Incubatrici Borotto®

Instructions manual for the artificial egg incubator

REAL series incubators

REAL 12 SEMI AUTOMATIC 	***REAL 12 AUTOMATIC*** 	
REAL 24 SEMI AUTOMATIC 	***REAL 24 AUTOMATIC*** 	
REAL 49 SEMI AUTOMATIC 	***REAL 49 AUTOMATIC*** 	

Contents

Declaration of conformity

The undersigned Andrea Borotto, as legal representative of the company INCUBATRICI BOROTTO®
with registered office in Via Papa Giovanni Paolo II, 7 37060 Buttapietra (VR) Italy
VAT 03787910235

DECLARES

That the product as per label shown below:

Is intended for the use: incubator for animal eggs, specifically: hen, pheasant, turkey, guinea fowl, quail, grey partridge, partridge, goose, Muscovy/common/wild duck, peacock, rock partridge, pigeon, Virginia quail, exotic birds and birds of prey.

And conforms to the following directives:

- Directive 2014/35/EU known as Low Voltage Directive.
- Directive 2014/30/EU known as "Electromagnetic compatibility Directive".
- Directive 2011/65/EC ROHS II

The products are made in compliance with the following standards:

- Standard CEI EN 60335-1:2012 Safety of electrical appliances for household use and similar – Safety – Part 1: General Regulations.
- Standard CEI EN 60335-2-71:2005 + A1:2007 Safety of electrical appliances for household use and similar – Safety – Part 2: Special regulations for electrical heating appliances for animal husbandry.
- Standard EN 55014-1:2006 + A1:2009+A2:2011
- Standard EN 61000-3-2:2015
- Standard EN 61000-3-3:2014
- Standard EN 55014-2:1997 + A1 :2001 + A2:2008

The declarant

BOROTTO ANDREA

Verona Italy, 01/01/2015

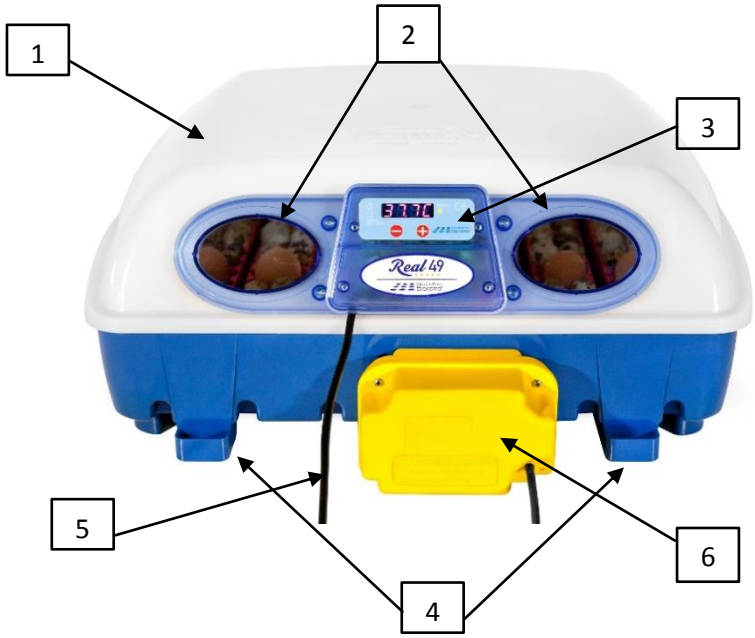
Attention, prior to performing any operation, carefully read the instructions manual.

1 – Presentation of the manual

This manual contains the instructions for the installation, maintenance and use of Model Real egg incubator.
The manual consists of various sections, each one of which deals with a series of topics, divided into chapters and paragraphs. The general index lists all the topics dealt with by the entire manual.
This manual is intended for users of the equipment, and concerns its technical life after its production and sale.
In the event it should be subsequently be transferred to third parties for any reason (sale, loan for use, or any other reason), the incubator must be delivered complete with all the documentation
This manual contains proprietary information and may not be, even partially, provided to third parties for any purpose and in any form, without the prior written consent of the manufacturer.
The manufacturer declares that the information contained herein is consistent with the technical and safety specifications of the egg incubator the manual refers to.

