to the adjusted time (in this case 2 hours) and will turn the eggs again after 2 hours.
   - The turning frequency can be adjusted, see table 1 further below.

2. **“Set”: This button allows for the setting of the required incubator conditions.**
   - Push the button once shortly: Adjustment of the basic temperature (parameter ID: PP).
   - By activating the “+” and “–” buttons, the desired temperature can be adjusted, another “set” button push allows the entered value to be saved.
   - Keeping the “set” button pushed: This will lead you into the menu to adjust the basic parameter (see table 1).
   - By activating the “set” button again, the various parameters can be selected.
   - If you wish to alter a parameter, push the “+” and “–” button to adjust the value shown upwards or downward. By pushing the “set” button again, the value is saved.
   - Display 4 will show each parameter via a number/letter combination (parameter ID).
   - Display 2 will show the changeable data.

Basic parameters	Parameter-ID	Adjustment range	Standard value	Note
Turning frequency	F1	0–999 min	120 min	When selecting 0 min, there will be no turning
Turning duration	F2	0–999 sec	15 sec	When selecting 0 min, there will be no more turning
Temperature calibration	F3	According to thermometer		
Humidity calibration	F4	According to hygrometer		
Display of days	F5	0–99	Remember to set the display of days after every breeding back to 0. The incubator will not do it automatically.	

Table 1: Adjustment of the basic parameters via the “set” button

3. **Holding “set “and “+” at the same time will let you enter the menu for fine adjustments (see table 2).**
   - By activating the “set” button again, the various parameters can be selected.
   - If you wish to alter a parameter, push the “+” and “–” button to adjust the value shown upwards or downward. By pushing the “set” button again, the value is saved.
   - Display 4 will show each parameter via a number/letter combination (parameter ID).

- Display 2 will show the changeable data.

Finer parameters	Parameter ID	Adjustment range	Standard setting	Note
Temperature alarm too high	P1	0–99.9 °C	38.5 °C	
Heating stop	P2	0–99.9 °C	37.7 °C	Please note that the radiator will switch off when reaching the value entered, but will still radiate some warmth, and the temperature might still rise a little bit inside the incubator, which means e.g., that a temperature of 38 °C can be reached when setting the temperature to 37.8 °C. If you wish to avoid this, the heating stop temperature needs to be corrected downwards.
Heating start	P3	0–99.9 °C	37.4 °C	
Temperature alarm too low	P4	0–99.9 °C	36.9 °C	
Humidity alarm too high	H1	0–99 %	80 %	
Humidity alarm too low	H2	0–99 %	40 %	

Table 2: Adjustment of the finer parameters via the “set” button

4. **“+” and “–”: Holding both down at the same for a longer moment (approx. 8 s) will reset the incubator to factory settings, a beep will sound.**

Display, function buttons and basic parameters
(for the incubators with item no. 51074, 51075)

On the control panel left outer corner, there is the connection for the electricity plug. It is important to push the plug in well to allow for the proper operation of the incubator. As soon as the plug is connected, the incubator will turn on.

Besides the two display (1 and 2), there are three buttons with which the device is operated (see **"Description of the function buttons")** and two small lights that will glow when the heater is heating ("work") or adjustments are made to the settings ("set").

Display 1 shows the temperature in Celsius.
Display 2 shows the humidity percentage.

Function buttons explanation
(for the incubators with item no. 51074 and 51075)

The incubator has three buttons which are required for the incubator operation. The buttons and their possible combinations will be explained in the following paragraph. Before operating the incubator, ensure that it is properly plugged into the according area.

The buttons are positioned as follows from left to right (green and round) in the centre of the operating panel: "set," "+" and "–."

1. **"Set": This button allows to set the incubator basic temperature.**
    - Push the button once shortly: Adjustment of the basic temperature (parameter ID: PP).
    - By activating the "+" and "–" buttons, the desired temperature can be adjusted, another push of the "set" button allows the entered value to be saved.
    - Keeping the "set" button pushed: This will lead you into the menu to adjust the basic parameter (see table 3).
    - By activating the "set" button again, the various parameters can be selected.
    - If you wish to alter a parameter, push the "+" and "–" button to adjust the value shown upwards or downward. By pushing the "set" button again, the value is saved.
    - Display 2 will show each parameter via a number/letter combination (parameter ID).
    - Display 1 will show the changeable data.

