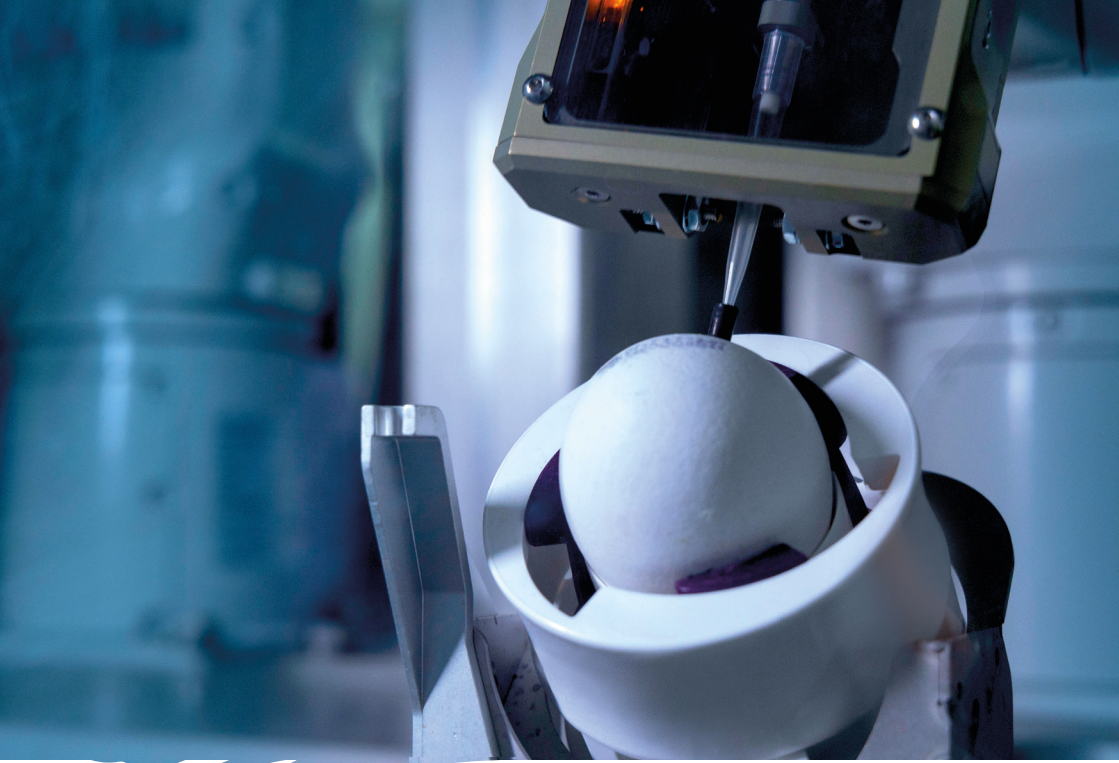




Let's end  
chick culling  
together!

 respeggt  
group  
*Committed to  
Free of Chick Culling*



## The standard to stop chick culling

Every year, about **6 billion** male chicks are culled worldwide directly after hatching. Simply because they aren't suitable for producing eggs or meat. Respeggt has the goal to eliminate the culling of day-old male chicks in the egg supply chain.

To reach this goal Respeggt offers two services:

1. **In-ovo sexing around day 9 of the incubation** with the Respeggt technology
2. **A Supply Chain Verification** guaranteeing the added value "Free of Chick Culling" with the heart-shaped Respeggt label.

Respeggt's solution for in-ovo sexing is ensuring a more sustainable ethical egg production, while maintaining the efficiency of the sector as practiced today.

The high level of scientific and technological standards held by Respeggt has enabled the development of a state-of-the-art process, that is **easy to use**, has an accuracy of 99% and is operational since 2019.

Due to this technology, every month more than one million female chicks "**Free of Chick Culling**" hatch.

