



VIDEO MANUAL

User's Manual

Model : EX-SUROP

1. Safety precautions

* Make sure to read this manual carefully and correctly for safe use.

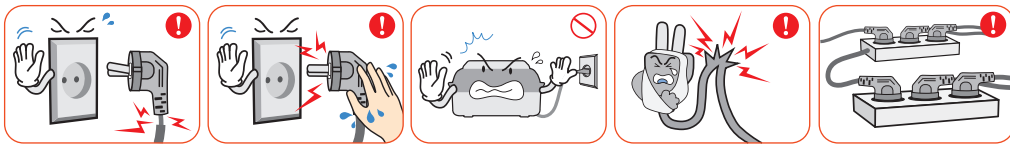
Caution : Caution mark against a fault that can cause damage, trouble, or failure of incubation.

- Prohibited.
- Do not disassemble.
- Do not touch.
- It is necessary to keep.
- Remove the power cord from outlet.
- Ground Connection for preventing electric shock.

Tip : References or useful suggestions in using Rcom product

CAUTION Warning of actions which may be dangerous or cause damage to the incubator.

Electrical hazards



- Do not use a damaged power cord or loose outlet. **Risk of electric shock or fire.**
- Do not pull the cord when taking out the power cord, and keep wet hands away from connecting plug. **Risk of electric shock or fire.**
- Never pull the plug out of the outlet during the incubation period. **Incubation will be interrupted.**
- Do not twist or crush electric cord. **Risk of electric shock or fire.**
- Do not insert multiple connecting plugs in an outlet. **Risk of fire or electrical overload.**

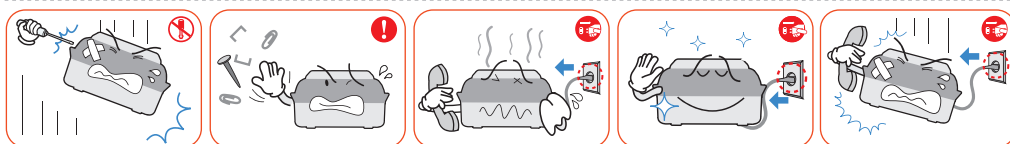
Setting Cautions



- Do not install the product in dusty or unclean places. **Risk of electric shock or fire.**
- Do not install the product under direct sunlight. **Risk of electric shock or fire.**
- Do not install the product in wet or moist places. **Risk of electric shock or fire.**
- Avoid too cold or hot place and do not dispose the product near candles, mosquito coil, cigarette fire or any heating equipment. **Risk of fire.**
- Do not use any other part than assigned ones. **Risk of breakdown or failure of incubation.**



- Do not block the ventilation hole with cover. **Lack of ventilation may cause an increase in internal temperature and result in breakdown or fire.**
- Do not have any heating device near the power cord. **Risk of fire or electric shock.**
- Do not place on a moving shelf, inclined place, unstable place or any place with severe vibration. **Product may fall resulting in breakdown or damage. The vibration may reduce the product life or cause fire.**
- Do not overturn the product. **The water within the main body may pour onto electronics or the sight glass may be damaged.**
- Do not let a child assemble the product. **Must be assembled by a competent adult.**



