



FULL AUTOMATIC INCUBATOR



AT-352 INCUBATOR

Operating Manual

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Important!

PLEASE READ CAREFULLY THE FOLLOWING RECOMMENDATIONS BEFORE CONNECTING THE UNIT

Instruction of safety:

1. Do not install the equipment in the open nor inside a room which is too humid. Please make sure that in normal conditions the room's remains dry. Ensure that the unit is steadily located on an even, flat and horizontal surface. Do not leave heavy items on the equipment.
2. Please confirm that the available electrical tension is coincident with the one as per stated in the plate of the unit and in the technical information delivered with it.
3. ADHAM Incubators do not have automatic protection devices against short circuits and displacement currents. The users should verify that the electrical power supply to the unit have, in its protection switchboard, the suitable automatic and differential switches, all that in accordance the present electro technical low tension regulations.

The power supply to the unit should be from sockets rated at 13 Amp, 230V, 50/60Hz + earth.

ADHAM incubators do not require any special maintenance, other than the usual requirements for any electrical household appliance. For any service, cleaning, maintenance or repair always disconnect from the mains.

4. General checking out of electrical equipment:

Approximately every three months, please visually check the condition of electrical contacts (connections to the heaters, etc.)

Do not replace original plugs, far from it; do not remove any of them to connect wires without plug. Please contact your official dealer for advice or to install one suitable socket inside regulations.

5. Always unplug the unit from the mains before carrying out any operation on the equipment. Ensure your hands are dry.
6. Do not use any long, thin tool (i.e. screw-driver), inside the fan's protection grill nor in the heater wire connections.
7. To clean and disinfect the unit please refer to the operating manual and use the recommended products. Carefully read the operating instructions and strictly adhere to all safety recommendations.

Discard the cleaning waste in accordance present regulations in the matter of dumping remains of industrial and chemical products.

8. Any unauthorized modification or alteration to the unit carried out without the approval of the manufacturer will invalidate the warranty and the manufacturer will not accept any claim it can be done because that reason.

9. ADHAM incubators have been designed to artificially reproduce natural hatching conditions. They should only be used in accordance with the "Operating Manual". Any other use outside of the as per stated limits will automatically cancel any warranty clause and release ADHAM farm equipment manufacturing LLC from any responsibility

1. Main Features

- 230/240 single phase, 50/60Hz.
- Incubating trays with positioned.
- Setter Trays/ Hatching Basket.
- Manual ventilation.
- High sensitivity electronic temperature thermostat, digital thermometer.
- Automatic turning system once per hour with turning counter.
- The body structure is made with sandwich panel (filled with thermal insulation 50 mm), with strong Galvanized Iron base and Aluminum roof.

AT-352 Technical Specification

Total Setter trays	4
Total Hatching baskets	1
Temperature control	PID digital
Turning system	Auto
Humidity	3 Water trays
Ventilation	Manual
Power (Watt)	300
Voltage (V) Freq. (Hz)	220 - 240 volt/50 - 60 Hz
Dimensions L*W*D(cm)	72.5L x 74D x 100H cm
Weight	40 Kg.



Controls unit

2. Positioning of Incubator

We recommend keeping the temperature in the room where the incubator is located at between 22°C to 28°C. It is important to maintain proper ventilation.

You can find air dehumidifier on the market, although in the most cases the best solution is to install an air conditioning device in order to achieve the control of the temperature within the limit of 24°C and at the same time to diminish relative humidity in the air. The incubator must be placed on top of a horizontal surface (on the floor).

- **Please ensure that electrical power is 230V 50/60Hz, single phase + earth.**

3. Start-up

On the upper part of the incubator the following controls can be found: (see controls photograph)

1. Long Press **POWER** for 3 seconds to turn on/off.
2. Press **SET** key to change temperature and humidity setting.
3. (~) to increase the set value. Long press for fast set. And (~) to decrease the set value. Long press for the fast set.
4. (↵) **ENTER** key to confirm the settings.
5. Short press **RESET** to cancel and return.
6. Press **LAMP** button to turn inside lighting on/off.



Do not plug this unit to the mains without automatic and differential protection and Herat connection.

4. Storing of the eggs

In order to achieve good incubation results, it is essential that the eggs be properly handled before they are placed in the incubator. Experience has shown that the eggs should be stored for a maximum of 7 days and the temperature should be between 12°C to 16°C with relative humidity at 50% to 60% Rh. It is advisable to place the eggs in special storing trays with the air sack upwards and with a turning that will later be utilized in the incubator can be used.

Dirty egg must be discarded or at any rate, if one were to try to use it as a hatching egg. It would be suitable to use some kind of brush and try clean it in dry conditions.

5. Loading the eggs inside the incubator

Once you have checked that the machine is working properly then you can proceed to load the eggs. Please put special attention on introducing the trays right up to the bumper so that they do not project outside of their holders. Normally, loading will take place every 5 days, (this depends on the species of eggs to be incubated). The position of the eggs to be important since it influences the hatch rate. The eggs must always be placed tip down, that is to say with the air sack upwards.



