
Gorniška oprema - Naprave za zaviranje - 3. del: Naprave za zaviranje z ojačanim zaviranjem

Mountaineering equipment - Braking devices - Part 3: Braking devices with amplified braking

Bergsteigerausrüstung - Bremsgeräte - Teil 3: Bremsgerät mit teilweiser Verriegelungsunterstützung

Matériel d'alpinisme et d'escalade - Dispositifs de freinage - Partie 3 : Dispositif de freinage avec assistance partielle au verrouillage

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English Version

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CEN/TR 15151-3:2026 (E)**European foreword**

This document (CEN/TR 15151-3:2026) 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.

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Introduction

This document summarizes the collection of work that was performed with the intention of forming an EN standard for manual braking devices with partially assisted braking used in mountaineering, climbing and related activities. Many different tests and test methods were conducted with the aim of finding a repeatable process that could be used to classify the performance of this type of device. However, since no repeatable data could be gained, after several years of work, it was not possible to write a complete a standard.

In order to save all of the valuable studies and findings, the CEN/TC 136/WG 5 decided to move from draft standard to technical report.

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CEN/TR 15151-3:2026 (E)

1 Scope

This document applies to manual braking devices with partially assisted locking used in mountaineering, climbing and related activities for belaying, to protect against falls from a height and/or for abseiling with speed regulation. These are for use with mountaineering ropes according to EN 892:2012+A3:2023. In case of abseiling and lowering down, this also applies to braking devices used with low stretch kernmantel ropes in accordance with EN 1891.

It does not apply to manual braking devices and braking devices with assisted locking which are addressed in EN 15151-1 and EN 15151-2, nor to fully automatic fixed installations.

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 15151-1, *Mountaineering equipment - Braking devices - Part 1: Braking devices with manually assisted locking, safety requirements and test methods*

EN 15151-2, *Mountaineering equipment - Braking devices - Part 2: Manual braking devices, safety requirements and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15151-1, EN 15151-2 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

braking device

mechanical device, which generates forces on the rope to oppose movement of the rope through the device

[SOURCE: EN 15151-1:2012, 3.1]

3.2

manual braking device with partially assisted locking

device controlled by hand force applied to the brake rope, in a specified range of positions, that produces an amplified holding force in the live rope such that when the force in the brake the rope is reduced to zero the amplified holding force is partially maintained

3.3

attachment point

system which is required and intended for the attachment of a connector according to the information supplied by the manufacturer

3.4

brake rope

section of rope leading into the belay device, that is controlled by the user

3.5**live rope**

section of rope leading from the braking device to the climber or anchor

3.6**brake rope angle**

angle between the brake rope and the live rope about the belay device

3.7**holding force**

force required to cause slippage of rope through the braking device

3.8**residual holding force**

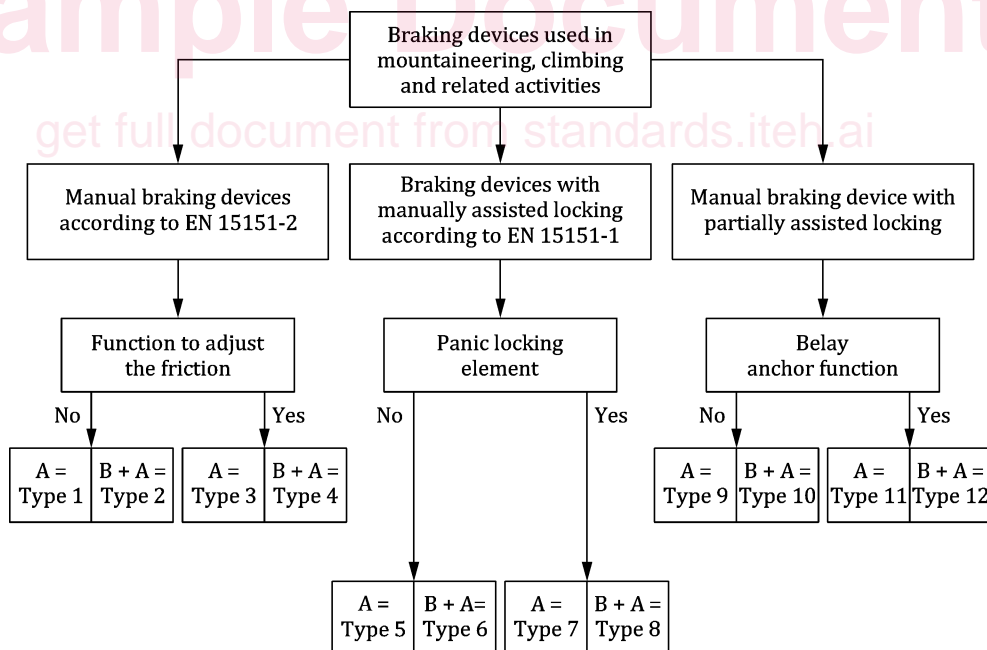
force required to cause slippage of rope through the braking device, after the device is locked and when no force is applied in the brake rope

3.9**rope bearing carabiner**

connector used with the braking device that the rope is in contact with

4 Classification

For classification of braking devices see Figure 1.

**Key**

A abseiling

B belaying

Figure 1 — Classification of braking devices

4.1 Manual braking device with partially assisted locking.**4.1.1 Type 9: devices for abseiling without a belay anchor function.**