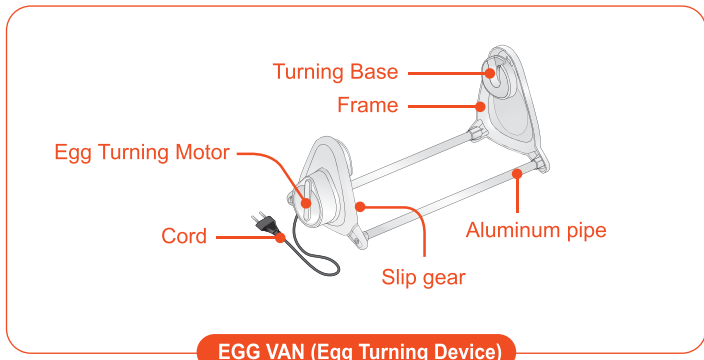
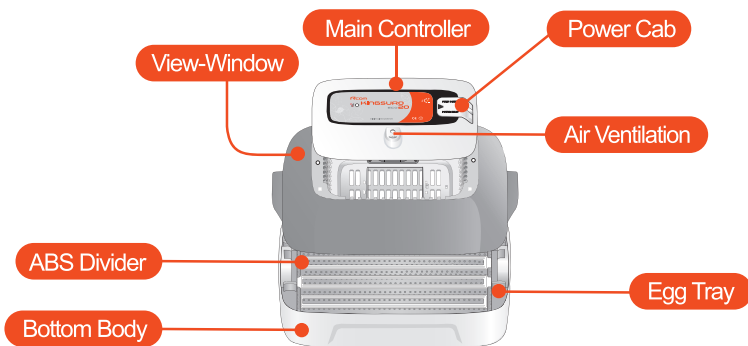
- Do not arbitrarily disassemble, repair nor modify/ remodel. **Risk of electric shock or fire. When you need repairs please contact to the service center.**
- Supervise children near product. Do not introduce any metal object, nail, clip or egg shell to the external hole of the device. **Risk of electric shock, fire or injury.**
- If the device produces any abnormal sound or smoke please immediately disconnect the power plug and contact to the service center. **Risk of electric shock or fire.**
- When not using the device for long time, please disconnect the power plug, clean, dry and maintain it properly. **The accumulated dust may produce electric shock, power leakage or fire due to heating, ignition or deterioration of insulation.**
- When dropped or damaged the product case, disconnect the power plug and contact to the service center. **When used in that condition, it may cause electric shock or fire.**

Cleaning Cautions



- Do not spray the detergent directly to the exterior part of the device. **Risk of discoloration, peeling of printed part, etc when directly sprayed.**
- Please wipe the product with smooth cloth and neutral detergent.
- If there is any dust in the pin or accessing part of the power plug, please clean it with dry patch. **Risk of electric shock or fire.**
- When cleaning please disconnect the power cord and polish the device with a smooth, clean cloth. **Do not use any chemical product as wax, benzene, thinner, mosquitoicide, air freshener, lubricant, detergent, etc.**
- Please contact the service or customer consultation center at least once a year for device check-up. **The dust accumulated for long time in the interior of the product may produce fire or breakdown.**

2. Name of each part



2. Name of each part

* The Serial No. of the product is noted on the left side of the main controller. Please do not damage it. (Ex:K20EP0000000000)
* The air filter (1 set: 5 units) and humidity pad are sold separately.

Power Cover fixing bolt 1EA	Main Controller Assembly Bolts 2EA	EGG VAN	Divider 6EA	Humidity Pad & V-Pin	Hatching Pad
Thermometer	Thermometer Holder	Nipple	Silicon Tube	Humidity Injector	Manual

Tip When the spirit thermometer from KingSuro ECO has an inaccurate reading (separations look like blue dots) caused by transit, please dip the thermometer in very warm water. When the thermometer spirit reaches maximum, please take the thermometer out of the warm water. Please check the spirit has joined together. The dipping method may need to be repeated to remove separations in spirit. At this time, if the water is too hot or maximum temperature is kept for a long time, it may cause malfunction of the thermometer.

4. Name and function of operational parts



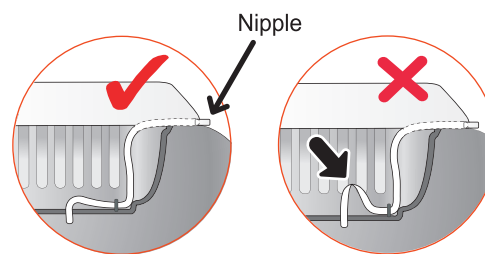
- ① Heater Operation Lamp : Light on when working
- ② Temperature Control Regulator : Using screw driver and turn to "+" to make Temp. Up, and "-" to make Temp. Down.

5. How to Assemble(Before use)

▶ Separate the parts for assembly and verify all parts are present and not damaged. Please do not discard the product box and use it to safely store the product furthermore.

▶ Loose 2 screws, connecting Main-controller and View-window. And then, disassemble Main-controller and View-window by pushing out 4 hooks on Main-controller.

▶ Fix silicone tube which is assembled with nipple into the hole.



Caution Be careful to ensure the silicon tube is not folded.

▶ Insert the nipple into the holder, located on edge of main controller, and assemble View-window and main controller with 2 screws

Caution Please do not tighten the screws too much.

