**C - CLIMBING A VIA FERRATA**

A via ferrata is a route up a rock face equipped with solid cables, steps and metal ladders which make the ascent easier and provide the possibility to belay yourself as you climb. Without such artificial aids, to tackle such a route you would need to be familiar with and use roped climbing techniques. Via ferrate let you climb trekking/mountaineering routes both at low altitude and on big mountain walls.

Even though via ferrate are solidly equipped and let a large number of people enjoy the vertical world, they remain challenging itineraries which should not be underestimated. You must always remember safety because there is always the risk of falling with serious consequences: you should always use a via ferrata set joined to your harness. The via ferrata set includes an energy absorbing device which, when used correctly, allows a user’s fall to be arrested and the arresting force reduced.

To tackle safely a Via Ferrata you need to:
- possess and know how to use the necessary equipment (harness, via ferrata set, helmet, etc.);
- know how to climb up the steps and ladders;
- be aware of the difficulty of the overall route (technical difficulty, length, time needed, descent routes, etc.);
- be aware of your own capabilities and limits.

A person can climb by themselves along a Via Ferrata, using the via ferrata set as the sole means of connecting themselves to the cables present along the route. Having said this, it is always best to be part of a group on a via ferrata because, if the need arises, they can belay you from above with a rope or provide help. With children or inexperienced people on a Via Ferrata, it is recommended to proceed roped together, so as to be able to belay them as they climb upwards or lower them on descents. To be able to do this you need to know the associated rope techniques.

**C1 - NECESSARY EQUIPMENT**

In order to tackle roped together a Via Ferrata the following products are also necessary:
- **Helmet.** To protect your head from rocks falling from above and/or avoid banging your head against the rock if you fall.
- **Harness.** Connects the climber to the Via Ferrata set and holds him if he falls.
- **Via Ferrata set.** Connects the climber’s harness to the cables present long the route, to arrest and absorb the force of a possible fall.
- **Gloves.** Protect hands against scratches/burns from the rock or cables.
- **Rucksack.** For transporting food, water, etc. during the ascent.

1) Helmet. To protect your head from rocks falling from above and/or avoid banging your head against the rock if you fall.
2) Harness. Connects the climber to the Via Ferrata set and holds him if he falls.
3) Via Ferrata set. Connects the climber’s harness to the cables present long the route, to arrest and absorb the force of a possible fall.
4) Gloves. Protect hands against scratches/burns from the rock or cables.
5) Rucksack. For transporting food, water, etc. during the ascent.

Not exhaustive information: always consult the user’s instructions of each device and the technical manuals.
Attention! It is essential to possess a proper technical education.
C2 - PUTTING ON THE VIA FERRATA SET

Harnesses for Via Ferrata normally have buckles for adjusting the waistband and leg loops and a single attachment point. Before climbing you should:
• put on the harness correctly and adjust the buckles so that the harness fits you correctly.
• insert the attachment loop of the via ferrata set through the harness’s attachment point, as shown (Fig. 1);
• pass the two arms of the via ferrata set through the attachment loop (Fig. 2) to form a larkspur knot (Fig. 3).

Important! Do not connect the via ferrata set to other points of the harness, only to those indicated (Fig. 4-5).

C3 - SAFELY MOVING ALONG THE VIA FERRATA

After having checked that the via ferrata set has been correctly attached to your harness, you can start climbing, following these steps:
• connect both arms of the via ferrata set to the first section of safety cable using the two karabiners (Fig. 1);
• climb along the route, remaining connected to the cable;
• when you reach the first point where the cable is connected to the rock, move one karabiner onto the new section of cable before you move the second, so that you are always clipped into the cable (Fig. 2);
• repeat this sequence until you reach the end of the route (Fig. 3).

Warnings:
• don’t climb with only one karabiner connected to the safety cable, always two;
• never unclip both karabiners at the same time, danger of death!
• on each section of cable, only one person should climb at a time (B);
• avoid falling.

Important! To avoid risking a fall due to tiredness, it is best to rest by attaching yourself to an attachment point with a quickdraw or sling.
You must always remember safety because there is always the risk of falling with serious consequences: you should always use a via ferrata set joined to your harness.

If you fall:
- you first slide down the safety cable (A).
- when the karabiners reach the first point when the cable is attached to the rock and cannot slide any further (B), the via ferrata set's energy absorber is loaded, and extends, absorbing energy as it does so (C).

