SLOVENSKI STANDARD
SIST EN 18039:2026

01-december-2026

Gorniška oprema - Samovarovala za rekreativno uporabo - Varnostne zahteve in preskusne metode

Mountaineering equipment - Autobelay devices for recreational use - Safety requirements and test methods

Persönliche Absturzschutzausrüstung - Selbstsicherungs-Automaten im Freizeitsportbereich - Sicherheitsanforderungen und Prüfverfahren

Equipement d'alpinisme et d'escalade - Auto-assureur automatique pour le loisir

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ICS:

13.340.60	Zaščita pred padci in zdrsi	Protection against falling and slipping
97.220.40	Oprema za športe na prostem in vodne športe	Outdoor and water sports equipment

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 18039

August 2026

ICS 13.340.60

English Version

Mountaineering equipment - Autobelay devices for recreational use - Safety requirements and test methods

Équipement d'alpinisme et d'escalade - Auto-assureurs automatiques pour le loisir - Exigences de sécurité et méthodes d'essai

Bergsteigerausrüstung - Selbstsicherungs-Automaten im Freizeitsportbereich - Sicherheitsanforderungen und Prüfverfahren

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European foreword

This document (EN 18039:2026) has been prepared by Technical Committee CEN/TC 136 “Sports, playground and other recreational facilities and equipment”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2027, and conflicting national standards shall be withdrawn at the latest by February 2027.

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

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

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1 Scope

This document specifies requirements, test methods, marking and information to be supplied for autobelay devices, intended to protect against falls during recreational use in a climbing structure. An autobelay device is a movable personal fall protection system for single person use.

This document does not specify requirements for descender devices or retractable fall arresters that are used for descending/climbing in mountaineering, rescue, rope access, fall arrest or work positioning systems.

NOTE 1 A climbing structure is e.g. a ropes course, a climbing gym.

NOTE 2 An autobelay device which enables the user to belay and descent himself/herself and which conforms to this document is personal protective equipment (PPE).

NOTE 3 For mountaineering standards, see Annex E.

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.

EN 341:2011, *Personal fall protection equipment — Descender devices for rescue*

EN 364:1992, *Personal protective equipment against falls from a height — Test methods*

EN 1176-1:2017+A1:2023, *Playground equipment and surfacing — Part 1: General safety requirements and test methods*

EN 12385-1:2002+A1:2008, *Steel wire ropes — Safety — Part 1: General requirements*

EN 13411-1:2002+A1:2008, *Terminations for steel wire ropes — Safety — Part 1: Thimbles for steel wire rope slings*

EN 13411-2:2001+A1:2008, *Terminations for steel wire ropes — Safety — Part 2: Splicing of eyes for wire rope slings*

EN 13411-3:2022, *Terminations for steel wire ropes — Safety — Part 3: Ferrules and ferrule-securing*

EN 15567-1:2015+A1:2020, *Sports and recreational facilities — Ropes courses — Part 1: Construction and safety requirements*

EN ISO 9227:2022, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2022)*

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3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
autobelay device
automatically operated device, usually installed on top of a route and above the user, including a retractable safety line, to which the user is connected, that allows climbing up without slack in the retractable safety line and, in case of loading the retractable safety line by the user, lowers the user automatically speed-regulated at a safe speed

Note 1 to entry: The device has a braking system that does not require an intervention for speed regulation by the user once the descent has commenced.

Note 2 to entry: The use of an additional redundant stop braking system is also possible and acceptable, provide that the additional redundant stop brake does not interfere during normal use.

3.1.1
class A autobelay device
autobelay device which has a safety line extension less than or equal to 70 cm, intended only for climbing up and descending without impact

3.1.2
class B autobelay device
autobelay device which has a safety line extension greater than 70 cm, for additional functions

EXAMPLE Freefall devices with a slack in retractable safety line.

3.1.3
autobelay device for speed climbing
autobelay device which is intended for climbing style, where high climbing speed is the target

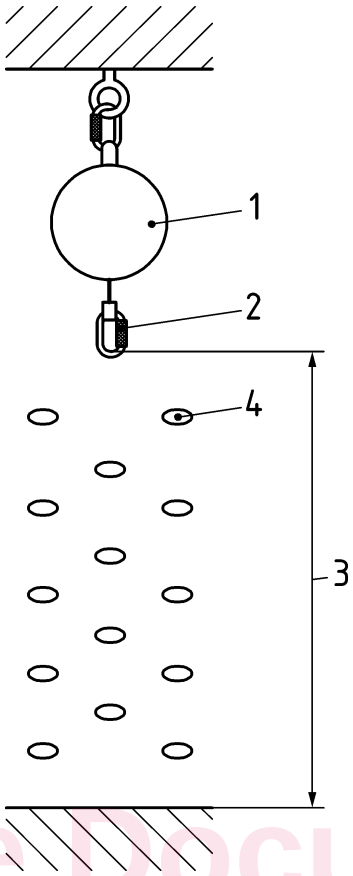
3.2
route
distance between ground floor and height of fully retracted connecting element when autobelay device is installed in accordance with the product instructions and information

Note 1 to entry: See Figure 1.