▶ How to cut and fold the Humidity pad properly.

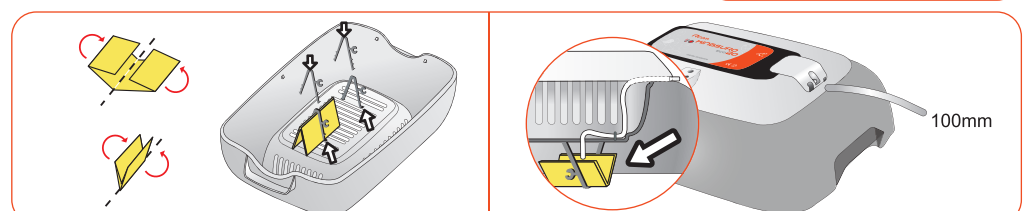
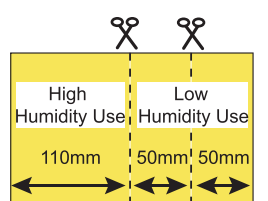
50mm X 150mm
(Low Humidity Use : When using under 60% Humidity setting)

110mm X 150mm
(High Humidity Use : When using over 60% Humidity setting)

After cutting the Humidity pad as above sizes for your purpose, fold up as below picture and insert it with 2 of V-pins.

Caution Humidification ability is different as the pad sizes. Please make sure that the silicon tube end is located onto the Humidity pad.

* The 'use by' of Humidity pad is about 4~6 months, but if you use dirty water, the life of pad will be short. (Using Distilled-water strongly recommended) Humidity pad can be purchased separately again from our shop.



- ▶ Please change the '50mm X 150mm sized humidity pad' to '110mm X 150mm sized pad' about 3 days before bird hatching to give much more humid environment inside of the incubator.
- ▶ Please put about 100mm long silicon tube to the other end of the silicon tube nipple, made of plastic, located outside of the incubator as below picture.

▶ Please put the thermometer to the V-pin as right picture.

⚠ If you push too strong to put the thermometer into the V-pin, the thermometer can be broken. Please make sure to put the thermometer just like right picture. The sensing part of the thermometer has to be same side with the picture. Also, the thermometer must not be touched with Humidity pad for exact temperature read.

▶ Please assemble Bottom-body, Tray, and Hatching-pad order.

⚠ Ensure the Hatching-pad is placed on the Tray. After hatching finished, be sure to wash and dry the Hatching-pad completely for next use. Please keep the hatching pad, and if not using the pad during incubation, the hatching rate will be lower.

[How to Assemble the EGG VAN]

▶ Insert aluminum pipe to the frame exactly. Place the EGG VAN on the flat surface, and tightenthe bolts. Incubator can drop in case of wrong assembling.

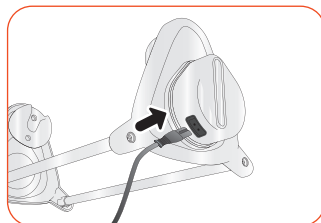
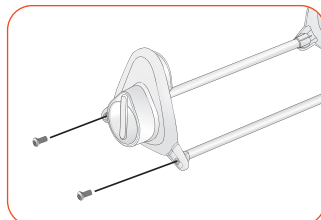
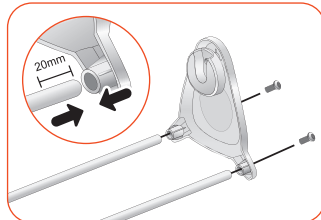
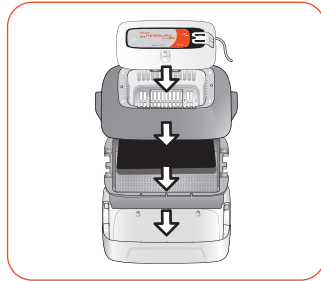
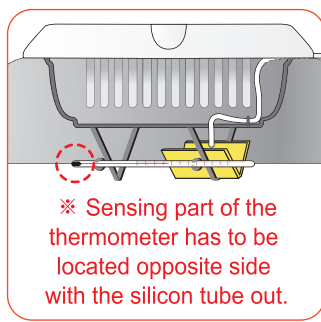
⚠ Do not turn the incubator manually when the incubator is on the EGG VAN. (It can cause egg turning device failure.)