Basic parameters	Parameter ID	Adjustment range	Standard setting	Note
Turning frequency	F1	0–999 min	120 min	When selecting 0 min, there will be no turning
Turning duration	F2	0–999 sec	15 sec	When selecting 0 min, there will be no more turning
Temperature calibration	F3	According to thermometer		
Humidity calibration	F4	According to hygrometer		
Display of days	F5	0–99	Remember to set the display of days after every breeding back to 0. The incubator will not do it automatically.	

Table 3: Adjustment of the basic parameters via the “set” button

2. **Holding “set “and “+” at the same time will let you enter the menu for fine adjustments (see table 4).**
   - By activating the “set” button again, the various parameters can be selected.
   - If you wish to alter a parameter, push the “+” and “–” button to adjust the value shown upwards or downwards. By pushing the “set” button again, the value is saved.
   - Display 2 will show each parameter via a number/letter combination (parameter ID).
   - Display 1 will show the changeable data.

Finer parameters	Parameter ID	Adjustment range	Standard settings	Note
Temperature alarm too high	P1	0–99.9 °C	38.6 °C	
Heating stop	P2	0–99.9 °C	37.8 °C	Please note that the radiator will switch off when reaching the entered value, but will still radiate some warmth, and the temperature might still rise a little bit inside the incubator. This means e.g., that a temperature of 38 °C can be reached when setting the temperature to 37.8 °C. If you wish to avoid this, the heating stop temperature needs to be corrected downwards.
Heating start	P3	0–99.9 °C	37.5 °C	
Temperature alarm too low	P4	0–99.9 °C	37 °C	
Humidity alarm too high	H1	0–99 %	80 %	
Humidity alarm too low	H2	0–99 %	40 %	

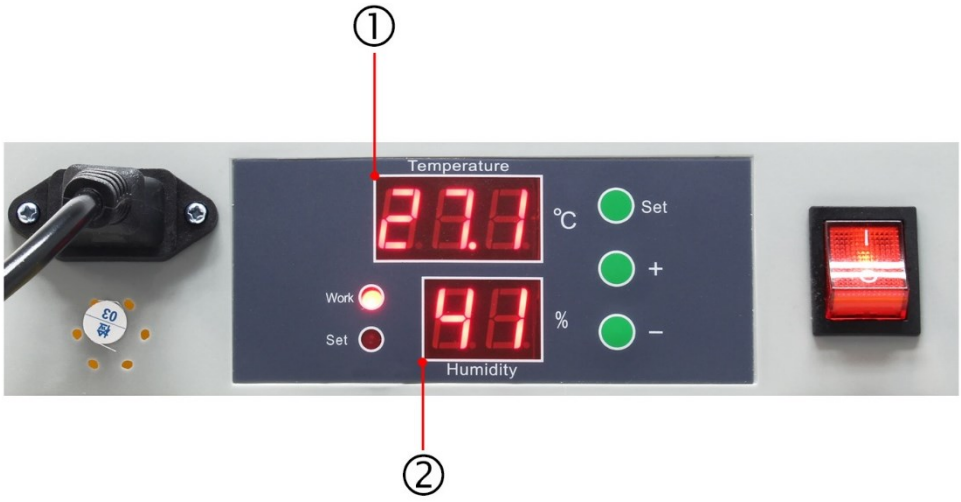
Table 4: Adjustment via “set” and “+” button for finer parameters

3. **“+”: Allows for the turning to be carried out manually.**

- Push the buttons once shortly: The device will turn the eggs for the time set in display 1. After that, the counter will reset itself to the adjusted time (in this case 2 hours) and will turn the eggs again after 2 hours.
- The turning frequency can be adjusted, see table 3 further up.

4. **"+" and "–": Holding both down at the same for a longer moment (approx. 8 s) will reset the incubator to factory settings, a beep sound will sound.**

Display, function buttons and basic settings
(for the incubator with item no. 51076)



On the left outer corner of the control panel is the connection for the electricity plug.
On the right outer corner there is the on/off switch. It is important that the electricity plug is completely plugged in before operating the on/off switch. If the on/off switch is glowing, the incubator is switched on and ready for use.

Besides the four displays (1 and 2), there are three more buttons with which the incubator is operated (see **"Function buttons description")** and two small lamps which glow when the heater is heating ("work") or adjustments are being made ("set").

Display 1 shows the temperature in Celsius.
Display 2 shows the humidity percentage.

