INTERNATIONAL STANDARD

ISO 10333-5

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Personal fall-arrest systems —

Part 5: Connectors with self-closing and self-locking gates

Systèmes individuels d'arrêt de chute —

Partie 5: Connecteurs à portail autofermant et autoverrouillant

Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 10333 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 10333-5 was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 4, *Personal equipment for protection against falls*.

ISO 10333 consists of the following parts, under the general title *Personal fall-arrest systems*:

— *Part 1: Full-body harnesses*

— *Part 2: Lanyards and energy absorbers*

— *Part 3: Self-retracting lifelines*

— *Part 4: Vertical rails and vertical lifelines incorporating a sliding-type fall arrester*

— *Part 5: Connectors with self-closing and self-locking gates*

The system performance tests will be the subject of a future part 6 to ISO 10333.

Introduction

In cases where the hazard of falling from a height exists and where, for technical reasons or for work of very short duration, safe access cannot be otherwise provided, it is necessary to consider the use of personal fall-arrest systems (PFAS). Such use should never be improvised and its adoption should be specifically provided for in the appropriate formal provisions for safety in the work place.

PFAS complying with this part of ISO 10333 should satisfy ergonomic requirements and should only be used if the work allows means of connection to a suitable anchor device of demonstrated strength and if it can be implemented without compromising the safety of the user. Personnel should be trained and instructed in the safe use of the equipment and be observant of such training and instruction.

This part of ISO 10333 is based on current knowledge and practice concerning the use of PFAS that incorporate a full body harness.

This part of ISO 10333 presumes that the manufacturer of the PFAS, subsystems or components will, for the sake of consistency and traceability, operate a quality management system which will comply with national and regional regulations in force at the time. Guidance on the form this quality management system may take can be found in ISO 9000 (all parts), *Quality management and quality assurance standards*.

Personal fall-arrest systems —

Part 5:
Connectors with self-closing and self-locking gates

1 Scope

This part of ISO 10333 specifies requirements, test methods, instructions for use and maintenance, marking, labelling and packaging, as appropriate, for connectors with self-closing and self-locking gates made from metallic materials.

Connectors are used in personal fall-arrest systems (PFAS), which will be specified in a future International Standard (see ISO 10333-6 in the Bibliography), such that, if an arrest takes place, the arresting force will not exceed 6 kN. This part of ISO 10333 is applicable only to connectors limited to single person use of a total mass not exceeding 100 kg.

NOTE Users of fall protection equipment whose total mass (including tools and equipment) exceeds 100 kg are advised to seek advice from the equipment manufacturer regarding the suitability of this equipment, which may need additional testing.

The scope of this part of ISO 10333 does not extend to:

a) attachment elements, fastening buckles, adjusting buckles and other metallic fittings used in the manufacture of full-body harnesses, which are specified in ISO 10333-6;

b) connectors used for material-lifting purposes;

c) connectors used in special techniques or situations, e.g. rescue, or rope access.

This part of ISO 10333 does not specify those additional requirements that would apply when connectors are subjected to special conditions of use (where, for example, there exist unusual limitations concerning access to the place of work and/or particular environmental factors). Thus, treatments to ensure the durability of the materials of construction (such as heat treatment, anti-corrosion treatment, protection against physical and chemical hazards) are not specified in this part of ISO 10333, but should comply with appropriate International Standards or, failing that, with national standards and other specifications dealing with relevant physical characteristics and/or the safety of users. In particular, when it is considered necessary to test the corrosion resistance of metallic parts of the equipment, reference should be made to ISO 9227.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 10333. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 10333 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 9227:1990, *Corrosion tests in artificial atmospheres — Salt spray tests*

ISO 10333-1, *Personal fall-arrest systems — Part 1: Full-body harnesses*

3 Terms and definitions

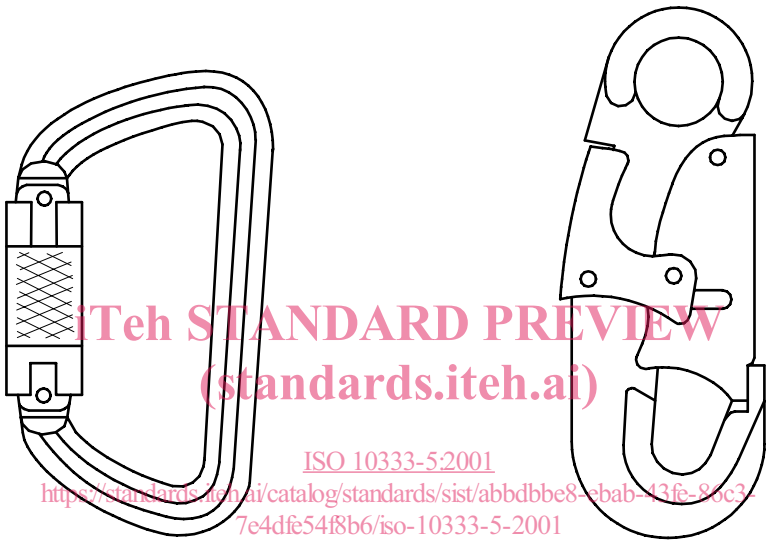
For the purposes of this part of ISO 10333, the following terms and definitions apply.