▶ Assemble opposite side with same way.

※ EGG VAN turns at an angle of 90° every one hour and it moves very slowly. And sometimes, it moves irregularly and produces noise intermittently. However these symptoms are normal by acting point of force.

💡 Spray lubricating oil such as WD 40 on the gear part or operation part of EGG VAN for helping smooth operation.

▶ Plug in the power code.



6. Incubator Installation (Start Incubation)

The Incubation Room is a confined space for setting and operating an incubator. Because the incubation room environment has a considerable effect on hatch rate, it's recommended to control the environment for setting up an incubator; there should be little noise and vibration around 22~25°C(71.6~77°F) with small variation in temperature. Especially, if there are frequent occasions when the temperature drops suddenly at night, compared with daytime, be sure to check from time to time and pay attention so that the incubator is not directly exposed to sunlight during daytime.

⚠ When the temperature of incubation room is lower than, recommended setting temperature there could be water-droplets in side of incubation room or water leak on the floor. because of dew condensation.

▶ Place assembled incubator on horizontal.

▶ Open the power cap to insert the power code, and then put reassemble.

⚠ Be careful to ensure the cords do not get jammed when you tighten screw bolt.

⚠ If you open power cap, there is a sticker which is showing rated current in the position of pic. (a).

▶ Ensure rated voltage of the incubator (a). If you open power cap, there is sticker which tells rated voltage in the position picture. (a)

▶ If you connect the power code of Kingsuro ECO PLUS 20 to outlet, incubator starts operation.

▶ Check the temperature inside of the incubator before putting eggs. When setting temperature, use the provided screwdriver. [Ref. 11]

▶ Place eggs by adjusting tray divider according to egg size and cover view window.

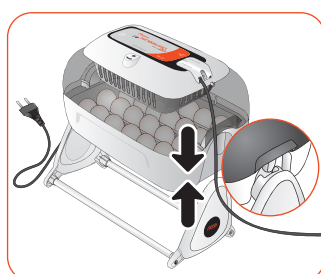
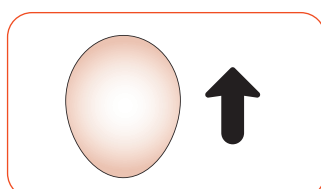
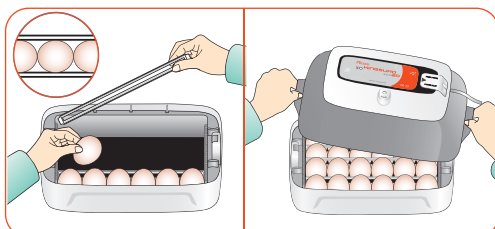
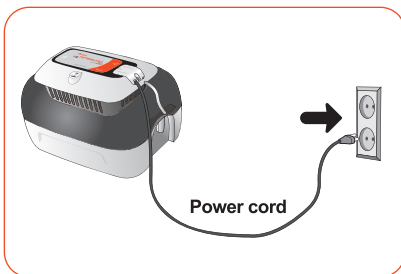
⚠ Control the space of eggs and divider optimally, so the eggs are not interrupted for incubation.

💡 The egg to incubate must be a fertilized egg. It is recommended to place eggs with sharp end side down.

💡 When the first operated, there could be odor for temporarily, but this is not incubator problem.

💡 Set the eggs in the incubator, and then operate 1~2 hours to get internal temperature stable. please calibrate temperature once. We usually recommend higher temperature for incubation. [37.5 ± 0.5°C]

▶ Place Kingsuro ECO PLUS 20 incubator on the Egg Van.

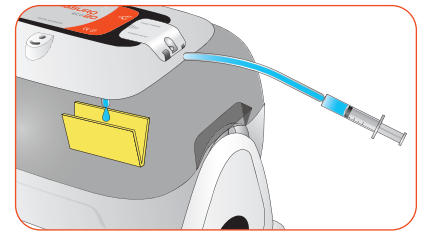
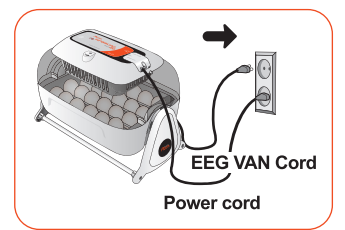


▶ If you connect the power code of EGG VAN to outlet, they are turned on. (EGG VAN turns at an angle of 90° every one hour.)