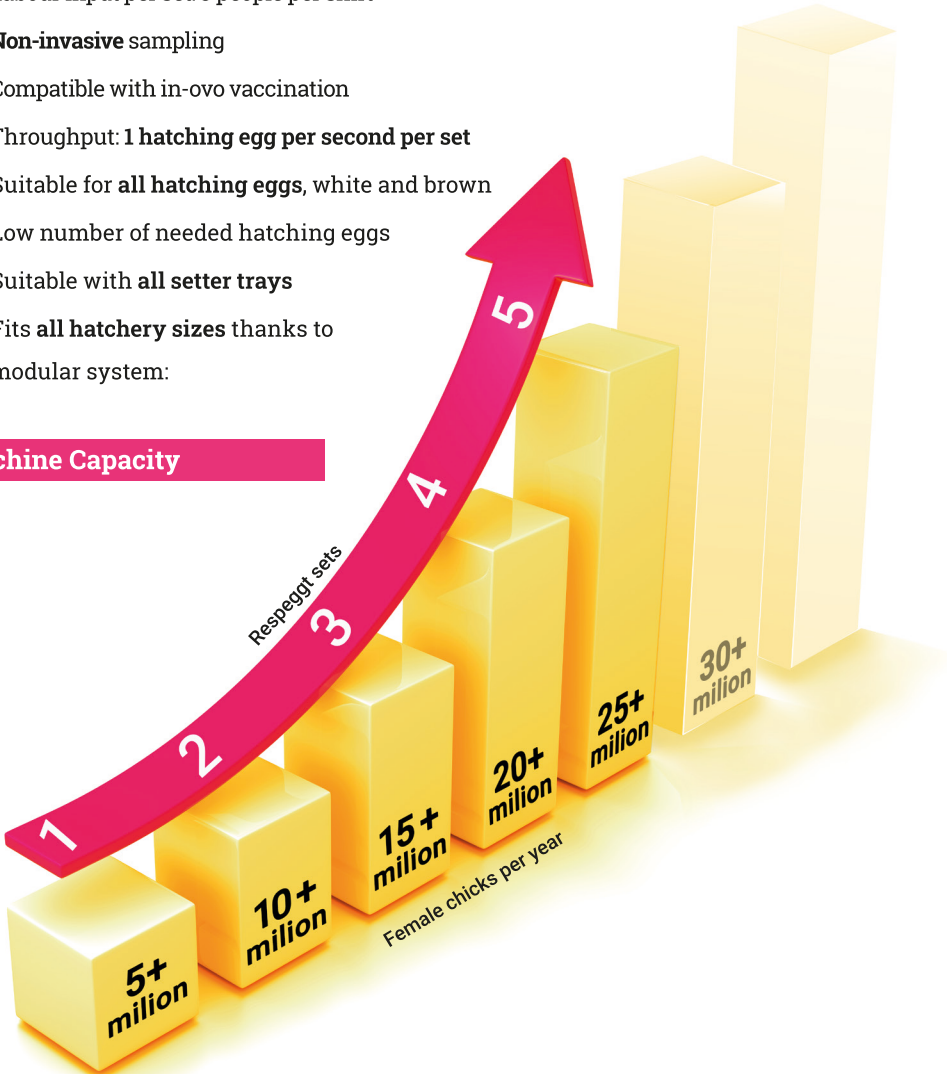
Thanks to our modular approach with the latest innovation, the Circuit, **chick culling can now be stopped by every layer hatchery.**



## Facts & figures

- Analysis around **day 9**
- **Highest accuracy** on the market (over 99%)
- **Small and flexible footprint** of machine
- Suitable for **all ages** of parent stock
- Labour input per set: 3 people per shift
- **Non-invasive** sampling
- Compatible with in-ovo vaccination
- Throughput: **1 hatching egg per second per set**
- Suitable for **all hatching eggs**, white and brown
- Low number of needed hatching eggs
- Suitable with **all setter trays**
- Fits **all hatchery sizes** thanks to modular system:

## Machine Capacity

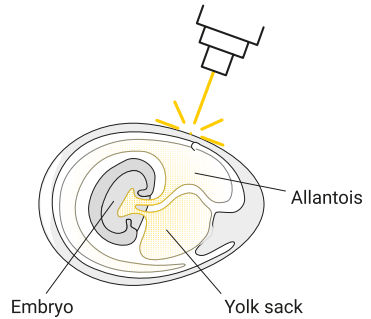


# 1. In-ovo sexing by Respeggt

One set of Respeggt technology consists of three modules:

## The Circuit

The machine works with a laser creating a tiny hole of 0.3 mm (0.01 inch) in the eggshell in all fertilized hatching eggs on **day 9** of the incubation. A minimal amount of allantoic fluid is then extracted from the eggs and placed into a marker outside of the egg. By utilising a **non-invasive** procedure to extract the fluid the hatching egg is left unharmed. Hence the interior of the hatching egg is untouched and remains safe and sound. The minuscule hole created by the laser is **sealed** after the extraction of the fluid.

