

EGG CANDLER MACHINE

Description

An **Egg Candler Machine** is a specialized device used to inspect the internal contents of eggs by illuminating them with a bright light source. It allows the user to detect cracks, blood spots, embryo development, yolk quality, and air cell size without breaking the egg. Used in both **hatcheries** and **egg grading** facilities.

Specification

- **Function:** Transmits light through eggshell to visualize interior
- **Lighting Source:** LED / Halogen / Fluorescent (depending on model)
- **Light Intensity:** ~4000–15000 lux
- **Capacity:**
 - Single-egg handheld types
 - Tray models: 20–300 eggs at a time
- **Power Supply:** 110V/220V (AC) or Battery-powered (portable models)
- **Cooling System:** Integrated fan or heat sink to prevent egg heating
- **Weight:** 1–20 kg (based on type)
- **Optional Features:**
 - Timer
 - Adjustable brightness
 - Auto-rotate trays

Types

- **Handheld Candler** – Portable, single-egg checking
- **Tabletop Candler** – Batch candling, medium capacity
- **Industrial Egg Candler** – Large-scale, high-speed grading
- **Digital/Smart Candler** – With embryo tracking, camera, sensors
- **Battery-Operated Candler** – Ideal for field/hatchery mobility

Material

- ABS Plastic housing (for light casing)
- Stainless steel trays (in industrial models)
- Heat-resistant lenses
- Polycarbonate light covers
- Aluminium/steel base (for durability in larger models)

Category / Product Form

- **Category:** Hatchery Inspection / Poultry Equipment
- **Product Form:**
 - Manual
 - Semi-automatic
 - Fully automatic
- **Reusable:** Yes (electronic device)

Handling & Maintenance

- Do not expose to water; use in dry environments
- Clean lenses and light cover regularly
- Check fan and cooling system function periodically
- Avoid overheating by switching off after long usage
- Store in dust-free area after use

Lighting & Technology

- **LED:** Low heat, long life, energy efficient
- **Halogen:** Brighter but hotter
- **Sensor-Based Candles:** For automated embryo detection and egg viability grading
- **Colour Temperature:** 5000K–7000K (daylight simulation)

HS / HSN Code

- **HS Code:** 8436.10 – Machinery for poultry-keeping
- **HSN Code (India):** 84361000 – Poultry incubators and brooders including candlers

Human Applications

- Used in poultry hatcheries to check fertility and embryo development
- Quality grading in commercial egg production
- Used in biology labs and schools for educational embryo studies

Veterinary / Livestock Applications

Essential in **avian reproduction programs**

- Monitors embryo viability in veterinary labs
- Used in exotic bird breeding and conservation programs
- Helps reduce loss by removing infertile or damaged eggs early

FAQs (Frequently Asked Questions)

Q1. What is an Egg Candler Machine (ECM)?

Full Form: Egg Candler Machine

Short Form: ECM

It is a device that uses bright light to view the internal contents of an egg without breaking it.

Q2. Can the Egg Candler detect fertilization?

Yes. It allows users to identify fertile vs. infertile eggs by embryo visibility, typically from day 4–7 onward in incubation.

Q3. Is it safe for the eggs?

Yes, if the candler has **cool LED lighting** and is not used for prolonged periods that might heat the egg.

Q4. What type of eggs can be candled?

Chicken, duck, goose, quail, turkey, parrot, and most other avian species' eggs can be candled with the correct light intensity.

Q5. What is the HSN Code for the Egg Candler Machine?

HSN Code: **84361000** – For poultry-keeping machinery including candler and brooders.