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Key

1 autobelay device
2 connecting element
3 route
4 climbing hold

Figure 1 — Route

3.3
retractable safety line
self-retractable lanyard of the autobelay device with an attachment point on its outer end termination

Note 1 to entry: See Figure 2.

EXAMPLES Wire rope, textile rope, or webbing.

3.4
safety line extension
element permanently or temporarily added to the end of *retractable safety line* (3.3) that does not retract into the belay device and provides a new fixation for the connecting element and also additional functions

Note 1 to entry: Examples of additional functions are but not limited to elastic webbing assemblies for freefall, or energy absorbers or line extensions required for specific site applications.

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3.5
connecting element
integral element permitting connection between the attachment point and the harness attachment point

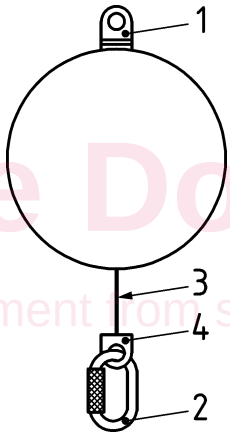
Note 1 to entry: See Figure 2.

3.6
attachment point
component of the retractable safety line permitting the fixation of the connecting element or temporary safety line extension

Note 1 to entry: See Figure 2.

3.7
anchor point
component of the autobelay device which is used to connect the autobelay device to the load bearing structure

Note 1 to entry: See Figure 2.



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Key

1 anchor point
2 connecting element
3 retractable safety line
4 attachment point

Figure 2 — Terminology of autobelay device components

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3.8
descent energy
energy measured in joules and expressed as *W,* which results from the product of the descent load, the gravity, the descent height and the number of descents

Note 1 to entry:

Descent energy $W = m \times g \times h \times n$

where

- W is the descent energy, expressed in joules (J);
- m is the descent mass, expressed in kilograms (kg);
- g is the gravity 9,81 m/s^2;
- h is the descent height, expressed in metres (m);
- n is the number of descents.

[SOURCE: EN 341:2011, 3.1.2]

3.9
minimum rated load
minimum mass of the user, including all gear, as specified in the product instructions and information

Note 1 to entry: Minimum rated load is expressed in kilograms.

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3.10
maximum rated load
maximum mass of the user, including all gear, as specified in the product instructions and information

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Note 1 to entry: Maximum rated load is expressed in kilograms.

3.11
energy dissipating element
element or component or arrangement of a fall arresting system, which is designed to reduce impact force of the kinetic energy developed during a fall of the user

3.12
braking force
maximum force F_{max} in kilonewtons measured at the anchor point during the braking period of the dynamic strength test

3.13
minimum mounting height
shortest vertical distance between ground and anchor point of autobelay device which is allowed in the product instructions and information

3.14
maximum mounting height
longest vertical distance between ground and anchor point of autobelay device which is allowed in the product instructions and information

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3.15
man-made fibre
fibre obtained by a manufacturing process

Note 1 to entry: For more information on man-made fibre, refer to ISO/TR 11827:2012.

3.16
twin-safety line
two independent retractable safety lines permanently connected together

4 Requirements

4.1 Design, materials and construction

4.1.1 General

The minimum rated load shall be specified according to 6.2 h).

The maximum rated load shall be specified in the product instructions and information and shall be at least 100 kg according to 6.2 h).

The materials which may come into contact with the skin of a user shall not be known to, or suspected to, adversely affect user hygiene or health, e.g. cause irritating or sensitization effects, during normal use of the autobelay device, according to 5.2.

The autobelay devices shall not have sharp or rough edges that may cut, abrade or otherwise damage retractable safety line or cause injury to the user, according to 5.2.

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There shall be no gaps between 8 mm and 25 mm and with a depth greater than 15 mm which can lead to entrapment according to 5.2. Finger entrapment does not apply to anchor points and connecting element.

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The energy dissipating elements of the autobelay device shall transmit an impact force not exceeding 6 kN, when tested according to 5.4.

NOTE For electrical supported systems, see informative Annex D.

4.1.2 Retractable safety line

4.1.2.1 General

The retractable safety line shall be made of galvanized steel wire rope or stainless-steel wire rope, textile rope or webbing.

The retractable safety line shall have a connecting element intended for attachment of a user.

The retractable safety line including its terminations shall allow inspections as specified in the product instructions and information. All requirements of this subclause are to be checked according to 5.2.

NOTE It is advisable to take care that the retractable safety line has an adequate protection against abrasive climbing wall surfaces.

4.1.2.2 Attachment point

The attachment point shall be terminated using appropriate methods depending on the retractable safety line material(s). The structural material of the attachment point shall be protected from wear.

All requirements of this subclause are checked in 5.2.

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