
**Protective equipment for martial
arts —**

**Part 4:
Additional requirements and test
methods for head protectors**

iTeh STANDARD PREVIEW
Équipement de protection pour les arts martiaux —
Partie 4: Exigences et méthodes d'essai complémentaires relatives aux
protecteurs de la tête
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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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A list of all parts in the ISO 21924 series can be found on the ISO website. <http://www.iso.org/iso/21924>

Introduction

Head protectors are an individual item of protective equipment to protect the front, the sides and the rear of the head in martial arts.

They are designed to provide a degree of safety in case of accidental contact during martial arts. Martial arts can be dangerous and severe blows to the head may cause serious injury even if the protector is fitted and used properly.

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Protective equipment for martial arts —

Part 4: Additional requirements and test methods for head protectors

1 Scope

This document specifies additional requirements and test methods for head protectors without face protection used in unarmed martial arts, such as taekwondo, karate, kick-boxing and similar disciplines.

It also applies to head protectors used in boxing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 21924-1:2017, *Protective equipment for martial arts — Part 1: General requirements and test methods*

EN 960, *Headforms for use in the testing of protective helmets*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21924-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Requirements

4.1 General

The general requirements for head protectors shall be the same as those given in ISO 21924-1.

Head protectors shall be easy to put on and take off.

4.2 Openings

Head protectors shall be so designed that the ears have a connection to the environment to enable the wearer to hear as well as to prevent air pressure damage caused by blows on the ear.

The head protector may be pierced by openings that allow ventilation.

4.3 Mass

The maximum mass permitted shall vary with the head circumference. The relevant mass is specified in [Table 1](#).

Table 1 — Head circumference and mass of the head protector

Head circumference mm	<540	540 to 560	>560 to 580	>580
Mass g	max. 360	max. 380	max. 400	max. 420

4.4 Sizing

The manufacturer shall indicate in centimetres the range of head circumference of the user for which the head protector is designed.

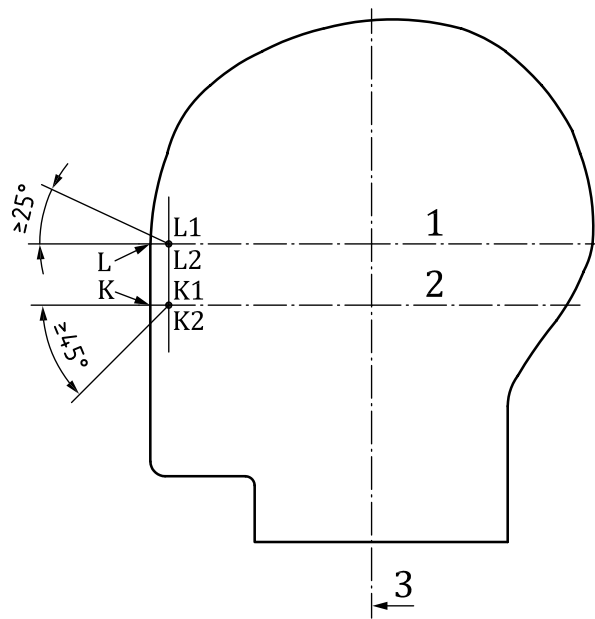
4.5 Field of vision

When tested in accordance with 5.4, there shall be no occultation in the field of vision bounded by angles as follows (see Figure 1):

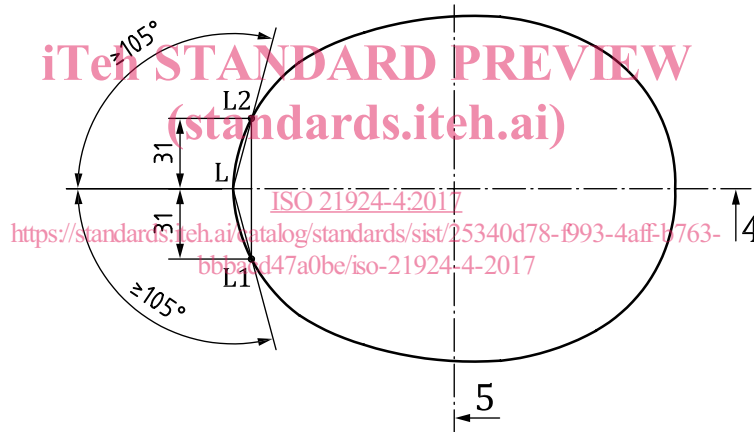
- horizontally: min 105° from the longitudinal vertical median plane to the left and right hand sides;
- upwards: min 25° from the reference plane;
- downwards: min 45° from the basic plane.

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a) Section of headform in longitudinal vertical plane



b) Section of headform in reference plane

Key

- 1 reference plane
- 2 basic plane
- 3 central vertical axis
- 4 longitudinal vertical median plane
- 5 central transverse vertical plane

Figure 1 — Field of vision

4.6 Restraint

A restraint system shall be provided by the manufacturer which enables the user to attach the head protector firmly without any assistance.

When attached firmly, the system shall meet the requirements defined in ISO 21924-1:2017, 4.3 excluding the third paragraph of ISO 21924-1:2017, 4.3, when tested according to 5.5.