

H2H Euthanizer

A regulator's view

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Legislation (England)

PATOK

- Assimilated European Council Regulation No 1099/2009 (**PATOK**)

WATOK

- The Welfare of Animals at the Time of Killing (England) Regulations 2015 (**WATOK**)
- **Animal Welfare Act 2006**

Humane killing (a good death) (PATOK)

.....spared any avoidable pain, distress or suffering during their killing and related operations.

...are **stunned** (defined as any intentionally induced process which causes loss of consciousness and sensibility without pain, including any process resulting in instantaneous death).

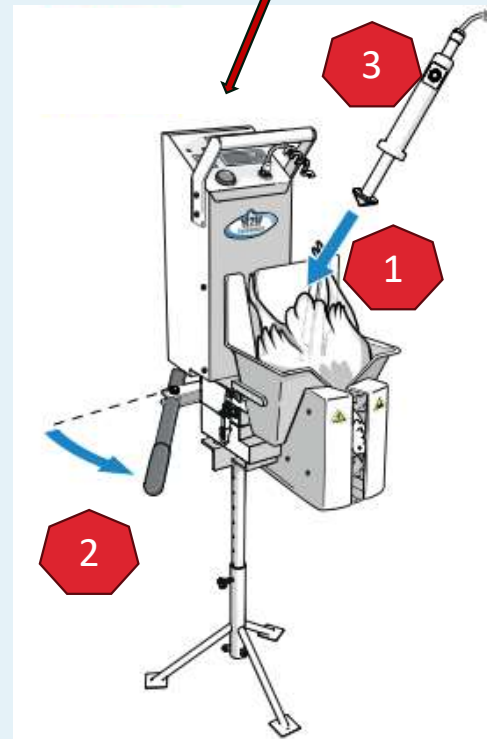
Annex I method is used.

The loss of consciousness and sensibility shall be maintained until the death of the animal.

Operating the H2H Euthanizer

1. Hand-held probe positioned on cloaca.
2. Lever pulled towards the operator so that the head clamp closes around the bird's head.
3. The button on the hand-held probe is activated, giving a 3-second current flow.

The display shows the electrical current and mains voltage (230V +/-).




WARNING this video shows the H2H Euthanizer humanely killing a chicken.

Please do not view this video if you feel you may be negatively affected by the content.



Legislation (head-to-body electrical stunning)

- Exposure of the body to a current generating at the same time a generalised epileptic form on the EEG [electroencephalogram] and the fibrillation or the stopping of the heart.
- Key Parameters:
 - Minimum current /voltage, maximum frequency
 - Minimum time of exposure
 - Frequency of calibration of the equipment
 - Optimisation of the current flow
 - Position and contact surface area of electrodes
 - Prevention of electrical shocks before stunning



Inputs

Legislation (Requirements from the seller)

- Appropriate instructions which ensure optimal conditions for the welfare of animals
- Instruction available online
- Information on parameters