2 – Technical features and specifications

Incubator model	REAL		
Type of eggs to be incubated	hen, pheasant, turkey, guinea fowl, quail, grey partridge, partridge, goose, Muscovy/common/wild duck, peacock, rock partridge, pigeon, Virginia quail, exotic birds and birds of prey.		
Rated Voltage and Frequency	Single phase, 230 Volt CE - 50/60 Hz		
Maximum power	45W Real 12	100W Real 24	150W Real 49
Average daily consumption	Max. 0.5 kW/24H Real 12	Max. 1 kW/24H Real 24	Max. 2 kW/24H Real 49
Display	Digital temperature control with decimal point		
Ventilation	Turbine		
Thermostat	Electronic precision +/-0.1°C		
Range	Temperature modifiable from Min. 30°C to Max. 40°C		
Humidity in the incubator	45-55% with water in one tray 60-65% with water in both trays		
Dimensions and weight of Real 12	32x36x26 cm – Weight: 2.92 Kg		
Dimensions and weight of Real 24	50x38x26 cm – Weight: 3.85 Kg		
Dimensions and weight of Real 49	58x57x25 cm – Weight: 5.5 Kg		
Capacity of Real 49	49 eggs placed in the cell device or 196 small-sized eggs (such as quail eggs)		
Capacity of Real 24	24 eggs placed in the cell device or 96 small-sized eggs (such as quail eggs)		
Capacity of Real 12	12 eggs placed in the cell device or 48 small-sized eggs (such as quail eggs)		



Note: demonstrative photo equivalent for all models of the REAL series

Component No. 6 is an accessory that may be supplied already installed according to the required model.

Note: demonstrative photos equivalent for all models of the REAL series

1	Cover
2	Inspection window
3	Control panel
4	Tray filling nozzles
5	Electrical cable
6	Automatic egg turning unit (accessory – may be supplied already installed according to the required model)
7	Egg tray element
8	Element joint rod
9	Bottom grate to be only used at hatching (last 3 days)
10	Digital display
11	Resistor on LED
12	Temperature control buttons

3 - Identification plate

The equipment is fitted with an identification plate showing the equipment's identification details and the main technical specifications.

Incubatrici Borotto®

INCUBATRICI BOROTTO
Via Papa Giovanni Paolo II, 7/A
37060 Buttapietra (VR) Italy

MODEL REAL INCUBATOR

Year XXX Code RXX
Serial number XXXX
Weight XXXXX
Maximum power XXXX
Voltage 230 V 50/60 Hz IP 24
Made in Italy

4 – Warnings for safe utilisation

When using electrical appliances it is always required to adhere to some basic safety precautions, including the following:

1. **READ THE INSTRUCTIONS IN THEIR ENTIRETY.**
2. Use the appliance only with electrical system features complying with the label affixed on the appliance and with this manual.
3. Do not touch hot surfaces (there is a resistor). Wait for at least 10 minutes even after switching off in the event you should need to access hot parts for cleaning or maintenance.
4. Do not place this unit close to heat sources and do not cover it with other objects.
5. Keep away from the reach of children.
6. Do not leave the appliance unattended for long periods of time when it is connected to the power mains.
7. To prevent electrocution, do not immerse the base in water or other liquids.
8. Detach the plug from the power socket when the appliance is not in use and/or prior to opening (lifting the cover plate) and cleaning.
9. Do not use the appliance with damaged cables or plugs, or appliances that have been dropped or damaged in some way. Consign the appliance to the nearest authorised service centre requesting check, or repair.
10. Use of accessories not recommended or not sold by the manufacturer is forbidden.
11. Do not use outdoors and do not move the appliance when in operation.
12. This appliance is not intended for use by persons (including children) with limited physical, mental or sensory abilities or lacking experience and knowledge, or not trained on the use of the appliance by a person responsible for their safety
13. The training of appliance users should be documented.
14. Always begin utilisation by preliminarily checking the condition of external cables then plug the appliance in the power socket. To disconnect the unit unplug it from the socket.
15. During utilisation place the appliance on a horizontal surface, stable and well aerated.
16. Children must be supervised to ensure they do not play with the appliance.
17. Even when the appliance is not in operation, unplug it from the power socket before inserting or removing individual parts or before performing cleaning.
18. Do not cover internal and external parts to prevent seriously damaging operation of the product.
19. To unplug the appliance, hold the plug directly and extract it from the wall outlet.
20. Do not use the appliance if the power cable or plug are damaged, or if the appliance is faulty; in this case, take it to the nearest authorised service centre
21. Any modifications to this product, not expressly authorised by the manufacturer, may involve deterioration of the safety and forfeiture of the warranty on its use by the user.
22. STORE THESE INSTRUCTIONS WITH CARE.

