SLOVENSKI STANDARD

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Osebna varovalna oprema za zaġļito pred padci z viġine - Lovilni sistemi

Personal protective equipment against falls from a height - Fall arrest systems

Persönliche Schutzausrüstung gegen Absturz - Auffangsysteme

Equipement de protection individuelle contre les chutes de hauteur - Systemes d'arret des chutes

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EUROPEAN STANDARD

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English version

Personal protective equipment against falls from a height - Fall arrest systems

Equipement de protection individuelle contre les chutes de hauteur - Systèmes d'arret des chutes

Persönliche Schutzausrüstung gegen Absturz - Auffangsysteme

This European Standard was approved by CEN on 15 March 2002.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Foreword

This document EN 363:2002 has been prepared by Technical Committee CEN/TC 160 "Protection against falls from a height including working belts", 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of an identical text or by endorsement, at the latest by November 2002, and conflicting national standards shall be withdrawn at the latest by November 2002.

This document supersedes EN 363:1992. This new edition contains the old text of the standard and incorporates some urgent amendments that are intended to give additional information and clarify inconsistencies. A comprehensive revision of the standard will follow at a later stage.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the terminology and the general requirements for fall arrest systems which serve as personal protective equipment against falls from a height. This European Standard additionally describes examples of how components or assemblies of components may be connected into a fall arrest system. These examples should enable the purchaser or user to assemble all components in a correct manner and to build up a fall arrest system.

2 Terms and definitions

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

2.1
element
part of a component or a sub-system. Ropes, webbing, attachment elements, fittings and anchor lines are examples of elements

2.2
component
part of a system at a point of sale by the manufacturer, supplied with packaging, marking and information supplied by the manufacturer. Body supports and lanyards are examples of components of systems

2.3
sub-system
assembly of elements and/or components making up a larger part of a system at a point of sale by the manufacturer, supplied with packaging, marking and information supplied by the manufacturer

2.4
fall arrest system
personal protective equipment against falls from a height comprising a full body harness and a connecting sub-system for fall arrest purposes

2.5
personal protective equipment (PPE) against falls from a height
equipment to secure a person to an anchor point in such a way that a fall from a height is either prevented or safely arrested

2.6
full body harness
body support primarily for fall arrest purposes, i. e. a component of a fall arrest system. The full body harness may comprise straps, fittings, buckles or other elements, suitably arranged and assembled to support the whole body of a person and to restrain the wearer during a fall and after the arrest of a fall

2.7
primary straps/secondary straps
primary straps are those straps of a full body harness which are intended by the manufacturer to support the body or exert pressure on the body during the fall of a person and after the arrest of the fall. The other straps are secondary straps

2.8
attachment element
specific connecting point for components or sub-systems

2.9
retractable type fall arrester
fall arrester with a self-locking function and an automatic tensioning and return facility for the lanyard, i.e. the retractable lanyard. An energy dissipating function may be incorporated in the device itself or an energy absorber may be incorporated in the retractable lanyard

2.10
guided type fall arrester
fall arrester with a self-locking function and a guide facility. The guided type fall arrester travels along an anchor line, accompanies the user without requiring manual adjustment during upward or downward changes of position and locks automatically on the anchor line when a fall occurs

2.11
guided type fall arrester including a rigid anchor line
sub-system consisting of a rigid anchor line, a self-locking guided type fall arrester which is attached to the rigid anchor line and a connector or a connector-terminated lanyard. An energy dissipating function may be installed between the fall arrester and the anchor line or an energy absorber may be incorporated in the lanyard or in the anchor line

2.12
guided type fall arrester including a flexible anchor line
sub-system consisting of a flexible anchor line, a self-locking guided type fall arrester which is attached to the flexible anchor line and a connector or a connector-terminated. An energy dissipating function may be installed between the fall arrester and the anchor line or an energy absorber may be incorporated in the lanyard or in the anchor line

2.13
energy absorber
element or a component of a fall arrest system, which is designed to dissipate the kinetic energy developed during a fall from a height

