

Operating the Thermopack Twin cocks is very simple but please note that for success in hatching operation you must first read the Manual Carefully.

#### General Notes:

- Before putting eggs into the machine, it should work for 1-2 days to make sure that every parts work correctly.
- If you do not have enough experience to use the machine, it is recommended, not to use expensive eggs. Start with some cheap eggs.
- Do not install the machine outdoor and under direct sun light or wind.
- The ideal temperature of the room is between 23-27 degrees, otherwise the output decreases.
- When using air conditioning systems, make sure that the machine is not exposed to the warm or cold wind.
- Enclosed and poorly ventilated spaces are not recommended .It will reduce efficiency.
- There are some inlets under the machine to enter fresh air.

Do not put the machine on the carpet or any floor covering those inlets.

- Please note that the ventilation channel on the machine's door must be open all the time.

- During the hatching period (3last days) especially when some chicks have been hatched, do not open the machine's door.
- Do not manipulate the electronic systems.
- Ideal humidity of atmosphere is between 50-55 percent.

3 issues are involved in this process:

- 1- Egg incubator
- 2- Eggs
- 3- Operator

Do not use old eggs. maximum time of storage eggs is 7 days. Also eggs must be stored in special condition.

Do not store eggs in refrigerator. the best temperature is 18 degrees and humidity is 55%. store them in dark places.

Temperature fluctuation of the environment should not be more than 4 degrees.

If the temperature fluctuation is more than 4 degrees, output decreases.

Before putting eggs in the machine, put them in a warm place for some hours (about 25 degrees) to prevent any shock.

To put the eggs in the machine, make sure that the eggs stand on their head.

Do not wash the eggs; clean them with a dry brush.

Do not use very big or small or abnormally shaped eggs.

Do the egg candling on the 7<sup>th</sup> and 14<sup>th</sup> nights and remove transparent eggs from the machine because they are without embryos and can cause the rest of the eggs be contaminated.

It is suggested that after each period, break the unsuccessful eggs and check out the reason. Note that if after 21 days, eggs still have albumen and yolk it means that they do not have sperm at all.

Do not use any chemical for cleaning the machine.

Incubation process definition:

Incubation process is divided to 2 periods of setter and hatch.

- During setter period, the egg is on the tray and turns. In this period the chick grows inside the eggs. Ideal temperature is 37.7 and ideal humidity is 55-65%.
- In hatch period, chick inside the egg is completed .in this period eggs must be put on the hatch basket. Hatch period for chicken eggs is 3 days.

Egg Candling:

For the diagnosis of fertilized eggs and also to ensure the growth of the embryo, do the egg candling on the 7<sup>th</sup> and 14<sup>th</sup> nights.

- 1-Do the egg candling in a dark room.
- 2- Do the egg candling in a warm room to prevent any shock.
- 3- Make sure that during egg candling the egg is not exposed to intense shaking.
- 4- Do the egg candling in the shortest time.

5- Remove the transparent eggs from the machine otherwise the rest of the eggs will be contaminated.

How can you do the candling?

While looking through eggs on seventh night, you must see blood vessels and black spots, otherwise remove transparent eggs.



On the 14<sup>th</sup> night, if you observe eggs, you must see most of the inside dark, otherwise remove transparent eggs again.

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## Introduction of machine's parts:

- 1- Body: it is made of ABS with 3 cm thickness insulation layer.
- 2- Controller: it has analog controller.

The ideal temperature inside the machine is 37.5 -37.7 degrees and the ideal humidity inside the machine is 55-65%.



- 3- Fan:

Note: The machine's fan must work all the time. check the fan daily and make sure that it works properly.

- 4- Hygrometer:



The ideal humidity is shown with green color.

5- Thermometers: it has 2 thermometers

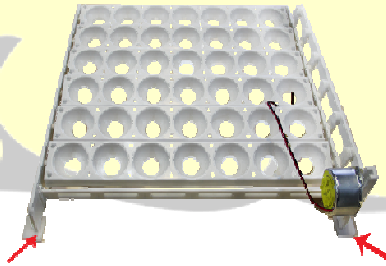


6- Egg Candler : doing egg candling on the 7<sup>th</sup> and 14<sup>th</sup> nights.

7- Tray: this machine has 3 kinds of trays for all kind of bird eggs.  
You can watch the method of changing trays on the video.



This machine has 2 shelves and note that first floor tray is different from the second floor. As shown in the below picture, the tray of the upper shelf has 4 added corners.



Note: Turning the eggs cannot be seen easily. To make sure that the gearbox works, put your hand on it and you must feel its shake and warmth.

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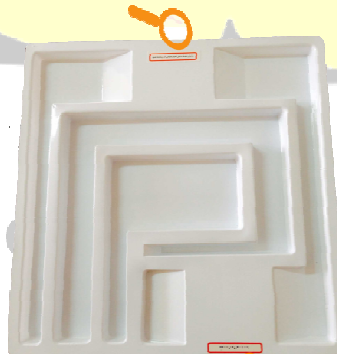


Place of connecting the motor to the digital part is shown in the previous page.