Warning symbols used on the product and in this manual

Symbol	Description
	Obligation not to cover the appliance during operation
	Presence of live parts with consequent electrical hazard
	Presence of hot surfaces, fire hazard
	Obligation to read the operating instructions before using the product

5 – General information

The REAL series incubator has been designed for hatching chicks of hen, pheasant, guinea fowl, quail, grey partridge, grouse, ducks (Muscovy/ common/wild duck, goose, etc.), peacock, turkey, rock partridge, pigeon, Virginia quail, exotic birds and birds of prey.

Semi automatic version incubator: it is fitted with a semi automatic system to tilt eggs, operated from the outside via a lever connected to the cell device located in the base of the incubator.

Automatic version incubator (with automatic egg turning motor): it is equipped with an automatic system to tilt the eggs actuated from the outside via a motor that performs a complete cycle in 2 hours.

The heat required for incubation is generated by an electrical resistor controlled by a latest-generation digital PID microcomputer control that makes it possible to regulate in a constant and precise manner the average internal temperature, setting it with the buttons on the control panel.

Ventilation takes place by means of a turbine fan that distributes the warm and humid air evenly. The natural surface humidification takes place thanks to the water contained in the trays stamped on the bottom of the incubator, which are filled via the two outer nozzles - a convenient system so the incubator does not require opening any longer.

6 – Selection and preservation of the eggs for incubation

It is recommended to incubate eggs from one's own farm. Eggs that have travelled for kilometres with couriers will have less than 50% hatching due to factors of travel stress, vibration, temperature changes, embryos that have died from asphyxiation because eggs that are closed inside packaging do not breathe! If you have actually taken eggs that have travelled, let them rest on an egg platform for at least 24 hours with the tip downwards before incubating them.

Choose eggs from breeders that are well developed, well fed and healthy.

NOTE: <u>The breeders must not be inbred</u> (no brothers, i.e. the males must always arrive from another farm), as they would result in eggs containing weak embryos destined to die in the process of hatching (the chick grows, but remains trapped inside the egg as it is weak and does not have the strength to break the shell to hatch), nature is very selective and does not allow vulnerable creatures to be born!

The breeders must be sexually mature, and the males must be present in the right proportions with respect to females, adhere to the information given in the following table

	PROPORTION BETWEEN			SEXUAL MATURITY	
Individual	**Male**	**and**	**Female**	**Male**	**Female**
Hen	1		6	6/8 months	6/8 months
Pheasant	1		4	6/7 months	6/7 months
Duck	1		4	8 months	4 months
Goose	1		4	8 months	7 months
Guinea fowl	1		2	8/10 months	8/10 months
Partridge	1		1	10/12 months	10/12 months
Quail	1		3	60 days	50 days
Turkey	1		8	7 months	7 months

Remember breeders lose their fertility after 3 years of age.

CHOICE OF THE EGGS

EGGS SUITABLE FOR INCUBATION

Good quality eggs

EGGS WITH LOW HATCHING PERCENTAGE

Rough shell

White (not genetically) and fragile shell

Small egg

Slightly dirty egg

Oblong egg

EGGS TO BE SCRAPPED

Soiled egg

Blood on the shell

Faecal material on the shell

Yolk on the shell

Slight crack

Broken

Pierced

Misshapen

Thin shell

Coarse shell

Very dirty

The embryo begins developing before incubation and, therefore, it needs proper care, otherwise there will be a decrease in the hatching percentage.