2.14
length of energy absorber including lanyard
total length L_t in metres, from one load bearing point to the other load bearing point measured in an unloaded, but taut condition of the energy absorber including lanyard

2.15
lanyard
connecting element or component of a fall arrest system. A lanyard may be of synthetic fibre rope, wire rope, webbing or chain

2.16
length of lanyard
length L_l in metres from one load bearing point to the other load bearing point measured in an unloaded, but taut condition of the lanyard

2.17
retractable lanyard
connecting element of a retractable type fall arrester. A retractable lanyard may be of wire rope, webbing or synthetic fibre rope and may be longer than 2 m

2.18
anchor line
connecting element specified for a sub-system with a guided type fall arrester

2.19
rigid anchor line
connecting element specified for a sub-system with a guided type fall arrester. A rigid anchor line may be a rail or a wire rope and is intended for securing to a structure in such a way that lateral movements of the line are limited

2.20
flexible anchor line
connecting element specified for a sub-system with a guided type fall arrester. A flexible anchor line may be a synthetic fibre rope or a wire rope and is intended for securing to an upper anchor point

2.21
adjustment device
element of a lanyard to vary its length

2.22
termination
ready-to-use end of a lanyard. A termination may be for instance a connector, a spliced eye or a sewn loop

2.23
attachment/detachment point
point on the anchor line where the guided type fall arrester can be fitted or detached

2.24
connector
connecting element or component of a fall arrest system

2.25
braking force
maximum force F_{max} in kilonewtons, measured at the anchor point or the anchor line during the braking period of the dynamic performance test

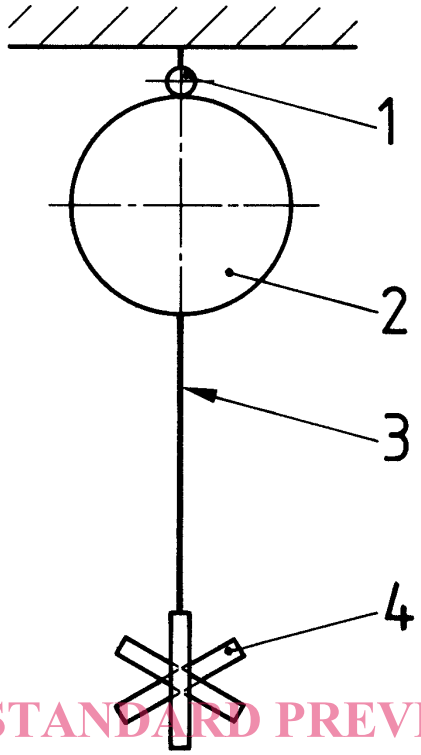
2.26
arrest distance
vertical distance *H* in metres, measured at the mobile load bearing point of the connecting sub-system from the initial position (onset of the free fall) to the final position (equilibrium after the arrest), excluding the displacements of the full body harness and its attachment element

2.27
horizontal distance
horizontal distance *A* in metres measured between the front side of the anchor line and the load bearing point of the connector intended to be attached to the full body harness

3 Examples of fall arrest systems

3.1 Fall arrest system with a retractable type fall arrester

An example of a fall arrest system with a retractable type fall arrester is shown in Figure 1. An energy absorber may be incorporated in the retractable lanyard, if the retractable type fall arrester does not have an energy dissipating function. Retractable type fall arresters are specified in EN 360.



Key

1 Anchor point

2 Retractable type fall arrester

3 Retractable lanyard

4 Full body harness

Figure 1 - Example of a fall arrest system with a retractable type fall arrester

3.2 Fall arrest system with a guided type fall arrester including a rigid anchor line

An example of a fall arrest system with a guided type fall arrester on a rigid anchor line is shown in Figure 2. An energy dissipating function may be installed between the fall arrester and the anchor line or an energy absorber may be incorporated in the lanyard or in the anchor line. Guided type fall arresters including a rigid anchor line are specified in EN 353-1.