▶ Slowly inject water with provided syringe, and be careful not to drop on the eggs.

⚠ If you put too much pressure on syringe or not to inject slowly, water can be dropped on the eggs.

⚠ If view window is not closed completely, temp. fails to go up.



7. Turning stop During Incubation

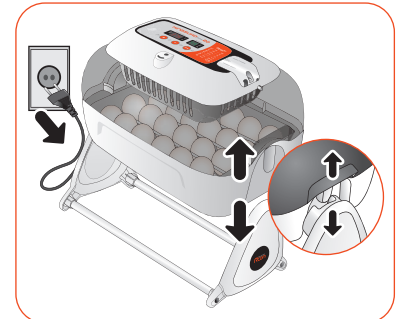
▶ Before 3 days of hatching, disassemble the incubator from EGG VAN, and place on a flat surface to stopping egg turning. After that, remove dividers.

⚠ Here, be sure to remove Egg Van power cord only. Be careful not to take power cord out of incubator.

▶ When you clean or disassemble EGG VAN, please use clean cloth, not water.

▶ When incubating various species of eggs at the same time, you can move the eggs three days of before hatching to other brooder for easy and clean management. (You can operate two incubators, and various incubators or brooders are available from Rcom website.)

💡 In case of altricial birds such as parrots or wild birds, turn the eggs once or twice additionally by hand.



8. Humidity and ventilation control during incubation

▶ When hatching, humidity should be relatively high to prevent the thin membrane from drying out or hardening before hatching.

▶ When hatching, it's recommended not to open the lid often. If you open the lid often humidity will be rapidly decreased and it will take a long time to regain the proper humidity.

※ If incubator temperature is higher than 37°C (98.6°F) and room temperature is low, it may be difficult to maintain humidity of over RH 70%. There may be some difference of humidity about ±5% according to the external environment, but no problem with hatching.

▶ It's very important to maintain humidity higher 1~2 days before hatching than the early and middle incubation periods. Humidity requirements during incubation are RH 45~55% for waterfowl, RH 40~45% for poultry and RH 35~45% for parrot, in general. (One day before hatching, all kinds of birds need about RH 65% humidity and sometimes need higher than that.) However, in areas of high ambient humidity, lower levels of humidity may be needed during incubation.

💡 It's very important to keep humidity higher than RH 65% before hatching 1~3days.

※ Air Controlling Lever : Outer fresh air can be flowed into incubator inside without affecting insulation. When eggs start hatching, open air controlling lever either fully or half-open.

💡 Check water level every three days during incubation, and refill when needed. You'd better to use tap water than purified water or underground water for avoiding evaporating pad damage. (Evaporating pad is available from Autoalex Co.,Ltd. or Rcom distributors.)

9. Incubation Termination

※ There is no specified ON or OFF button on the incubator.

▶ Just take off the power cord after hatching.

10. Water supply for humidity.

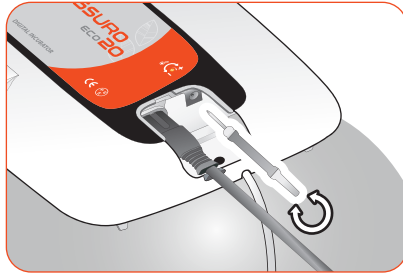
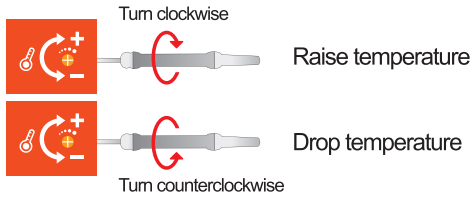
▶ During hatching, supply water to humidity pad at least once a day.

▶ Use provided syringe, inject 15ml water through silicone tube.