Below are some rules that will be helpful in obtaining suitable eggs for incubation:

1. Collect the eggs at least 5 times a day to prevent environmental contamination. **Never incubate eggs that have been at a temperature lower than 5°C or higher than 24°C. Over this figure the germinating cell starts developing in an abnormal way, it still develops when incubated but the chick will die during hatching!** NEVER store the eggs in the refrigerator.
2. Do not incubate eggs dirty with faecal material, as during incubation the temperature and humidity would lead to the establishment of a bacterial flora that would contaminate all the eggs, causing infections to the embryos and resulting in chick death during hatching.
   The eggs must not have blood stains.
   Do not wash the eggs for any reason, at the most you may dry brush them with an abrasive sponge.
3. Store the eggs in a cool room with a temperature between 14°C and 16°C and humidity approximately 65-75%.
4. ***NOTE: Store the eggs in the egg trays with the tip downwards.***
5. The eggs are suited to incubation from the second to the sixth/seventh day after laying. Incubating eggs older than 8 days significantly reduces the hatching percentage, up to almost zero in the event of eggs stored longer than 15 days!
6. Choose eggs of normal shape (they must not be elongated, spherical, undulated or with any other malformation)
7. The egg shell must not be cracked, broken, creased, soft, thin or with bluish spots (old eggs).
8. Allow cold eggs (from storage temperature) to slowly reach room temperature before placing them in the incubator. Suddenly going from 12°C to 38°C would cause condensate on the shell which would lead to a reduction in hatchings.

NOTE: during incubation DO NOT add eggs at a later time!

7 - Preparation and commissioning of the incubator

For successful hatchings it is recommended to keep the incubator in residential premises, not in sheds, porches or garages. The room temperature should ideally be between 20°C and 25°C and have no air drafts. The suitable room must be well aerated and comfortable. Ensure the incubator is not exposed to direct sun rays or placed close to direct heat sources such as radiators, stoves, fireplaces, boilers etc. Relative humidity must be between 50% and 75%.

ATTENTION: DO NOT USE THE NCUBATOR IN ROOMS WITH TEMPERATURES BELOW 20°C OR HIGHER THAN 25°C!

NOTE: it is strongly recommended to keep the incubator at home!

Do not use or store the incubator in rooms where are chemicals, poisons, toxic or flammable substances, even at low concentrations, as they adversely affect embryo development. Do not use the incubator where there is a danger of water or other substances being sprayed.

NOTE: These instructions help acquiring familiarity with the incubator. Carefully reading these instructions results in high hatching yield, therefore this manual must not only be followed to the letter but seriously complied with! Neglecting or overlooking even one instruction only will make a difference in hatching! Egg selection is therefore recommended: the secret of high hatching yield lies exactly in obtaining compliant eggs.

7.1 - Controls

The incubator has no controls. Plugging the appliance in activates the electrical resistor and motors.

The incubator may be used in two positions: open and closed.

In the closed position it works as an incubator, in the open position it allows the eggs to be simply handled.

7.2 - Use

Place the incubator on a flat table.

Do not place other objects between the product and the surface, such as table cloths or blankets, that might obstruct the aeration holes.

Remove the cover plate and lay it next to the incubator.

Remove the bottom plastic hatching grate, which is not used at the moment (it is only used in hatching, i.e. for the last 3 days). NEVER LEAVE IT IN THE INCUBATOR DURING THE INCUBATION PERIOD!

Ensure the egg supports are well positioned in their seats and that (in the automatic version) **the steel tab of the egg turning motor is properly inserted in the slot of the egg support, i.e. the plastic of the egg support must be inserted onto the steel tab.**

Fill one of the nozzles at the outer base of the incubator (either one) with warm water, pouring the water slowly. Do not allow the water to spill over the tray: excess liquid would cause an increase in the humidity level, resulting in lower hatchings.

Replace the cover plate, ensuring the rim of the incubator's lower part perfectly meshes with the duct in the cover plate base.

Plug the cover plate plug in a power socket. Ventilation will start immediately, the internal temperature will then be displayed and the yellow LED will switch on. The LED will remain on for about 20-40 minutes, until the set temperature is reached, then it will begin flashing. Set the temperature at 37.7°C (ideal temperature for all bird species).