Function buttons explanation
(for the incubator with item no. 51076)

The incubator has three buttons which are required for the operation of the incubator. The buttons and their possible combinations will be explained in the following paragraph. Before putting the incubator on by the on/off switch, ensure that the plug is properly plugged into the according area.

The buttons are positioned the following from left to right (green and round) in the centre of the operating panel: "set," "+" and "–."

1. **Set: This button allows to set the basic temperature of the incubator.**
   - Push the button once shortly: Adjustment of the basic temperature (parameter ID: PP).
   - By activating the "+" and "–" buttons, the desired temperature can be adjusted, another "set" button push allows the entered value to be saved.
   - Keeping the "set" button pushed: This will lead you into the menu to adjust the basic parameter (see table 5).
   - By activating the "set" button again, the various parameters can be selected.
   - If you wish to alter a parameter, push the "+" and "–" button to adjust the value shown upwards or downward. By pushing the "set" button again, the value is saved.
   - Display 2 will show each parameter via a number/letter combination (parameter ID).
   - Display 1 will show the changeable data.

Basic parameter	Parameter ID	Adjustment range	Standard setting	Note
Turning frequency	F1	0–999 min	120 min	When selecting 0 min, there will be no turning
Turning duration	F2	0–999 sec	15 sec	When selecting 0 min, there will be no more turning
Temperature calibration	F3	According to thermometer		
Humidity calibration	F4	According to humidity sensor		
Display of days	F5	0–99	Remember to set the display of days after every breeding back to 0. The incubator will not do it automatically.	

Table 5: Adjusting the basic parameters via the “set” buttons

2. **Holding down “set” and “+” together at the same time will open the menu for finer parameter adjustments (see table 6)**
   - By pushing the “set” button again, each parameter can be seen.
   - If you wish to alter a parameter, push the “+” and “–” buttons, to alter the value upwards or downward. By activating the “set” button again, the data is saved.
   - Display 2 shows the individual parameter, which is shown in a number/letter combination (parameter ID).
   - Display 1 shows the changeable value.

Finer parameters	Parameter ID	Adjustment range	Standard setting	Note
Temperature alarm too high	P1	0–99.9 °C	38.6 °C	
Heating stop	P2	0–99.9 °C	37.8 °C	Please note that the radiator will switch off when reaching the entered value, but will still radiate some warmth, and the temperature might still rise a little bit in the incubator. This means e.g., that a temperature of 38 °C can be reached when setting the temperature to 37.8 °C. If you wish to avoid this, the heating stop temperature needs to be corrected downwards.
Heating start	P3	0–99.9 °C	37.5 °C	
Temperature alarm too low	P4	0–99.9 °C	37 °C	
Humidity alarm too high	H1	0–99 %	80 %	
Humidity alarm too low	H2	0–99 %	40 %	

Table 6: Adjustment of the finer parameters via the “set” and “+” buttons

3. **"+": Allows for the turning to be carried out manually.**
   Push the buttons once shortly: The device will turn the eggs for the time set in display 1. After that, the counter will reset itself to the adjusted time (in this case 2 hours) and will turn the eggs again after 2 hours.
   The turning frequency can be adjusted, see table further up.

4. **"+" and "–": Holding both down at the same for a longer moment (approx. 8 s) will reset the incubator to factory settings; a beep will sound.**

Troubleshooting (problems with the chicks)

#	Problem	Possible reasons	Measures
1	Too much egg white or unfertilised eggs	(a) Wrong ratio of male and female animals	(a) Check the mating conditions according to the breeder's recommendations.
		(b) Male animal is malnourished	(b) Feed the roosters separately, so that the chickens do not take most of the food.
		(c) Interruption of male animals during mating	(c) Do not use too many male animals; keep the breeding roosters together; build a non-permanent solid separation wall between the individual breeding coop or separate them within bigger breeding coops
		(d) Damaged combs and gills on the roosters	(d) Ensure that their coop is comfortable and there is enough suitable drinking water.
		(e) Rooster is too old	(e) A young rooster is required
		(f) Rooster has been sterilised	(f) An unsterilised rooster is required
		(g) The egg has been stored for too long or under the wrong circumstances beforehand	(g) Do not keep the eggs for more than ten to twelve days; store them at a cool temperature (8–15 °C) with a relative humidity of 75–80 %. Turn the eggs at least once a day around their longitudinal axis
2	Blood dots which point to an early death of the embryo	(a) Temperature of the incubator is too high or too low	(a) Check the thermometers, thermostat and the electricity, follow the instructions of the manufacturer
		(b) See 1 (g)	(b) See 1 (g)
3	Broken eggshells	(a) See 2 (a)	(a) See 2 (a)
		(b) Eggs were not turned properly	(b) Turn the eggs frequently, at least 4–5 times a day; always turn them into the opposite direction
		(c) Inefficient feeding, if the death rate is high on days 10 and 14	(c) Check the feeding
		(d) Ventilation of the incubator faulty	(d) Increase the air flow by normal means
		(e) Infectious diseases	(e) Only use eggs from healthy stock; check the hygiene measures
4	Eggs which will not hatch	(a) Inefficient humidity in the incubator	(a) Increase the evaporation surface with water or sprays
		(b) Too high humidity at a too early stage	(b) Check the humidity temperature measurements