Suitable installation environment	Temperature and humidity at the installation site are low [Below 20°C(68°F), 40%]	Temperature and humidity at the installation site are high [Over 25°C(77°F), 60%]	Before 3 days of hatching
1 time per every 5~6 hours	Whenever day	1 ~ 2 times a day	At the end of incubation, exchange to high humidity pad and inject 20~25ml
Humidity pad (50mm x 150mm)			Humidity pad (110mm x 150mm)

11. How to set temperature

- ▶ If you want to adjust the desired temperature, open the power cap and turn temperature control volume using the supplied driver.



- ⚠ Temperature regulator can be damaged if you use unspecified tool, and repair service will be paid.

- ⚠ Temperature control is very sensitive. therefore, turn it little by little. (After setting, read temperature about 10~20 minutes later.)

- ⚠ In the first time when putting the eggs, adjust temperature after 1~3hours for stabilization. Please do not turn high from the first time, raise temperature from low to high little by little carefully.

12. Management after hatching / Dew Condensation

- ▶ Hatching within the incubator can cause a build up of germs with possible cross contamination of bacteria, and the dust, feather dander, egg shells and excrement may produce a breakdown of the incubator which is not covered under warranty. Please consider the Rcom Suro eco hatcher specifically for hatching. Please reference the web site (www.Rcom.co.kr→Download→Incubation Common Sense) for simple developer chamber instructions or we recommend to use the KINGSURO Brooder of our company.

- ⚠ Do not brood the chick within the incubator. Have a radiant heat brooder for chicks that are dry and fluffy. As it can be the cause of breakdown and produce paid repair (A/S) cost even within warranty period. (Please move the chick to the brooding chamber after hatching.)

- 💡 **Generating chamber:** It is a space for hatching (egg breaking) used 1~3 days before hatching. (Rcom KINGSUR BROODER)
- 💡 **Developing (brooder) chamber:** It is a space (device) which adapts the just born chick to the environment by maintaining proper temperature and humidity. (Rcom KINGSUR BROODER/Rcom BIRD BROODER&ICU)

- ▶ As the feed for little birds may vary by type, it is recommendable to acquire prior understanding on the bird before hatching. (Please use the information on birds in the Rcom web site.)

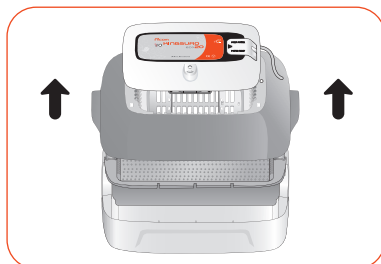
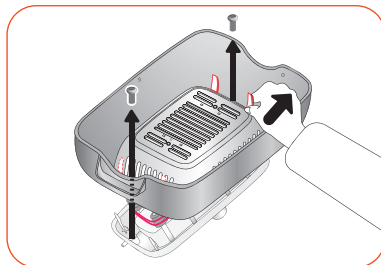
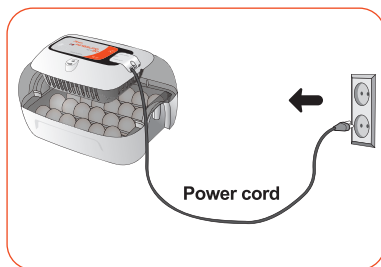
- ※ **Dew condensation :** When operating the device, if the difference between exterior and interior temperature of the device is high, the dew condensation is naturally occurred therefore there is no operational problem due to this phenomena.

13. How to clean up after hatching finished

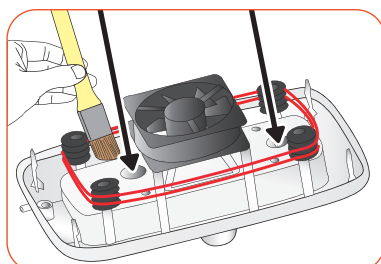
- ⚠ Be sure to take off power cord before cleaning the incubator.

- 💡 After incubation terminated, never leave the incubator covered with view window. Moisture inside of the incubator vaporizes and it can stick to electric parts causing operation failure. Be sure to dry the incubator perfectly.

- ▶ Remove main controller from view window.



- ▶ Wipe the main controller smoothly with soft brush. Be careful not to give impact to sensor part or heating part.

