SLOVENSKI STANDARD
oSIST prEN 341:2025

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Osebna varovalna oprema za zaščito pred padci z višine - Naprave za spuščanje ob reševanju

Personal fall protection equipment - Descender devices for rescue

Persönliche Absturzschutzausrüstung - Abseilgeräte zum Retten

Équipement de protection individuelle contre les chutes - Descendeurs pour sauvetage

Ta slovenski standard je istoveten z: **prEN 341**

ICS:

13.340.60	Zaščita pred padci in zdrsi	Protection against falling and slipping

oSIST prEN 341:2025 **en,fr,de**

EUROPEAN STANDARD

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ICS 13.340.99

Will supersede EN 341:2011

English Version

Personal fall protection equipment - Descender devices for rescue

Persönliche Absturzschutzausrüstung - Abseilgeräte zum Retten

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 160.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 341:2025) has been prepared by Technical Committee CEN/TC 160 Protection against falls from height including working belts", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 341:2011.

A list of technical changes between this edition and EN 341:2011 is given in Annex A. Background and rationale about the changes between this edition and EN 341:2011 is given in Annex B.

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.

1 Scope

This document specifies requirements, test methods, marking and manufacturer's instructions and information for descender devices fitted with a built-in speed-regulating system, which include descent lines (hereinafter referred to as lines). These descender devices are intended to be used in a rescue system to provide protection against falling from a height when accessing/leaving positions at a height. This document does not specify requirements for descender devices that are used for descending in mountaineering, rope access or work positioning systems.

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 363:2018, *Personal fall protection equipment — Personal fall protection systems*

EN 364:1992, *Personal protective equipment against falls from a height — Test methods*[1]

EN 365:2004, *Personal protective equipment against falls from a height — General requirements for instructions for use, maintenance, periodic examination, repair, marking and packaging*[2]

EN 1496:2017, *Personal fall protection equipment — Rescue lifting devices*

EN 1891:1998, *Personal protective equipment for the prevention of falls from a height — Low stretch kernmantel ropes*

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

EN ISO 9227:2022, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2022)*[3]

3 Terms and definitions

For the purposes of this document, the terms and definitions of EN 363:2018 and the following 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
descender device
automatic (type 1) or manually-operated (type 2) device, including a line, by which persons can, at a limited velocity, rescue themselves, themselves and others or solely others from a higher to a lower position in such a way that a free fall is prevented

Note 1 to entry: In this document the term "device" is used to refer to the descender device without the line.

Note 2 to entry: The device can be designed for a line made from e.g. wire rope, textile rope, or webbing.

[1] As impacted by EN 364:1992/AC:1993
[2] As impacted by EN 365:2004/AC:2006
[3] As impacted by EN ISO 9227:2022/A1:2024

3.1.1
automatic descender device (type 1)
descender device with a built-in speed-regulating system that does not require an intervention by the user once the descent has commenced

3.1.2
manually-operated descender device (type 2)
descender device with a built-in speed-regulating system that requires an intervention by the user

3.1.3
built-in speed-regulating system
integral braking system of the descender device used to control the velocity of the descent for type 1 and to stop the descent with hands-off for type 2

3.1.4
descent control element
integral element of the manually-operated descender device, used to control the built-in speed regulating system

Note 1 to entry: A handle is an example for a descent control element.

3.1.5
panic locking element
integral part or function of the control device which stops the descent and thereby prevents an uncontrolled descent or a fall if the user panics and operates the descender device beyond its intended control parameters

3.1.6
attachment point
point at the descender device for connection of the user or to the anchor point

3.2
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 load, 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.

3.3
minimum rated load
minimum mass of the person(s), excluding tools and equipment, for the descender device, as specified by the manufacturer

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

3.4
maximum rated load
maximum mass of the person(s), including tools and equipment, for the descender device, as specified by the manufacturer

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

3.5
man-made fibre
fibre obtained by a manufacturing process

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

4 Requirements

4.1 General

4.1.1 Classes

Descender devices are classified as follows:

a) class A: descent energy $W \geq 7{,}5 \times 10^6$ J;

b) class B: descent energy $W \geq 1{,}5 \times 10^6$ J;

c) class C: descent energy $W \geq 0{,}5 \times 10^6$ J;

d) class D: For only one descent. Descent energy depends on the maximum descent height and the maximum rated load.

NOTE In practice, descender devices are subjected to different loads. A descender device for descending, e.g. 100 passengers from a cable car at a height of 100 m, has to meet more severe requirements than a descender device used by a crane driver to descend by himself from a height of 20 m only once.

4.1.2 Minimum rated load

The minimum rated load shall be specified by the manufacturer when tested in accordance with 5.1.

4.1.3 Maximum rated load

The maximum rated load shall be specified by the manufacturer and shall be at least 100 kg when tested in accordance with 5.1.