- 8- Water container: It has different grooves. At first only pour water in the middle groove. If after 2 hours humidity doesn't reach to 60%, add water to another groove.

The machine has a special container to help you to pour water so there is no need to remove the tray to pour water. Pour some water in the machine Every 3 days.

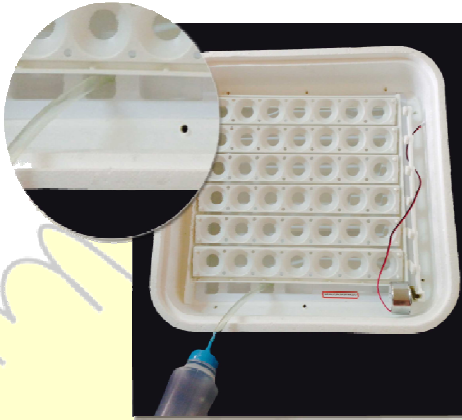
Pour the water in the middle groove



In the direction of gearbox

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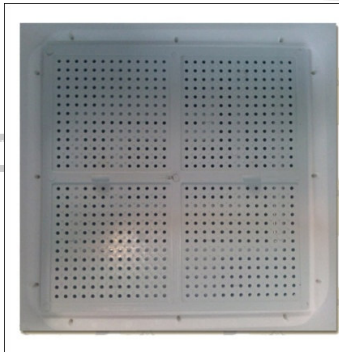
**Gearbox must be in the direction that shows  
on the water container.  
In this situation you can pour water without removing turners.**



- 9- Hatching basket: only put this basket in the machine during the last 3 days. if you do not remove the basket during the first days, humidity does not go up.

Note that the hatching basket of the second floor is bigger.

In hatching period, remove the tray from the machine and put the basket on the water container and put eggs on it.



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### Machine installation:

Put the water container in the machine and pour water in the middle groove.

Put the tray in the machine and connect the gearbox to the digital part.

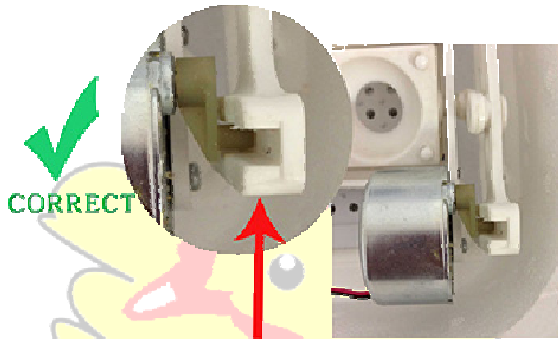


Note: before putting eggs in the machine, let it work for a day to make sure that every part works properly.

Then put the eggs. Eggs must stand on their head. Close the machine door and make sure that air cannot enter.

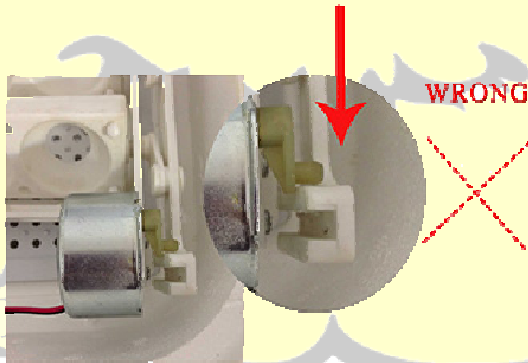
Turn the machine on.

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Gearbox's shaft must be in its place for turning the egg trays

If the shaft exits from its place,  
Gearbox cannot turn the egg trays



Turn the machine on and note the following:

- The fan works with high speed.
- The gearbox is warm and shakes.
- If you turn the thermostat to the right side, the green light of the thermostat must be on.

During the 18 days of setter, every 3 days pour water in the machine.

The ideal temperature inside the machine is 37.5 -37.7 degrees and the ideal humidity inside the machine is 55-65%.

In the 7<sup>th</sup> and 14<sup>th</sup> nights, do the candling with considering all important notes.

#### Setting:

- When the machine is started, the red light comes on and the element gets warm.
- When the temperature reaches 37.5°, turn the thermostat to the left side till the red light goes off.
- Wait for one hour till it reaches 37.7°.
- In case, after one hour, the temperature does not reach 37.5°, turn the volume to the right till the thermostat goes on.
- Note that each millimeter to the right, adds 0.5 degree, but it is shown by the thermometer after half an hour.
- When the temperature is 37.5°, fluctuations between 36° to 38° is accepted. Therefore, do not change the setting.