 **ATTENTION**	**Should the fan not work, immediately unplug the appliance and contact the service.**

To set the temperature use the (+) and (-) buttons on the panel. When one of the two buttons are pressed the memory is accessed (the letter “P” is displayed next to the degrees), keep pressing until the desired temperature has been set, after setting the temperature wait for it to be stored (the current internal temperature and the letter “C” are displayed).

NOTE: let the machine operate unladen (without any eggs) for at least 2-3 hours to stabilise temperature and humidity.

After ensuring the machine works properly, remove the cover plate and lay it next to the incubator. Gently place the eggs in the cells **with the tip downwards.** Close the incubator again.

For the semi automatic incubator:

At least 4 times a day change the tilt of the eggs placed in the cell device by means of the lever located at the front of the incubator. Tilt the lever alternatively to the right or left, stopping it in the position corresponding to 10 o'clock or 2 o'clock. Never leave the lever (and consequently the eggs) in vertical position (12 o'clock). Move the lever gently to prevent any shocks to the eggs.

For the automatic incubator (with egg turning motor):

Plug the egg turning motor plug in a power socket. The egg turning motor will then start turning.

NOTE: the egg turning motor maintains the eggs in constant motion, tilting them from right to left and vice versa. However, this motion is unnoticeable as it rotates very slowly like the hands of a clock, performing the complete right to left cycle (or vice versa) in 2 hours (operation of the egg turning motor may be deceptive, i.e. it may look as it is not actually working although it is. A whirring sound emitted by the motor signifies the egg turner is working correctly. However, one should worry if no whirring is heard.

The incubation cycle now starts. It is advisable to mark the day on a calendar and follow the instructions of the table below.

Check water level on a daily basis, and top it up with clean and lukewarm water using the suitable filling nozzles. The water level that may be seen in the filling nozzles coincides with the internal level in the trays. Humidity is generated by the water surface not its quantity, therefore the moisture content in the incubator will always be the same, whether the water level in the tray is minimum, half or full!

ATTENTION: do not cover the incubator with blankets for any reason nor close it in a box thinking this will lead to energy savings! The incubator has been designed to exchange the air inside it through the holes at the bottom and through the two windows (slightly detached from the cover plate to let air through): if the embryo does not breathe it will die by asphyxia!

SUGGESTION: interchange the position of the eggs every 5 days, i.e. move the ones in the middle of the incubator to the sides and vice versa to ensure all eggs have greater evenness in temperature and air flow.

7.3 - Incubation of palmiped eggs (goose, duck, etc)

From the tenth day of incubation to the last three days before hatching, open the incubator once a day and let the eggs cool down for 15/20 minutes. Before repositioning the cover plate spray a thin layer of water (ATTENTION: NEVER MOISTEN THE EGGS WHEN THEY ARE STILL WARM, WAIT FOR THEM TO COOL DOWN). The appliance must be unplugged during this operation.

7.4 - Information for correct incubation

Suggested temperature at the start of incubation: 37.7°C
Suggested temperature during the last 3 days before hatching: 37.2°C
Refer to the following table to obtain successful incubation:

Species	Incubation time	For correct humidity at the start of incubation	Do not turn the eggs afterwards the	For correct humidity during the last 3 3 days before hatching
Hen	21 days	Fill 1 tray of water	Day 18	Fill 2 trays of water
Pheasant	23-25 days	Fill 1 tray of water	Day 20	Fill 2 trays of water
Quail/rock partridge	17 days	Fill 1 tray of water	Day 14	Fill 2 trays of water
Guinea fowl	26-28 days	Fill 1 tray of water	Day 23	Fill 2 trays of water
Turkey	28 days	Fill 1 tray of water	Day 25	Fill 2 trays of water
Grey Partridge / partridge	23-24 days	Fill 1 tray of water	Day 20	Fill 2 trays of water
Peacock	28 days	Fill 1 tray of water	Day 25	Fill 2 trays of water
Goose	30 days	Fill 1 tray of water	Day 27	Fill 2 trays of water
Common/wild duck	27-28 days	Fill 1 tray of water	Day 24	Fill 2 trays of water
Muscovy duck	35 days	Fill 1 tray of water	Day 30	Fill 2 trays of water

Summary

During incubation maintain temperature at 37.7°C and one tray of water.
In the last 3 days before expected hatching the eggs must not be turned any longer and humidity must be increased by filling the second tray as well. Set the temperature at 37.2°C

The incubation days table is indicative, it is recommended to leave the incubator on 2 or 3 days longer over the deadline, to allow laggards to hatch.