In illustration 1, as an example, the activation of a tearing webbing energy absorber is shown. Failure to use a certified via ferrata set and instead using a system without an energy absorber (rope, rope sling, sewn sling, etc.) can have serious consequences and can be fatal.

In illustration 2, as an example, we see a fall by a person connected to the cable by a length of single rope. Absence of an energy absorbing mechanism leads to the breakage of the length of rope used.
C5 - MOVING AS A ROPE PAIR ON A VIA FERRATA

Moving as a roped pair on a via ferrata, in addition to the obligatory use of a via ferrata set, is recommended in the following cases:

- children or inexperienced persons are present;
- exposed or difficult sections with a high risk of a fall;
- sections where you could fall onto obstacles present before the energy absorber activates.

To move as a roped pair you need to use a rope and know how to belay one or more seconds. The group needs to have a member who can be the lead climber and belayer or hire a professional guide who can do this. In the illustrations we see an example of belaying a second up a difficult section:

- A is connected to the safety cable with the via ferrata set and has belayed himself with the climbing rope to the intermediate cable anchor point;
- A has attached the belay device to the intermediate cable anchor point and with the climbing rope belays B and takes in rope as she climbs;
- B is connected to the safety cable with the via ferrata set and is belayed top-rope by A using the climbing rope;
- B has fallen and has been held by the climbing rope. The top-rope belaying means she has avoided falling a greater distance, with the associated risks, to the next cable anchor point below her.
LOCKING SYSTEM TYPOLOGY

**TRADITIONAL**
This locking system is recommended in dirty environments, where it’s necessary to clean the carabiner easily.

**CATCH FREE**
This locking system makes the hooking and releasing movements of the carabiners more fluent, avoiding the catching in ropes, webbings and anchoring points.

GATE TYPOLOGY

<table>
<thead>
<tr>
<th>STRAIGHT GATE (S)</th>
<th>BENT GATE (B)</th>
<th>WIRE BENT (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic lever designed for progression.</td>
<td>Classic lever designed for progression. Eases the placement of the rope.</td>
<td>On equal performances highly reduces the weight of the connector. Diminishes the “open gate” effect in case of fall.</td>
</tr>
</tbody>
</table>

GATE BLOCKING SYSTEM TYPOLOGY

<table>
<thead>
<tr>
<th>SCREW GATE (SG)</th>
<th>SCREW GATE WITH ACL SYSTEM (SGL)</th>
<th>TWIST-LOCK GATE (WG)</th>
<th>TRIPLEX GATE (TG)</th>
<th>TRIPLEX GATE WITH ACL SYSTEM (SGL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two movements are necessary to open the gate (1-unscrew and 2-open). WARNING! It’s necessary to screw in order to guarantee lock the gate.</td>
<td>The stainless steel wire gate holds the carabiner in place on the belay loop to avoid the danger of cross loading of the connector. It allows an easy positioning and removal.</td>
<td>Two movements are necessary to open the gate (1-twist and 2-open). WARNING! It automatically comes back in the locking position of the gate.</td>
<td>Three movements are necessary to open the gate (1-push, 2-twist and 3-open). WARNING! It automatically comes back in the locking position of the gate.</td>
<td>The stainless steel wire gate holds the carabiner in place on the belay loop to avoid the danger of cross loading of the connector. It allows an easy positioning and removal.</td>
</tr>
</tbody>
</table>

AUTOMATIC GATE
Two movements are necessary to open the gate (1-push and 2-open). WARNING! It automatically comes back in the locking position of the gate.

DOUBLE GATE
Two movements are necessary to open the gate (1-push and 2-open). WARNING! It automatically comes back in the locking position of the gate.

Note that: the abbreviation that follows the name of the carabiner, indicates the type of gate.

ALL THE CONNECTORS ARE INDIVIDUALLY TESTED AT 12 KN.
SPECIAL FEATURES

**FIXIT**
New innovative shaped rubber fastener for quickdraw slings (patent pending). It secures the lower carabiner of the quickdraw to the sling, preventing the accidental rotation and keeps it on the axis. It also protects the sling from wear and tear.

**CAPTIVE BAR**
The captive bar could be supplied assembled or loose, to be assembled by the customer.