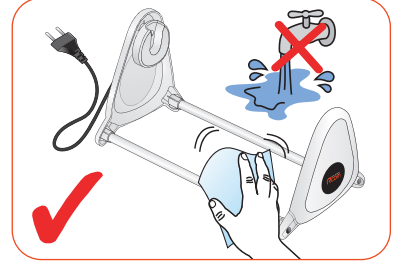
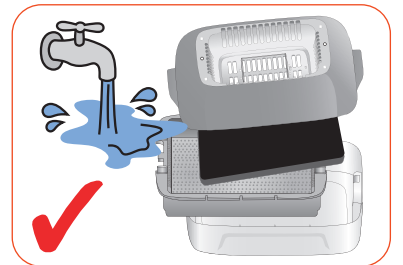


- ▶ Wash the window, tray, hatching pad and bottom body with warm water.

- ▶ Do not wash EGG VAN with water, just wipe with a soft cloth.

- ⚠ Do not use benzene or thinner when wipe the unit. It can cause transformation or decoloration.

- ▶ Wipe the exterior with a soft cloth, and completely dry before storing.



14. How to replace the Fuse

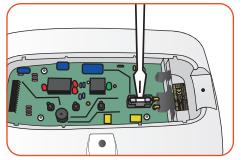
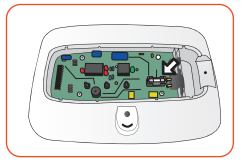
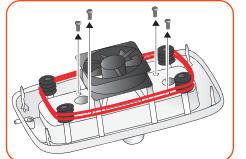
- ▶ If you have power failure even though you plug in power cord, please check the Fuse. If you disassemble the PC board after loosening 4 screws as left picture, there is a Fuse, and if the Fuse is damaged, please remove and replace it.

- ▶ Please make sure the Fuse standard. (250V 2A Ø5*20mm)

- ▶ After replacing the Fuse, please assemble in reverse order of disassemble.

- ⚠ If the cover is not perfectly assembled, the rubber seals are not perfectly block the moisture from incubation room, and this can make the PC board broken.

- 💡 You can purchase the fuse separately at the shop, you purchased.



15. Specification

Power input	AC 100~120V, 50/60Hz / AC 220~240V, 50/60Hz
Power consumption	Max 48[W] Average 25[W]
Operating serviceable temp.	20 ~ 42°C (68~107.6°F)
Capacity	Chick : 24eggs / Duck : 20eggs / Turkey : 9~12eggs / Pheasant 40eggs / Quail : 60eggs / Amazone,Macaw : 36eggs
Fuse Standard	250V 2A (Ø5×20mm)
Weight	2.4kg
Size	(W)370×(D)231×(H)209mm

Extension of free service is not allowed for this product. The warranty period is one year from the date of purchase.

- Go to www.rcom.co.kr
- 1. Sign up for membership first, then log in using those credentials
- 2. Click "register products"
- 3. Fill in all required fields and click "Save"
- 4. Product registration is now completed.

16. Guide on Customers' Damage Compensation

Types of damages of customers	Details on compensation	
	Within guarantee period	After expiring guarantee period
In case of naturally occurred failure in function or performance in normal condition of use.	Free repair	Paid repair
Failure in function or performance due to intention or error of the customer.	Paid repair	
<ul style="list-style-type: none"> ■ In case of failure due to natural disaster (fire, sea wind, gas, earthquake, storm and flood). ■ When replacing expendable part normally abraded during the use. ■ Breakdown due to abnormal power source or faulty connection device. ■ Breakdown due to repair or remodelling by person any other than the service engineer of headquarters or the service center. ■ External factors which are not defect of the product. ■ Breakdown due to use of different rating voltage. ■ Breakdown due to use of consumable, optional product not designated by the company. ■ Breakdown or loss due to drop during the transportation. ■ Breakdown for not cleaning the product / Breakdown due to use of other liquid than distilled or purified water / Breakdown due to use of the incubator as brooder device (developer) / Breakdown due to incorrect device control / Breakdown due to manner of use not mentioned in the instruction manual / If the customers' fault is clear. 		

- ⚠ The success of incubation may vary according to different factors. The manufacturer and distributor are not responsible for failure of incubation of costly eggs, loss of life, property damage due to negligence of user, remodeling, painting, modification of purpose of use or power failure. When incubating parrot or costly birds please verify the internal temperature (adjust) before use. Please read carefully the instruction manual before use to avoid failures.