8 – Periodic egg inspection during incubation (candling)

Candling is a complicated and delicate operation that may result in errors and eliminating fecundated eggs. Since it is optional, we advise not to perform it if one has no experience and to proceed with incubation. Otherwise, the incubated eggs may be periodically inspected by candling. This operation must be performed in a dark room, using a concentrated beam of light (the egg candler is available on the website www.borotto.com), following the table below:

Species	1st inspection	2nd inspection	3rd inspection
Hen	at 8 days	at 11 days	at 18 days
Pheasant	at 8 days	at 12 days	at 20 days
Guinea fowl	at 8 days	at 13 days	at 23 days
Turkey	at 8 days	at 13 days	at 25 days
Grey Partridge / partridge	at 8 days	at 12 days	at 20 days
Peacock	at 9 days	at 14 days	at 25 days
Goose	at 9 days	at 15 days	at 27 days
Mallard and wild duck	at 9 days	at 13 days	at 24 days
Muscovy duck	at 10 days	at 15 days	at 30 days

Extract the eggs from the incubator one by one and check them immediately. The egg may remain outside the incubator for 2 minutes at most. With a little experience, and using the suitable instrument, the eggs may be inspected without extracting them from the incubator. In that case, open the incubator and place the candler onto each egg. The light beam lets you see the embryo. Never turn or shake the eggs with violence as this would cause the blood vessels to break and result in embryo death.

1st Inspection: start of the incubation

It is usually difficult to see the embryo because it is encased in the yolk: blood vessels are visible near the air cell and on the tip. If the egg has not been fecundated the inside will be uniform, without any blood vessels and the yolk will be in the middle. In that case scrap the egg. It is likely that in this stage the inside of eggs with a thick or brown shell cannot be seen well: these will be checked in the second inspection.

2nd Inspection: development of the embryo

The mesh of blood vessels is normally visible in the tip of the egg and the embryo will appear as a dark spot. If the blood vessels are not visible this means that the embryo is dead.

3rd Inspection: embryo check

The embryo normally occupies the entire egg, therefore the blood vessels should no longer be visible. The air cell is large, If the embryo does not occupy the entire space, blood vessels are visible, the air cell is small and the white has not been used up, this means that the embryo is underdeveloped and the egg must be scrapped.

9 – Chick hatching

The operation described below is very critical and must be done quickly, it is recommended to be assisted by another person to speed up the operation so the eggs do not get excessively cold.

For the semi automatic incubator:

A. In the last 3 days before the expected hatching extract the metal lever located at the front of the incubator.

For the automatic incubator (with egg turning motor)

A. In the last 3 days before the expected hatching stop the egg turning motor by unplugging it from the power socket, possibly when the eggs are still in vertical position.

B. Remove the eggs from the cells and gently place them on a blanket.
C. Remove the egg cells.
D. Place the plastic grate in the base of the incubator paying attention to ensure the two tabs of the grate cover the 2 communicating water ducts to prevent the chicks from falling in and drowning.
E. Distribute the eggs on top and close the cover plate again.
F. Fill the trays with lukewarm water as needed (as shown in the table in chapter 7.4).
G. Set the temperature at 37.2°C.

VERY IMPORTANT: During hatching (in the last 3 days) DO NOT open the incubator! When the cover plate is lifted unnecessarily the accumulated moisture escapes and it takes several hours to restore it. Therefore, the curiosity to see the chicks about to hatch thus opening the incubator all the time will result in the chick inside the egg dying for dehydration and desiccation! Open once a day at the most to remove hatched and properly dry chicks then close again immediately. Keep the newly hatched chicks in the incubator for about 12 hours. They can stay in it for as long as 3 days without drinking or eating without suffering.
Leave the incubator on 2 or 3 days longer than the incubation table, to give time to laggards to hatch,

9 – First days of life

Place the chicks in an environment that assures the necessary heat and light, with no air drafts, where they can be fed and watered.
SUGGESTIONS: you can use a 50x50 cm cardboard box. Cover the bottom with newspaper, which must be changed every day. Otherwise you may use the complete weaning pen or artificial hen available on the website www.borotto.com
For heating, hank a reflector with infra-red lamp at about 20-25 cm from the ground. Adjust the temperature by changing the height of the reflector. The box must be large enough to contain a water pan and one for the feed.