4.2 Design, materials and construction

4.2.1 General

Materials which can 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 descender device.

Descender devices shall not have sharp or rough edges that can cut, abrade or otherwise damage rope or webbing or cause injury to the user.

When descender devices in accordance with this standard have a rescue lifting function, they shall in addition to this document conform to EN 1496:2017, class A.

Suitable connectors shall be used (e.g. a connector conforming to EN 362:2004).

These requirements shall be tested in accordance with 5.1.

4.2.2 Lines

4.2.2.1 General

Lines shall be made from steel or stainless steel wire rope, textile rope or webbing.

Lines shall have at least one termination. Line ends that do not have a termination shall have an end stop.

The ends of the lines shall be protected against slipping through the device unintentionally.

Lines including their termination(s) shall be of a type capable of visual inspection or else subject to manufacturers' guidance for appropriate examination.

These requirements shall be tested in accordance with 5.1.

4.2.2.2 Wire rope lines

Wire rope lines shall be made from one piece and shall be stress and torsion relieved.

Wire rope lines made from steel except stainless steel shall be galvanized according to EN 12385-1:2002+A1:2008.

The nominal tensile strength of the wires of the steel or stainless steel wire rope shall not exceed 1960 N/mm^2.

NOTE A limit of the nominal tensile strength is necessary, because the wires become too brittle with a higher nominal tensile strength.

Manufacturers of descender devices should be particularly careful when selecting lines made from stainless steel as some types of stainless steel can have unpredictable fatigue and corrosion characteristics.

These requirements shall be tested in accordance with 5.1.

4.2.2.3 Textile rope lines

When tested in accordance with 5.1 textile rope lines for descender devices, class A, B or C shall be of kernmantel construction and shall conform to EN 1891:1998, 4.1 to 4.10, with the requirements of type A.

4.2.2.4 Webbing lines

Webbing lines shall meet the requirements of EN 1891:1998, 4.5, 4.6 and 4.10, with the requirements of type A.

Webbing lines shall be made from man-made fibres suitable for the use intended. The breaking tenacity of the man-made fibre shall be known to be at least 0,6 N/tex.

The materials used for the construction of the webbing line shall be known to have a melting point of more than 195 °C. Webbing lines made from polypropylene or polyethylene shall not be used.

These requirements shall be tested in accordance with 5.1.

4.2.2.5 Line integrity

When tested in accordance with 5.8, lines made of stainless steel wire rope or made of textiles containing aramid fibres shall withstand a test force as given in 4.6, applied for 3 min.

4.2.2.6 Terminations, end stops

Lines shall be terminated in such a manner that they can be connected, directly or by an appropriate connector as specified by the manufacturer, to a body holding device, e.g. a rescue harness or a rescue loop, or to an anchor device.

Reinforcement or another method shall be used to protect terminations from concentrated wear at all webbing-to-metal fitting interfaces.

All splices shall be secured to prevent the splice from coming open in use.

Eye splices in laid fibre rope shall consist of at least four tucks using all the yarns in the strands. The length of the splicing tails emerging after the last tuck shall be at least one rope diameter.

Threads used for sewing shall be physically compatible with the webbing/rope, and the quality shall be compatible to that of the webbing/rope. They shall, however, be of a contrasting shade or colour in order to facilitate visual inspection.

When using a knot for forming a termination or as an end stop, the knot shall be secured so that it cannot be opened without the use of a tool. The tail end of the knot shall have a minimum length of 100 mm after testing in accordance with 5.5.2.

Webbing ends shall be sealed or otherwise prevented from unravelling.

Eye terminations of wire ropes shall be made with thimbles and by splices or with thimbles and by pressed ferrules.

4.3 Dynamic strength

When tested in accordance with 5.2, the descender device shall not release the test mass and no part of the descender device shall show any signs of breaking or tearing.

4.4 Function

4.4.1 Overview of requirements and applicable conditioning

An overview for the conditionings and function requirements for the different Classes and Types is given in Table 1.

Table 1 — Overview of conditioning and function requirements

Conditioning		Classes A, B, C				Class D			
		Type 1		Type 2		Type 1		Type 2	
		5 m	Full length	5 m	Full length	5 m	Full length	5 m	Full length
	Clause	4.4.2.1.1	4.4.2.1.2	4.4.2.2.1	4.4.2.2.2	4.4.3.1.1	4.4.3.1.2	4.4.3.2.1	4.4.3.2.2
Dry conditioning	5.3.1.2	No	Yes	Yes	Yes	No	Yes	No	Yes
Wet conditioning	5.3.1.3	No	Yes	Yes	Yes	No	O	No	O
Cold conditioning	5.3.1.4	Yes	No	Yes	No	O	No	O	No
Wet and cold conditioning	5.3.1.5	O	No	O	No	O	No	O	No
O = required, if claimed by the manufacturer.									