www.top-equipment.nl

Legislation

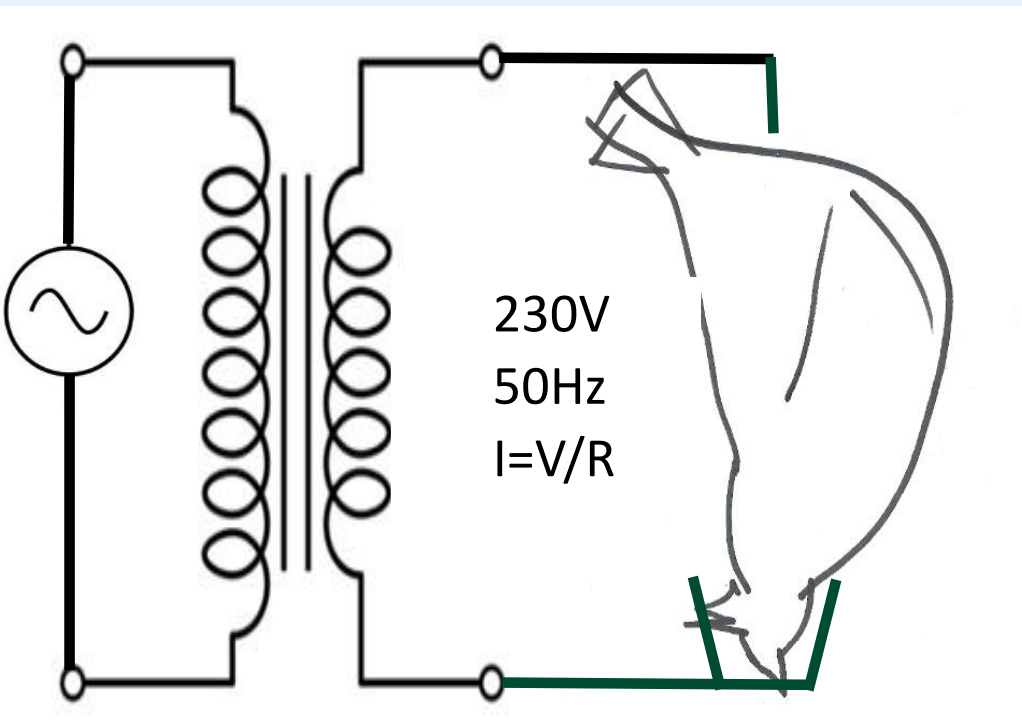
- Good electrical contact
- Audible or visible device indicating the length of time of its application to an animal
- Voltage and the current under load, positioned to be clearly visible to the operator
- Strength and duration of the current used is such that the animal is immediately rendered unconscious and remains so until it is dead

Inputs

Outcome

Inputs

Outcomes



Effective stun



- rigid extended legs
- neck arched
- rapid body tremors
- wings held tight and close to the body
- absence of rhythmic breathing
- absence of eye reflex

Dead



- limp body
- dropped wings/head
- dilated pupils
- closed eyelids



Permanent



Permanent

Welfare considerations and mitigation

PATOK: Article 3(1) Animals shall be spared any avoidable pain, distress or suffering during their killing and related operations.

- Inversion
- Clamp pressure
- Pre-stun shock
- Insufficient current (exposure time/strength)



Evidence gap & further research required

Exposure of the body to a current generating at the same time a **generalised epileptic form on the EEG** and the **fibrillation or the stopping of the heart**.

- Timing and duration of epileptiform activity and death (EEG including evoked responses)
- Timing of ventricular fibrillation (electrocardiograph)
- Variation between poultry species
- Long-term field use

On-farm killing options for poultry

- Non-penetrative captive bolt devices
- Electric stunning
- Cervical neck dislocation
- Mass culling for disease control:
 - Whole house gassing (WHG)
 - Containerised gassing unit (CGU)

Depopulation for Avian Influenza

- WHG is now the established method of choice for animal welfare and speed of disease control.
- On-farm Contingency Plan:
 - Outline how mass cull will operate on-premises.
 - Support that can be given by staff using individual culling devices.

WATOK licence (England and Wales)

- Required to demonstrate:
 - competence to carry out stunning and related operations....
 - sufficient knowledge of legislation and guidance available....
- WATOK licence is not required:
 - If working in the presence and under the direct supervision vet or licence holder
 - For depopulation for disease control
 - For emergency killing
 - ...

Emergency killing (legal, ethical and welfare)

- Definition (PATOK)
 - the killing of animals which are injured or have a disease associated with severe pain or suffering and where there is **no other practical possibility** to alleviate this pain or suffering.
- PATOK Recital 12
 - It is an ethical duty to kill productive animals which are in severe pain where there is no economically viable way to alleviate such pain. In most cases, animals can be killed respecting proper welfare conditions.
 - However, under **exceptional circumstances**, such as **accidents** in **remote** locations, where competent personnel and equipment cannot reach the animals, complying with optimal welfare rules could prolong their suffering.
 - In the **interest of the animals**, it is, therefore, appropriate to exclude emergency killing from the application of certain provisions of [PATOK]

Summary

- From field observations, the H2H Euthanizer appears to provide a humane, innovative and practical option to stun and kill chickens on farms for management and welfare reasons.
- A WATOK licence is generally required to use an H2H Euthaniser in England and Wales.
- Research using EEG would help establish the timing of brain patterns indicative of unconsciousness, insensibility and death and associated minimum currents required.

Acknowledgement

- Poultry industry
- Top Equipment
- DEFRA, APHA and Scottish Government
- Researchers and experts consulted

References and further information

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