Do not load egg with turning system on.

6. Turning system

- To start the turning system on AUTO, turn the switch to right or left.
- To stop the turning system, point the switch into middle position.

7. Candling eggs

In general, after the 7th day of the incubation period, egg candling can be carried out. This operation consists of looking through the eggs against the light in order to eliminate unfertilized eggs or those that are aborted. This can be done using an egg Candler of whom we have several types available. For easy operation the room should be quite dark.

Fertilized eggs have a dark spot from which reddish filaments emerge, (thus giving the appearance of a spider) with mobility of their own or by slightly tilting the eggs.

Eggs with an aborted embryo show a blackish spot in the form a semi-circle that is stuck to the shell. Unfertilized eggs appear totally clear and must be removed along with the aborted eggs.

8. Temperature

The recommended temperatures for the incubation are the following:

Bird	Setter/ Hatcher Mode
Chicken	37.5°C
Quail	37.5°C
Turkey	37.5°C

Temperature control systems are factory adjusted with great precision.

Do not use any other type of thermometer because it would lead you to false temperature verification readings.

9. Humidity

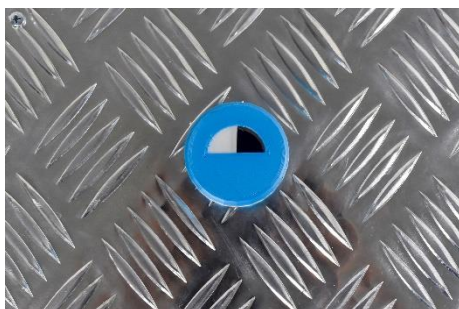
To give embryos the correct humidity please make sure that the Water Trays always contains water. (We recommended to change water every 3 days)



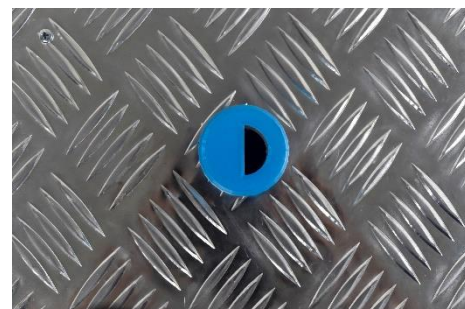
Water Trays

10. Ventilation

- AT-352 top side has an adjustable ventilation vents.
- It is recommended that 50 % of ventilation vent has to be open during the incubation period for stable humidity and temperature.
- In case of humidity or temperature issues, ventilation vent could be changed accordingly to achieve stable humidity and temperature.



Recommended 50% Ventilation



100% ventilation

11. Hatching

During the last three days of the incubation period, the hatching of the chicks takes place. During these days the eggs should be placed on the hatching trays, they have to be placed in a horizontal position and should no longer be turned.

All chicks must be taken out of the hatching trays at the same time and only when they are totally dry. This takes place 24hrs after the hatching period.

12. Incubation period for different species of birds

Bird	Setter	Hatcher
Chicken	18 days	3 days
Quails	15 days	3 days
Turkey	25 days	3 days

13. Fertility and incubation

There are many factors to bear in mind in order to achieve the maximum hatching rate. It is impossible to consider this subject in depth within these instructions, as it is a very complex matter. However, it is useful to understand that both fertilization and the later development of the embryo during incubation of the egg could be affected by a number of factors to a greater or lesser extent. A few of these factors are listed here though this is by no means an exhaustive list:

- Parent's feeding.
- Correct proportion between males and females, according to each bird species.
- Habitat where the birds are to be kept.
- Correct morphology of the eggs to be incubated.
- Proper storage of eggs prior to incubation.
- Parent's age.

14. Cleaning



Un-plug the unit from the mains before making any operation inside it.

After every hatching it will be needed to clean thoroughly the bottom and all the inside parts of the unit.

- Completely disconnect the incubator from the power supply.
- Should also clean the hatch tray and the bottom of the machine.
- Do not spray direct to the Electrical Parts.
- Do not use caustic products for this operation: bleaches, acids, etc.

15. Disinfection

This section is of special importance and should be treated from various aspects:

1. Disinfection of the material:

Setter Trays/ Hatching Basket, water moisture trays, incubator walls, etc..... We suggest you use active disinfectants, but not corrosive ones that would attack the material.

2. Disinfection of the eggs:

At large premises, it may be very convenient to have one disinfecting chamber available. Please if\when necessary ask to ADHAM technical service for the additional details of these points since this does vary according to species, number of eggs available and operating system of the entire process.



Before using any product, please make sure about its suitability on the material where has to be applied.

16. Technical assistance

Obviously, these instructions are not a perfect incubation manual, nor do they pretend to be, there are other points that could be dealt or extended upon; however, our only wish is that they serve as a starting point or guideline for the most important operations, these being the ones that could possibly influence the good results of the incubation.

At our ADHAM technical assistance service we are happy to be available to you in order to provide any information or to solve any doubts you might have.

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17. Get to know your Incubator parts