9.1 - Benefits of the infra-red lamp

Infra-red lamps not only serve to warm the chick, but act in depth, on the tissues and muscles, fixing calcium in the bones and supporting the expansion of the blood and lymph vessels, thus improving blood circulation and, consequently, the nutrition of cells. This promotes healthy growth of the chick which will also be more resistant to disease.
The reflectors (used to convey heat) and infra-red lamps are available on the website: www.borotto.com

9.2 - Nutrition

Chicks usually start eating and drinking from the second/third day of life.
Place in the box/pen: a water trough and a manger with chick feed. We suggest scattering some feed also on the newspaper.
Manger and water troughs are available on the website www.borotto.com
If other water troughs are used, ensure the pan is not higher than 3-4 cm otherwise the chicks will risk getting wet or drowning. To prevent that, place pebbles on the bottom, which will also attract the chick to the drinking water.

10 – Problems that may be encountered during use

PROBLEM	POSSIBLE CAUSE	SUGGESTION
The product or its accessory does not switch on	Disconnected cable	Connect the cable
	Damaged cable	Request technical support for the repair
	Other	Request technical support
Does not reach the required temperature	Unsuitable room temperature	Move to another room
	Thermostat does not work	Request technical support
	Resistor does not heat	Request technical support
	Damaged product parts that cause heat dispersal	Request technical support
An accessory does not work	Disconnected cable	Connect the cable
	Damaged cable or component	Request technical support for the repair
	Other	Request technical support

11 – Problems that may be encountered during incubation

PROBLEM	POSSIBLE CAUSE	SUGGESTION
Clear eggs. There are no blood vessels (through candling).	Non-fecundated eggs due to too many or too few cockerels, old or infertile.	Only use young, zestful and unrelated cocks and not exceeding 3 years of age
Blood rings visible in candling	Egg storage was too long before incubation.	Do not store the eggs longer than 7 days.
	The temperature in the egg storage room was too high or low.	Ensure the temperature in the egg storage room is between 14°C and 18°C.
	Inadequate egg care before incubation.	Check proper egg storage.
	Low egg collection frequency	Collect the eggs more often throughout the day.
Many dead embryos or chicks that die before pipping	Breeders are inbred	The breeders must not be related (the cock MUST NOT be the hen's brother)
	Old eggs.	Store the eggs for 7 days at most.
	Aged breeders.	The breeders must not be older than 3 years.
	Nutritional deficiencies	Feed breeders with adequate feed (use breeding feed)
	Eggs have travelled long distances.	Incubate local eggs.
	Incorrect humidity during incubation.	Comply with the information provided on filling the water trays.
	The incubator has been opened several times during hatching.	Open once a day at most to remove properly dry hatchlings.
	The incubator has been operating in excessively hot or cold premises	Ensure the room temperature is between 20°C and 25°C.
	Bacterial contamination	Disinfect the incubator before use. Ensure the eggs are properly clean.
	Other causes	**ADHERE TO CHAPTERS 6 and 7.1.2.3.4!**
The eggs explode	The eggs are dirty	Incubate clean eggs
Chicks with lower limb malformations	Incorrect humidity during incubation.	Comply with the information provided on filling the water trays. Do not pour water out of the trays
	Inbred breeders	The breeders must not be related
	The incubator has been operating in premises with temperature below 20°C	Ensure room temperature is at least 20°C

12 –Cleaning, sanitising and maintenance of the incubator at the end of cycle.

The activities for cleaning, sanitising and maintenance must be performed with machine off, unplugged and after a sufficient time to allow hot parts to cool down.