#### Hatching operation:

- Remove the trays from the machine.
- Pour water in the water container to make sure that there is no need to open machine door during rest of the days.
- Put the hatch basket of the first floor on the water container.
- Put the eggs on the basket without any shake.
- Then put the hatch basket of the second floor.

- Put the eggs on the basket without any shake.

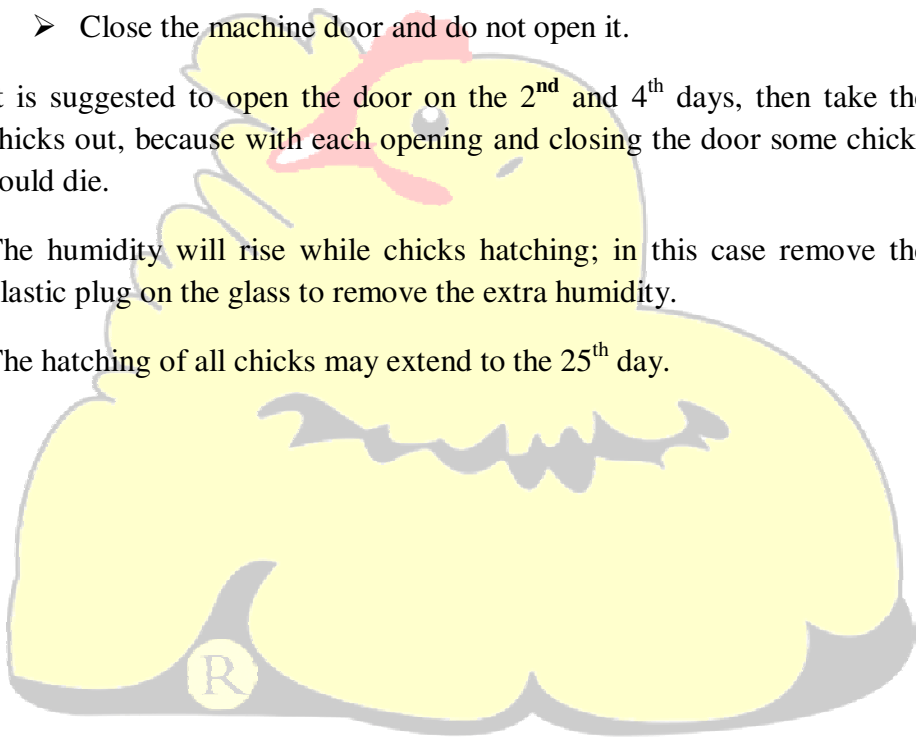
Note: Operation of transferring eggs must be done in a warm room to prevent any shock.

- Close the machine door and do not open it.

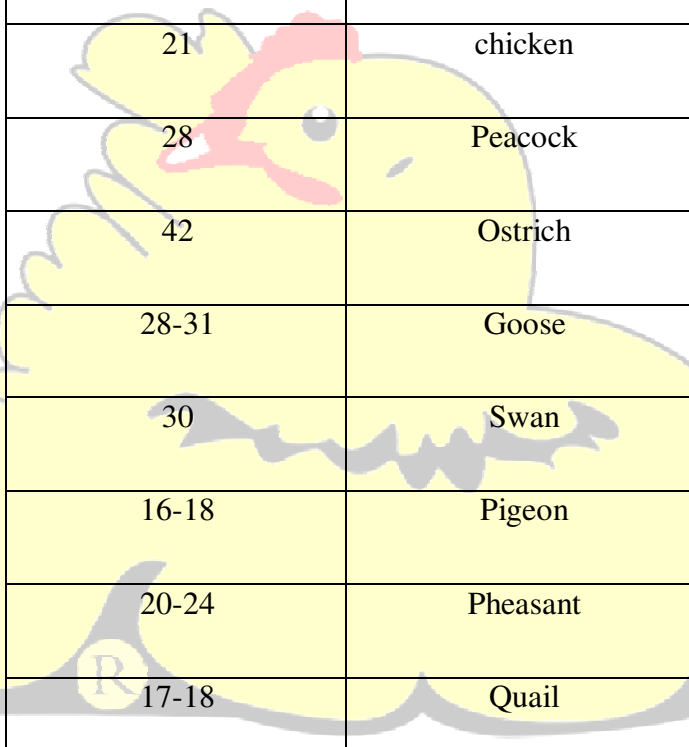
It is suggested to open the door on the 2<sup>nd</sup> and 4<sup>th</sup> days, then take the chicks out, because with each opening and closing the door some chicks could die.

The humidity will rise while chicks hatching; in this case remove the plastic plug on the glass to remove the extra humidity.

The hatching of all chicks may extend to the 25<sup>th</sup> day.



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Period of incubation	Poultry
21	chicken
28	Peacock
42	Ostrich
28-31	Goose
30	Swan
16-18	Pigeon
20-24	Pheasant
17-18	Quail
23-25	Partridge

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