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Keine Stimmen

# Carabiner (hook)



**Carabiners** are mainly used in children's and youth work for outdoor activities (climbing or rope techniques).

This article provides an overview of the various models and in some cases refers to more detailed articles on specific types of carabiners.

**Note: Care must be taken when handling carabiners.**

## Why is the carabiner called a carabiner?

A **carabiner (karabiner** ) is a hook with a catch (gate). It was originally used by cavalrymen. After firing, the carbine (short-barrelled rifle) could be quickly attached to the chest or cartridge belt on the *snap hook* in order to continue the fight with pistols or blank weapons. Over time, however, this *carbine hook* took on new significance, especially in rope technology, and the term " *carbine* " began to be used.

A comparable device is mentioned as early as **1616** in the military writer Johann Jakob von Wallhausen's work *Kriegskunst zu Pferd (Art of War on Horseback* ):

"*... on it a **Schleiff von Eysen** has a **little hook**, such a spring, so that the pipe, so he hangs in it, cannot fall out of it.*"

(J. J. von Wallhausen, *The Art of War on Horseback.* Frankfurt/M. 1616, p. 35)

## What types of carabiners are there?

### Standard carabiner

Carabiners **without a locking mechanism** are usually referred to as **normal carabiners**. These can be used where the carabiner is **not the only safety-critical feature** (e.g. material carabiners) or where the ability to open and close the carabiner quickly provides a greater safety benefit than the loss of safety due to the lack of a locking device (e.g. when used with a quickdraw sling).

As a replacement for a locking carabiner, two normal carabiners can also be used **in opposite directions** (one gate on the left, the other on the right).

## Locking carabiner

On **locking carabiners**, the **gate** is **protected** against **accidental opening** by a **sliding** or **screwable sleeve**. When closed, the sleeve lies on the side of the gate to be opened over the connection point between the gate and carabiner body, preventing the gate from being opened. When open, it is pushed or moved onto the gate, thus exposing the connection point to allow it to be opened. Locking carabiners are **used** wherever the **safety chain would be interrupted** if the carabiner failed.

Nowadays, only self-locking locking carabiners are used in commercial applications. Different terms are used for locking carabiners depending on the type of construction and use:

- Screw-lock carabiner
- Twist-lock carabiner
- Tri-lock carabiner
- Safety carabiner

## Special carabiners

There are a number of different carabiners that are used for **special purposes**. Here are a few examples:

- HMS carabiners
- Firefighter carabiners
- Pipe hook
- Via ferrata carabiners
- "DIY store carabiner"
- Air sports

## What standards must a carabiner meet?

Carabiners that are to be marketed in the **European Union** must comply with **European standards (EN)** and be certified if they are part of personal protective equipment (PPE). Certification guarantees compliance with the standard specifications and conformity with the European PPE Directive (89/686/EEC) and is confirmed with the **CE marking** and a declaration of conformity, among other things. This enables barrier-free trade in the EU.

- When **closed ,carabiners** must hold at least **20 kN in the longitudinal direction**. In addition, the breaking load values in the transverse direction and with the gate open must also be specified, which - in the case of aluminum carabiners - are around one third to one half of the breaking load in the closed state.
- **Closed via ferrata carabiners** must achieve **breaking load values of 26 kN**, as they are exposed to greater loads when falling.

In addition to the European standard, there is also the **Union Internationale des Associations d'Alpinisme (UIAA) standard**, which sets much stricter standards for durability; however, certification according to UIAA is not mandatory in order to be allowed to market the carabiners, provided they comply with the EN.

## Files test

Profil_Minileiter

## How are carabiners made?

A video from Black Diamond gives an insight into the production of carabiners.

## Sources

- **Cover picture:** Ramun Badertscher;
- Wikibooks (Climbing/carabiners) retrieved on 23.09.2014;
- Wikipedia (carabiners) retrieved on 23.09.2014;
- Bergundsteigen 1/04; Snappers, screwdrivers and companions; PDF 2.5 MB;

## Weitere Informationen

*Categories*
Technology and outdoor activities

*Tags*
Rope Technology

*Age*
8–12 years
13–16 years
from the age of 16

*Number of participants*
No data available.

*Bible*
This information is missing.

*Material*
None

*File download*
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