Cleaning incubator bottom: at the end of the cycle thoroughly wash the bottom of the incubator with a water softener to remove any scaling left during water evaporation (do not use steel wool or scrapers to remove the scale), rinse thoroughly with water to remove all water softener residues before moving to the sanitising stage in order to avoid chemical reactions.

Sanitising incubator bottom: disinfect it with bleach or Amuchina (the one used for laundry is fine), then pour about half a glass at the bottom of the incubator with a little water, shake the incubator so that the liquid covers every part of the base including the walls, then rinse as well as possible.
MANDATORY: TO SANITISE THE INCUBATOR BASE ONLY USE BLEACH OR AMUCHINA! IT IS FORBIDDEN TO USE ALCOHOL OR OTHER CHEMICALS.
If you disinfect the inside of the incubator with alcohol or other chemical detergents, when the incubator is used again the residual chemical particles will affect the embryos leading to infections and resulting in death on hatching.
Do not remove the automatic egg turner from the incubator.
Incubator cover plate cleaning: accurately clean the outside of the cover plate with a soft cloth moistened with alcohol.
Blow the inside of the cover plate with compressed air to remove the down lost by chicks during hatching.
NOTE: SANITISING MUST BE PERFORMED BEFORE INCUBATING

STORAGE: perfectly dry the inside of the incubator, operating it dry for 2/3 hours.
Store the incubator in a dry and clean place, away from shocks and changes in temperature.
Do not place any objects on top of the incubator.

No electrical maintenance is to be performed by the user.

13 - Disposal

In implementation of Directives 2002/95/EC, 2002/96/EC and 2003/108/EC, relative to the use of hazardous substances in electrical and electronic equipment and the disposal of waste, the symbol of the crossed wheelie bin, shown here, indicates that at the end of its service life the product must be collected separately from other waste.
The user shall therefore deliver the appliance at the end of its service life to the suitable electric and electronic separate waste collection facilities.
Appropriate separate collection for subsequent recycling of the decommissioned appliance, treatment and environmentally compatible disposal contributes to avoiding possible negative effects on the environment and health and promotes the recycling of the materials the appliance consists of
Unlawful disposal by the user involves the application of the administrative sanctions provided for by the laws in force.
The information related to the correct procedure of available collection systems must be obtained from the Local Waste Disposal Service.

AEE ITALY REGISTRATION NUMBER: IT14080000008557

14 – Warranty / after sale service

INCUBATRICI BOROTTO® (hereinafter the Manufacturer) grants a 24 month warranty to the product from the date of purchase. During this period, the Manufacturer undertakes to repair at its expense any defect that might occur during normal operation of the machine, attributable to manufacture.
Upon requesting servicing under warranty, show this contract complete with date, stamp and signature.
The incubator must be shipped in its original packaging under the customer's responsibility.
If the incubator is in the warranty period and has been used correctly it will be repaired free of charge. It is understood that no reimbursement shall be acknowledged in the event of lack of fault or defect of the product. However, the Manufacturer reserves the right to charge to the customer the expenses incurred for the demand for servicing in warranty in the absence of the prerequisites.
The warranty does not cover damage caused by:

- transport;
- wear, water, dirt;
- use in conditions other than herein specified by the Manufacturer;
- repairs or modifications made by personnel not authorised by the Manufacturer;
- force majeure (earthquakes, floods, fires etc.).

Only use the incubator for the purpose it is intended for; uses other than indicated in these instructions shall be deemed as hazardous and the Manufacturer disclaims any and all liability for any damage to persons, animals or property arising from failure to comply with this warning.
The Manufacturer shall not be deemed liable, nor shall they grant any servicing under warranty or compensation for negative results due to failure to comply with these instructions, misuse, incorrect installation of the appliance or problems arising from the inadequacy of the electrical installations or other facilities, or arising from environmental, climate or other conditions, or from entrusting the appliance to minors or persons manifestly unsuitable to using or handling the appliance.
No compensation shall be requested from the Manufacturer for indirect damage due to loss of material occurred as a consequence of product defects such as, eggs inserted or to be inserted in the incubator, or further damage to property, persons or animals.

INCUBATRICI BOROTTO ®

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Date, stamp and signature for the warranty

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