2. Name of each part

- **Main Controller**
- **View Window**
- **Egg Tray**
- **Bottom Body**
- **Power Cord 21A**

- **Power Cover**
- **Main Controller Assembly bolts 3 T/A**
- **EGG VAN**
- **Divider 6 T/A**
- **Humidity Pad & V-Pins**
- **Hatching Pad**

- **Thermometer**
- **Thermometer Holder**
- **Nipple**
- **Silicon Tube**
- **Humidity Injector**
- **Manual**

When the split thermometer from Kingsuro ECO+20 has an inaccurate reading (separations look like blue dots) caused by transit, please dip the thermometer in very warm water. When the thermometer splits reaches maximum, please take the thermometer out of the warm water. Please check the split has joined together. The dipping method may need to be repeated to remove separations in split. 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** - Use screwdriver 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.

Be careful to ensure the silicone 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**

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 80% Humidity setting)

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

Humidification ability is different as the pad sizes. Please make sure the silicone 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 silicone tube to the other end of the silicone tube nipple, made of plastic, located outside of the incubator as below picture.
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.9.

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

If you connect the power code of Kingsuno 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.

Get 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 Kingsuno ECO PLUS 20 incubator on the Egg Van.

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 before hatching to other brooder for easy and clean management. (You can operate two incubators, and various incubators or brooders are available from Room website.)

In case of abrial 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 rapidly decrease 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 1-3 days.

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 Autoleaf Co.,Ltd. or Room 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.

<table>
<thead>
<tr>
<th>Suitable installation environment</th>
<th>Temperature and humidity at the installation site are low [Below 20°C(68°F), 40%]</th>
<th>Temperature and humidity at the installation site are high [Over 25°C(77°F), 80%]</th>
<th>Before 3 days of hatching</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 time per every 5-6 hours</td>
<td>Whenever day</td>
<td>1 ~ 2 times a day</td>
<td>!At the end of incubation, exchange high humidity pad and inject 20-25ml</td>
</tr>
</tbody>
</table>

Humidity pad (90mm x 150mm)
11. How to set temperature

- If you want to adjust the desired temperature, open the water 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 1–3 hours 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

- Hatchery 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 Room Suro eco hatcher specifically for hatching. Please reference the web site (www.Room.co.kr–Download–Incubation Common Sense) for simple developer chamber instructions or we recommend to use the KINDSUR 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 (AIS) 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. (Room 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. (Room KINGSUR BROODER/Room BIRD BROODER/IAI)

- 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 Room 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 EGGS 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 PCB 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 Ø20mm)

- 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 PCB board broken.

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

15. Specification

<table>
<thead>
<tr>
<th>Power Input</th>
<th>AC 100<del>120V, 50/60Hz / AC 220</del>240V, 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption</td>
<td>Max 480W (Average 25W)</td>
</tr>
<tr>
<td>Operating service temp</td>
<td>20 ~ 42°C (68~107°F)</td>
</tr>
<tr>
<td>Capacity</td>
<td>Chick: 1000ggs / Duck: 200ggs / Turkey: 9-1200ggs / Pheasant: 400ggs / Quail: 600ggs / Amazons/Macaws: 3000ggs</td>
</tr>
<tr>
<td>Fuse Standard</td>
<td>250V 2A (Ø20mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>2.4kg</td>
</tr>
<tr>
<td>Size</td>
<td>W370x(H)214x(D)203mm</td>
</tr>
</tbody>
</table>

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

- Go to www.Room.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

<table>
<thead>
<tr>
<th>Details on compensation</th>
<th>In case of naturally occurred failure in function or performance in normal condition of use.</th>
<th>Free repair</th>
<th>Paid repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure in function or performance due to intention or error of the customer.</td>
<td></td>
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<tr>
<td>- In case of failure due to natural disaster (fire, sea wind, gas, earthquake, storm and flood).</td>
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<tr>
<td>- When replacing expendable part normally damaged during the use.</td>
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<tr>
<td>- Breakdown due to abnormal power source or faulty connecting device.</td>
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<tr>
<td>- Breakdown due to repair or remodeling by person other than the service engineer of headquarter or the service center.</td>
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<tr>
<td>- External factors which are not defect of the product.</td>
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<tr>
<td>- Breakdown due to use of different rating voltage.</td>
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<td></td>
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<tr>
<td>- Breakdown due to use of consumable, optional product not designated by the company.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>- Breakdown due to use of consumable, optional product not designated by the company.</td>
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<tr>
<td>- Breakdown for not using the product! Breakdown due to use of other liquid then distilled or purified water!</td>
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<tr>
<td>- Breakdown due to use of the incubator as brooder device (developer)</td>
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</tr>
<tr>
<td>- Breakdown due to unsolvable factor not mentioned in the instruction manual (if the customers fault is clear).</td>
<td>Paid repair</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 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.