3.1 Connectors

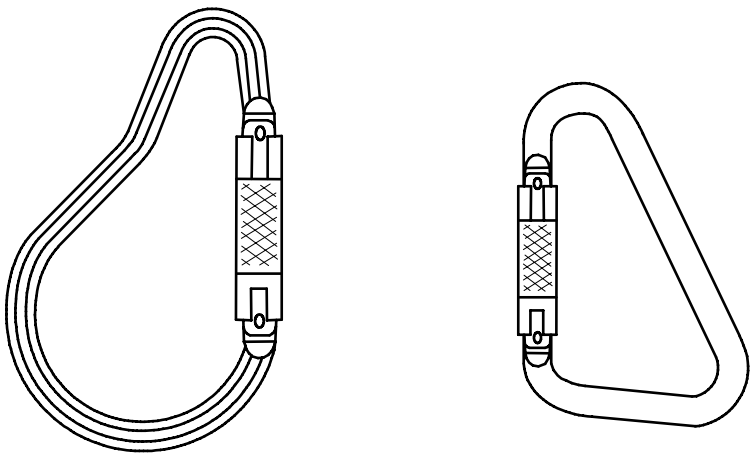
3.1.1
connector
device, which is used to assemble a PFAS by enabling two other components or subsystems to be physically connected

See Figure 1.

NOTE A connector has an opening guarded by a self-closing gate with a self-locking feature.

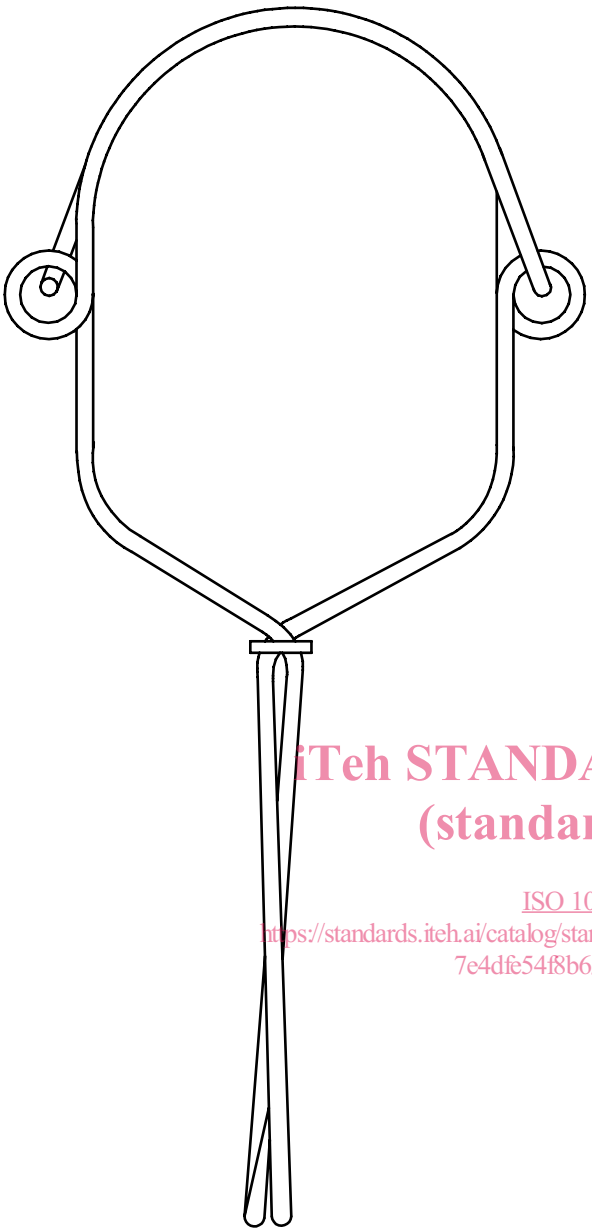


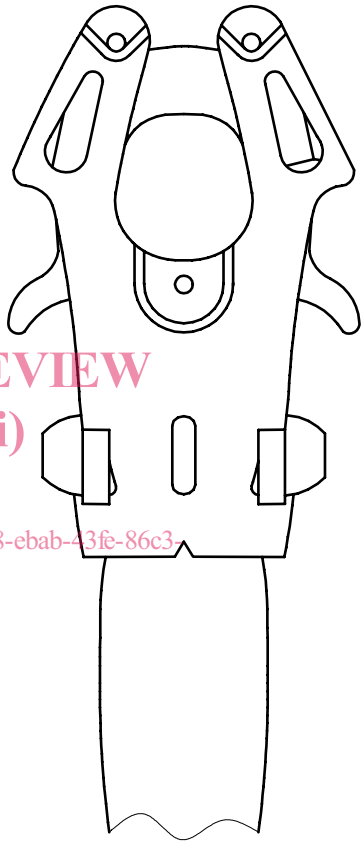
a) Karabiner and small snap hook



b) Large hooks

Figure 1 — Examples of connectors





c) Anchor connector **d) System assembly connector**

Figure 1 — Examples of connectors (*continued*)

3.1.2
gate
self-closing, sliding or hinged mechanism which, when opened, allows passage of the components or sub-systems to be coupled into the connector

See Figure 2.

NOTE When closed and with the locking feature engaged it is designed to prevent the unintentional separation of the coupled components or subsystems.