		(c) Problems with the food	(c) Check the food
5	(a) Hatching too early	(a) Temperature too high in the incubator	(a) (b) (c) Adjust the temperature regulation accordingly/adjust it properly
	(b) Hatching too late	(b) Temperature too low in the incubator	
	(c) Sticky chicks	(c) Temperature in the incubator most likely too high	
6	Deformed chicks	(a) Temperature is too high in the incubator	(a) See 2 (a)
		(b) Temperature in the incubator is too low	(b) See 2 (a)
		(c) Eggs turned improper	(c) See 3 (b); ensure to insert the eggs with the wider part first
7	Chicks with straddled legs	Breeding inlay too slippery/ smooth	Use wire inlay or cover the slippery/smooth ground e.g., with sackcloth
8	Weak chicks	(a) Incubator or hatchery overheated	(a) See 5
		(b) Used small eggs	(b) Only use eggs of average size
	Small chicks	(c) Too low humidity in the incubator	(c) See 4
	Heavily breathing chicks	(d) Too high humidity in the incubator	(d) See 4
		(e) Possibly infectious disease	(e) Bring the chicks to a vet for diagnosis
		(f) Lower the temperature during the time in the incubator	(f) See 2 (a)
	Weak chicks	(g) Ventilation of the incubators is too low	(g) See 3 (d)
		(h) Omphalitis (navel infection)	(h) Clean and disinfect the incubator as well as the entire equipment
9	Do not hatch evenly	Eggs are too different in size and age	Sit the eggs at least once a week and never keep them for longer than ten to twelve days before breeding them, only brood average sized eggs

Troubleshooting (technical problems)

#	Problem	Possible reason	Measures
1	The display has a loose contact/ does not shown anything	(a) Plug is not connected properly to the incubator	(a) Check the plug and push it into the incubator again
		(b) Plug is not properly connected to the socket	(b) Reconnect the plug to the socket and check the placing of the socket
		(c) Too little voltage	(c) Connect the incubator to another socket
		(d) Damaged cable	(d) Exchange the electricity cable
		(e) Loose contact in the display	(e) Check whether the connection pieces are loose (e) Exchange the display
2	Display does not show any numbers	(a) The temperature sensor is broken	(a) Exchange the sensor
		(b) The humidity sensor is broken	(b) See 2 (a)

	but only the same letter		
3	When turning the incubator on, the fuse blows every time	(a) Short circuit due to entered humidity	(a) Incubator needs to be replaced
		(b) Short circuit due to broken air vent (items 50041, 51273, 51274)	(b) Central fan needs to be exchanged (c) The cable needs to be connected properly (see **“Operating: before placing the eggs into the incubator”)**

Disposal regulations

EU guidelines regarding the disposal of scrap electric appliances (WEEE, 2012/19/EU) were implemented in the law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE regulations are labelled with the crossed-out wheeled waste bin logo. This logo indicates that this electric equipment must not be disposed with domestic waste.

The company WilTec Technik GmbH has been registered in the German registry EAR under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic appliances (intended for use in the countries of the European Union and other European countries with a separate collection system for these appliances).
The logo on the item or on its packaging points out that this item must not be treated as normal household waste but must be disposed of at a recycling collection point for electronic and electrical waste equipment. By contributing to the correct disposal of this item you help protect the environment and the health of fellow human beings. The environment and the health of living beings are threatened by inappropriate disposal.

Recycling materials helps reduce the consumption of raw materials.

Additional information on recycling this item can be provided by your local community, municipal waste disposal facilities or the shop where this item was purchased.

Address:
WilTec Wildanger Technik GmbH
Königsbenden 12 / 28
D-52249 Eschweiler

Important note: