BRITISH STANDARD

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*Including Amendment No. 1*

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## Specification for

# Electric stunners for poultry

ICS 65.040.20

# Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Light Electrical Engineering Standards Policy Committee (LEL/-) to Technical Committee LEL/105, upon which the following bodies were represented:

AFRC Institute of Engineering Research

Agricultural Training Board

Association of Manufacturers Allied to the Electrical and Electronic Industry (BEAMA Ltd)

British Agricultural and Garden Machinery Association Ltd

British Medical Association

Health and Safety Executive

Institution of Electrical Engineers

Milk Marketing Board

Milking Machine Manufacturers' Association

Ministry of Agriculture, Fisheries and Food

National Farmers' Union

Universities Federation for Animal Welfare

This British Standard, having been prepared under the direction of the Light Electrical Engineering Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 31 August 1990



The following BSI references relate to the work on this standard:
Committee reference LEL/105
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# Foreword

This British Standard has been prepared by Technical Committee CPL/61/8 (formerly LEL/105).

It specifies requirements and tests for the safety and performance of electric stunners for poultry.

The style used in this standard follows that used in IEC 1011 which in turn was based on IEC 335-1.

Attention is drawn to the provisions of legislation which require that poultry be slaughtered without causing or permitting avoidable excitement, pain or suffering. One permitted method under the regulations requires that poultry be stunned prior to slaughter. This standard therefore includes both safety requirements for the protection of the operators of stunners and also minimum performance requirements for stunners to ensure that stunning is satisfactorily carried out without avoidable pain or suffering.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

**Summary of pages**

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 52, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

## 1 Scope

This British Standard specifies safety and performance requirements for type tests and routine tests for electric stunners for poultry. It does not cover stunning and tenderizing equipment used for other animals.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

## 2 Definitions

For the purposes of this British Standard the following definitions apply.

NOTE Where the terms "voltage" and "current" are used, they imply the r.m.s. values, unless otherwise specified.

**2.1**
**rated voltage**

the input voltage assigned to the stunner by the manufacturer

**2.2**
**rated voltage range**

the input voltage range assigned to the stunner by the manufacturer, expressed by its lower and upper limits

**2.3**
**working voltage**

the maximum voltage to which the part under consideration can be subjected when the stunner is operating at its rated voltage and under normal operating conditions

NOTE When deducing the working voltage, the effect of possible transient voltages on the supply mains is ignored.

**2.4**
**output voltage**

the voltage required to sustain the stunning current under normal load conditions

**2.5**
**rated power input**

the input power under normal operating conditions and assigned to the stunner by the manufacturer

**2.6**
**rated input current**

the current assigned to the stunner by the manufacturer

NOTE If no current is assigned to the appliance, the rated input current for the purpose of this standard is determined by calculation from the rated power input and the rated voltage and/or by measuring the current when the stunner is operating under normal operating conditions [see **4.3** a)] but supplied at rated voltage.

**2.7**
**rated frequency**

the supply mains frequency assigned to the stunner by the manufacturer

**2.8**
**rated frequency range**

the supply mains frequency range assigned to the stunner by the manufacturer, expressed by its lower and upper limits

**2.9**
**normal load**

a non-inductive resistor which represents the impedance of the poultry for test purposes. For an enclosed poultry stunner it is 322 Ω and for an open poultry stunner 1 250 Ω.

**2.10**
**power supply cord**

a flexible cable or cord, for supply purposes, fixed to, or assembled with, the stunner

**2.11**
**basic insulation**

the insulation applied to live parts to provide basic protection against electric shock

NOTE Basic insulation does not necessarily include insulation used exclusively for functional purposes.

**2.12**
**supplementary insulation**

an independent insulation applied in addition to the basic insulation, in order to ensure protection against electric shock in the event of a failure of the basic insulation

**2.13**
**double insulation**

insulation comprising both basic insulation and supplementary insulation

**2.14**
**reinforced insulation**

a single insulation system applied to live parts which provides a degree of protection against electric shock equivalent to double insulation under the conditions specified in this standard

NOTE The term "insulation system" does not imply that the insulation should be one homogeneous piece. It may comprise several layers that cannot be tested singly as supplementary or basic insulation.

**2.15**
**poultry**

domestic fowl including chickens, turkeys, guinea fowl, ducks, geese and quail

**2.16**
**poultry stunner**

an apparatus which is intended to deliver an electric current for the purpose of rendering poultry immediately unconscious prior to slaughter