ICS 13.340.60 SLOVENSKÁ TECHNICKÁ NORMA Jún 2024

STN	**Osobné ochranné prostriedky proti pádu z výšky Záchytné lanové systémy pre pracovné polohovanie Adjustačné zariadenia lana**	**STN EN 12841** 83 2630

Personal fall protection equipment - Rope access systems - Rope adjustment devices

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/24

Obsahuje: EN 12841:2024

Oznámením tejto normy sa ruší
STN EN 12841 (83 2630) z apríla 2007

138498

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12841

February 2024

ICS 13.340.60 Supersedes EN 12841:2006

English Version

Personal fall protection equipment - Rope access systems - Rope adjustment devices

Équipements de protection individuelle pour la prévention des chutes de hauteur - Systèmes d'accès par corde - Dispositif de réglage de corde pour maintien au poste de travail

Persönliche Absturzschutzausrüstung - Systeme für seilunterstützten Zugang - Seileinstellvorrichtungen

This European Standard was approved by CEN on 17 December 2023.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN 12841:2024 E

Contents

Page

European foreword ... 4

Introduction ... 5

1 Scope ... 6

2 Normative references ... 6

3 Terms and definitions ... 6

4 Requirements ... 9
4.1 General requirements for all Types ... 9
4.1.1 Anchor lines ... 9
4.1.2 Compatibility ... 9
4.1.3 Edge design ... 9
4.1.4 Corrosion resistance ... 9
4.1.5 Marking and information ... 9
4.2 Overview of the specific requirements for each type of rope adjustment devices ... 9
4.3 Specific requirements for Type A rope adjustment devices ... 10
4.3.1 Connecting elements ... 10
4.3.2 Free movement ... 10
4.3.3 Static strength ... 11
4.3.4 Dynamic performance ... 11
4.3.5 Dynamic strength and residual strength ... 11
4.4 Specific requirements for Type B rope adjustment devices ... 11
4.4.1 Free movement ... 11
4.4.2 Release prevention function ... 11
4.4.3 Minimum working performance ... 11
4.4.4 Dynamic strength and residual strength ... 12
4.5 Specific requirements for Type C rope adjustment devices ... 12
4.5.1 Hands-free locking element ... 12
4.5.2 Minimum working performance ... 12
4.5.3 Static strength ... 12
4.5.4 Dynamic strength and residual strength ... 12
4.5.5 Descent velocity and panic locking ... 12
4.5.6 Temperature rise ... 13

5 Test methods ... 13
5.1 Test apparatus ... 13
5.2 Conditioning and setup before testing ... 13
5.2.1 General conditioning ... 13
5.2.2 Conditioning to heat ... 13
5.2.3 Conditioning to wet ... 13
5.2.4 Conditioning to very cold ... 14
5.2.5 Conditioning to wet and cold ... 14
5.3 General tests ... 14
5.3.1 Test samples ... 14
5.3.2 Compatibility ... 14
5.3.3 Edge design ... 14
5.3.4 Corrosion resistance ... 15

5.4 Specific tests 15
5.4.1 Length of connecting elements 15
5.4.2 Movement test 15
5.4.3 Release prevention test for Type B rope adjustment devices 16
5.5 Static tests 17
5.5.1 Test samples 17
5.5.2 Minimum working performance test for Type B and Type C rope adjustment devices 17
5.5.3 Static strength test for Type A and Type C rope adjustment devices 18
5.6 Dynamic tests 19
5.6.1 Test samples 19
5.6.2 Dynamic performance for Type A rope adjustment devices 19
5.6.3 Dynamic strength and residual strength for Type A rope adjustment devices 20
5.6.4 Dynamic strength and residual strength for Type B and Type C rope adjustment devices 22
5.7 Descent test for Type C rope adjustment devices 25
5.7.1 General 25
5.7.2 Test samples 26
5.7.3 Test arrangement 26
5.7.4 Velocity, locking and temperature rise 26

6 Marking 27

7 Manufacturer's instructions and information 28

Annex A (informative) List of useful information 29

A.1 General 29

A.2 Maintenance of rope adjustment devices within the user's reach 29

A.3 Anticipation of emergency situations 29

A.4 Care when selecting anchor lines 29

Annex B (informative) Background and rationale about the changes between this document and EN 12841:2006 30

Annex C (informative) Significant changes between this document and EN 12841:2006 34

Annex ZA (informative) Relationship between this European Standard and the essential requirements of Regulation 2016/425 aimed to be covered 38

Bibliography 40

European foreword

This document (EN 12841:2024) 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 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 August 2024, and conflicting national standards shall be withdrawn at the latest by August 2024.

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 supersedes EN 12841:2006.

A list of technical changes between this edition and EN 12841:2006 is given in Annex C. Background and rationale about the changes between this edition and EN 12841:2006 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.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

In rope access systems, rope adjustment devices are used in combination with suitable anchor lines, which could be a working line or a safety line, e.g. made of ropes conforming to Type A of EN 1891:1998. Rope adjustment devices are intended to be used to link suitable sit harnesses (e.g. conforming to EN 813) or suitable full body harnesses (e.g. conforming to EN 361) to a working line and a safety line to allow access, egress and changes in the work position, to give support and to protect against falls.

Attention is drawn to the limitations of rope adjustment devices. Type A rope adjustment devices are for use on safety lines to prevent a fall in the event of failure of the working line or its components. However, in extreme circumstances, such as failure of the working line or its components during improper use of the system, Type A rope adjustment devices may be called upon to prevent or arrest a limited fall. This is reflected in the test requirements. Type B and C rope adjustment devices are for ascending and descending a working line respectively, but also have a fall prevention function. The design of each type may be incorporated into another when, in every case, they should meet the higher requirements of any common or similar test.

In a rope access system, the worker is typically protected by a Type A rope adjustment device connected to a safety line and a Type B or C rope adjustment device connected to a working line. The two rope adjustment devices with their respective anchor line are all components of the protective system. It is fundamental for the safe use of a rope access system that the worker is always connected to both anchor lines, and that any slack in the anchor lines and connecting lanyards is avoided.

A non-exhaustive list of useful information for the rope adjustment devices described in this document is provided in the informative Annex A.

1 Scope

This document applies to rope adjustment devices intended for use in rope access systems. It specifies the requirements, test methods, marking and manufacturer's instructions and information.

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*

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

EN 892:2012+A3:2023, *Mountaineering equipment - Dynamic mountaineering ropes - Safety requirements and test methods*

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

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