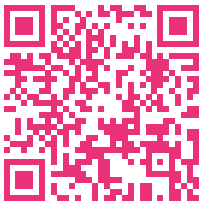
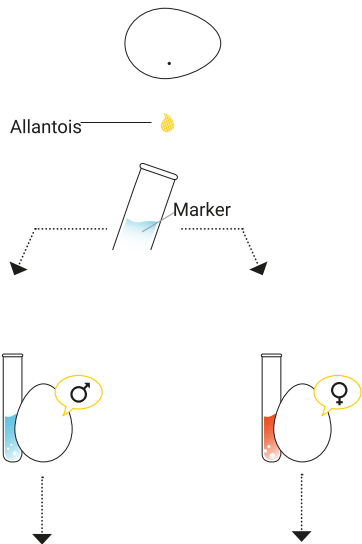


## The Lab

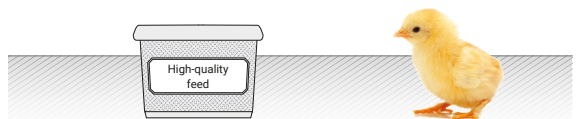
A **PCR analysis** of the extracted liquid provides the result if the hatching egg is male or female and is automatically forwarded to the Sorter.

## The Sorter

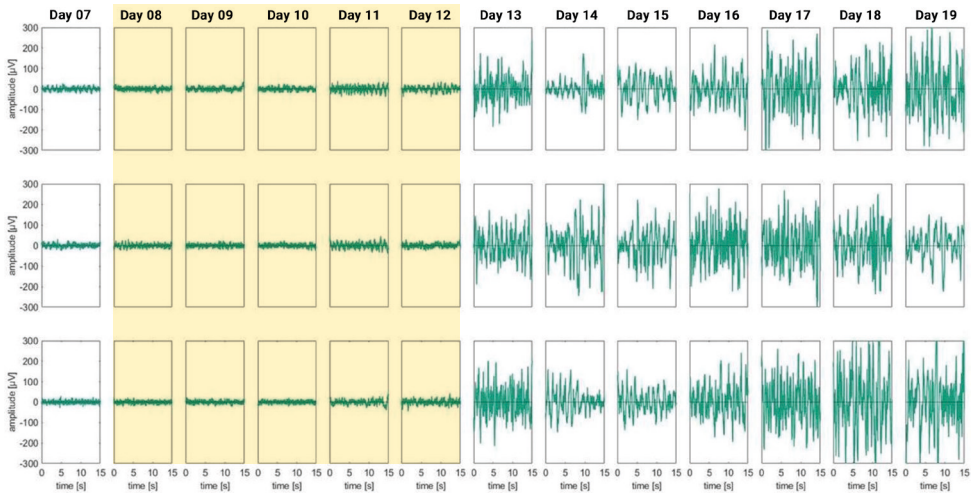
The hatching eggs can now be **sorted according to the result**. The male hatching eggs are processed into high-quality feed and the female hatching eggs are returned to the incubator. Consequently, only female chicks hatch on the 21st day of the incubation, which will later lay table eggs "Free of Chick Culling".



Scan here and watch the film:  
"Ending Chick Culling by Respeggt Technology"



## No pain perception before day 12 of incubation



Source: Study of Technical University Munich, published in (March 2023)

A study by TU Munich from 2023 shows that **after day 12** of incubation, different processes in the embryo, e.g., **brain activity**, are starting. This indicates the beginning of a possible **pain perception** by the embryo.

Practicing in-ovo sexing before day 12 of incubation guarantees ethical benefits and meets consumer expectations. In-ovo sexing should always be applied **as early as possible**.

Respeggt's in-ovo sexing technology is one of the earliest methods, operating around **day 9** of the incubation (see **yellow area** in the graph).

Respeggt's goal is to offer even earlier technical solutions through continued research and development.

Stopping the incubation process of male hatching eggs is rapid and effective. In addition, these eggs can be used as high-quality feed and thus play an important role in the circular approach to nutrition.

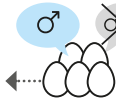
With using Respeggt technology operating around day 9 of the incubation, we offer an ethical solution „Free of Chick Culling“!



Hatching eggs are put in the incubator



in-ovo sexing by Respeggt



Final incubation



Hatch



Rearing farm



Laying hen farm



Packing centre



Retail



## 2. Supply Chain Verification by Respeggt

Respeggt controls the supply chain from the hatchery to the egg carton or food packaging and ensures that the added value of **"Free of Chick Culling"** can be guaranteed to consumers. Egg cartons and food packaging can then carry the heart-shaped Respeggt label.

By using recent **blockchain** technologies that secure data sets in a transparent and tamper-proof manner, Respeggt can ensure that all the principles of our Respeggt promise are respected throughout the supply chain. One can easily identify Respeggt eggs that bear our **heart-shaped Respeggt label** and be completely sure that no chicks were killed during their production.



Committed to  
Free of Chick Culling

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