
**Protective equipment for use in ice
hockey —**

**Part 4:
Head and face protection for
goalkeepers**

iTeh STANDARD PREVIEW
*Équipements de protection destinés à être utilisés en hockey sur
glace —*
(standards.iteh.ai)
Partie 4: Protections de tête et de visage pour les gardiens de but

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 83, *Sports and other recreational facilities and equipment*, Subcommittee SC 5, *Ice hockey equipment and facilities*.

This first edition of ISO 10256-4, together with ISO 10256-1, ISO 10256-2, ISO 10256-3, ISO 10256-5, and ISO 10256-6, cancels and replaces ISO 10256:2003, which has been technically revised.

ISO 10256 consists of the following parts, under the general title *Protective equipment for use in ice hockey*:

- *Part 1: General requirements*
- *Part 2: Head protection for skaters*
- *Part 3: Face protectors for skaters*
- *Part 4: Head and face protection for goalkeepers*
- *Part 5: Neck laceration protectors for ice hockey players*

The following parts are under preparation:

- *Part 6: Lower leg protectors for ice hockey players*

Introduction

Ice hockey is a contact sport with intrinsic hazards. The use of protective equipment will not eliminate all injuries but is intended to substantially reduce the severity and frequency of many injuries. Participation in the sport of ice hockey by a player implies acceptance of some risk of injury. The goal is to reduce the risk.

Performance requirements were determined after consideration of the state of the art of head and face protective design and manufacture. This specification was developed to address the unique demands and hazards associated with the position of ice hockey goalkeeper.

Three types of protectors are designated. All types are subject to impact resistance and shock attenuation requirements. Types D1 and D2 protectors are subject to hockey stick blade penetration resistance requirements over their entire area of coverage. Type D3 protectors are subject to hockey puck penetration resistance requirements within the protected area of the face and hockey stick blade penetration resistance requirements over the protected area of the head. It is recommended that Type D3 protectors be used only by players 18 years of age and older.

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Protective equipment for use in ice hockey —

Part 4: Head and face protection for goalkeepers

1 Scope

This part of ISO 10256 covers performance requirements for head and face protectors to be used by ice hockey goalkeepers. It is intended to be read in conjunction with ISO 10256-1, ISO 10256-2 and ISO 10256-3.

Performance requirements are established, where appropriate for the following:

- a) materials, assembly, and design;
- b) protected areas (coverage) and penetration resistance;
- c) shock absorption;
- d) puck impact resistance;
- e) retention;
- f) optical quality.

NOTE 1 The requirements of a clause take precedent over a figure.

NOTE 2 The intent of this part of ISO 10256 is to reduce the risk of injury to the head and face of ice hockey goalkeepers without compromising the form and appeal of the game.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10256-1:2016, *Protective equipment for use in ice hockey—Part 1: General requirements*

ISO 10256-2:2016, *Protective equipment for use in ice hockey—Part 2: Head protection for skaters*

ISO 10256-3:2016, *Protective equipment for use in ice hockey—Part 3: Face protectors for skaters*

CSA Z262.6-14, *Specifications for Facially Featured Headforms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10256-1, ISO 10256-2 and ISO 10256-3 and the following apply.

3.1

goalkeeper head and face protector

goalkeeper protector

device intended to protect the head and face of an ice hockey goalkeeper

Note 1 to entry: Examples can include but are not limited to the following:

- a) skater helmet in combination with a full-face protector; or
- b) mask that consists of
 - 1) a front portion to cover part of the head, face and jaw,
 - 2) a covering (e.g. cage) for the eyes and face, and
 - 3) a moveable backplate that covers the back of the goalkeeper's head.

3.2

Type D1

goalkeeper head and face protectors meeting the requirement for ice hockey stick blade penetration resistance within the protected areas of the head and face

3.3

Type D2

goalkeeper head and face protectors meeting the requirement for ice hockey stick blade penetration resistance within the protected areas of the head and face and are intended for use by goalkeepers, 10 years of age or younger

3.4

Type D3

goalkeeper head and face protectors meeting the requirement for ice hockey stick blade penetration resistance within the protected area of the head and puck penetration resistance within the protected area of the face

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4 Requirements

4.1 General

[ISO 10256-4:2016](https://standards.iteh.ai/catalog/standards/sist/48df014a-e071-4245-bfe4-10256444-goalkeeper-head)

<https://standards.iteh.ai/catalog/standards/sist/48df014a-e071-4245-bfe4-10256444-goalkeeper-head>

In addition to meeting this part of ISO 10256, a goalkeeper head and face protector shall meet the requirements according to ISO 10256-2:2016, 4.1 to 4.3 throughout their full range of adjustment.

4.2 Design

4.2.1 Padding

Padding or cushioning material shall be used to cover all hard surfaces of the protector that could otherwise come into contact with the wearer's head and shall remain in position under normal conditions of use.

4.2.2 Load-bearing area

Protectors shall have a minimum padded load-bearing area as specified in ISO 10256-3:2016, Figure 5.

4.2.3 Welded wire components

All wire ends shall terminate at the perimeter of the wire cage.

4.2.4 Overlap

4.2.4.1 The wire cage portion of the face protector shall overlap all edges of the head protector within the protected area (see [4.3.2](#)) by at least 6 mm.

4.2.4.2 For a face protector/skater helmet combination, the face protector shall overlap the lower edge of the helmet (forehead area) by at least 6 mm in the horizontal plane and follow the helmet backwards at least to the mid-frontal plane down to the basic plane (see [Figure 2](#), G'H'HZZ'HH'G').

4.2.5 Minimum distance (headform to face protector)

Except where it is covered by padding, no part of the protector shall be closer than 10 mm to the surface of the facially featured headform within the area of protection outside of the no-contact zone.

4.2.6 Maximum distance (headform to face protector)

The horizontal distance measured on the median plane, between the inside of the face protector and points g and Sn on the facially featured headform shall not exceed 60 mm (see [Figure 1](#)).

4.3 Protected areas (coverage)

4.3.1 Protected area of the head

The protected area of the head shall comply with ISO 10256-2:2016, 4.4.

4.3.2 Protected area of the face

The protected area shall include the front portion extending to at least the line G'-H'L-HL-Z-Z-HR-H'R-G' (where L is left and R is right) in [Figure 2](#) as viewed perpendicular to the median plane and when the protector is tested according to [5.4.2](#).

4.4 Penetration resistance

4.4.1 General

With the exception of the ear apertures (ear openings) and when tested according to [5.5](#), the following shall apply.

[ISO 10256-4:2016](https://standards.iteh.ai/catalog/standards/sist/48df014a-e071-4245-bfe4-f2b93a4fc413/iso-10256-4-2016)

4.4.2 Types D1 and D2

<https://standards.iteh.ai/catalog/standards/sist/48df014a-e071-4245-bfe4-f2b93a4fc413/iso-10256-4-2016>

There shall be no contact with the bare headform by the test blade within the protected areas of the head and face.

4.4.3 Type D3

There shall be no contact with the bare headform by the test blade within the protected area of the head and no contact by the test disk within the protected area of the face.

4.5 Shock-absorbing capacity

When tested according to [5.6](#), no single impact shall exceed a peak acceleration of 275 g under all test conditions. The outer covering (shell) shall remain intact, with no cracks visible through its full thickness.

4.6 Puck impact resistance

4.6.1 Contact test

When tested according to [5.7](#),

- a) neither the protector nor the puck shall touch the facially featured headform within the no-contact zone (see ISO 10256-3:2016, Figure 3),
- b) the shock-absorbing material at the load-bearing area shall remain securely attached to the face protector, and