



# CLiC-iT RiDER

## *CONTINUOUS BELAY SYSTEM*



*INSTRUCTIONS AND MAINTENANCE MANUAL*

*Rev G // 31-01-2024*

# INDEX

<b>A. COMPONENTS</b>	<b>3</b>
1. CLiC-iT RiDER components compatibility	3
2. Anchor	4
3. Anchor wedge	6
4. Articulated arms	8
5. Positionners	11
6. Anchor plate for trees	13
7. Non-returns	14
8. Inverters	18
9. Cable connector	18
10. Route swapper	19
<b>B. PARCOURS DESIGN</b>	<b>21</b>
1. Optimal path	21
2. Installation according to different slopes and inclinations	22
3. Safety line height	22
4. Ziplines	23
5. Safety line cable installation	25
<b>C. RESPONSABILITY &amp; GENERAL RECOMMENDATIONS</b>	<b>27</b>
<b>D. CONTROL &amp; MAINTENANCE SHEET</b>	<b>29</b>

## GLOSSARY

MCD: Mobile Connection Device.  
Technical definition that describe  
a pulley-type product according to  
EN17109.



# A. COMPONENTS

## 1 CLIC-IT RIDER COMPONENTS COMPATIBILITY

### SAFETYLINE CABLE FOR CLIC-IT RIDER PULLEY :

Réf :  
CR-CA-LDV

OR

Type: 6x19 + IWRC (steel core compacted)    Nominal diameter: 12mm  
Core: steel    Resistance: 127 kN  
Surface treatment: hot-deep galvanized    Real diameter:  $\varnothing = 12\text{mm}$

Type: 6x26 + IWRC (steel core compacted)    Nominal diameter: 12mm  
Core: steel    Resistance: 127 kN  
Surface treatment: hot-deep galvanized    Real diameter:  $\varnothing = 12\text{mm}$

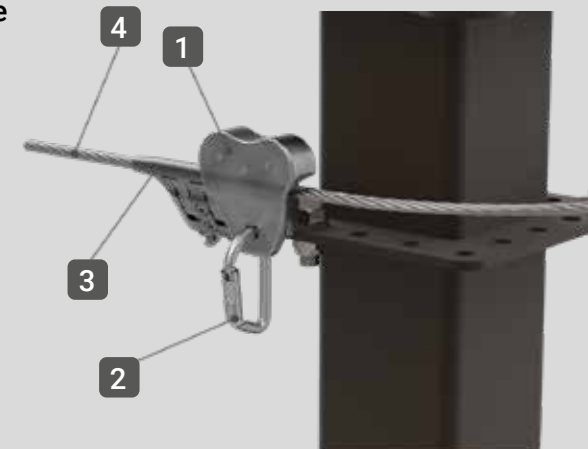
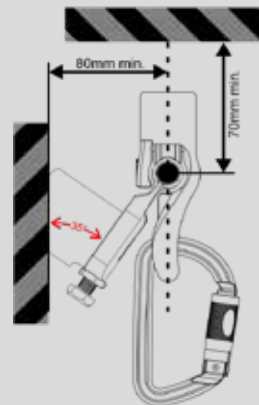
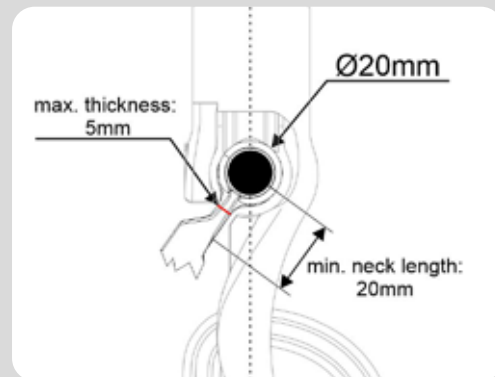


The CLiC-iT RiDER continuous belay system is compatible exclusively with the CLiC-iT RiDER pulley. Any other cable reference not supplied by DEHONDT SARL or IMN must be validated by DEHONDT SARL beforehand for mechanical testing. A 4-meter sample is required for this purpose. Non-compacted lifeline cables are strictly FORBIDDEN, as the pulley would be at risk of coming off the lifeline. Do not use any other type of pulley on this lifeline. To ensure safe installation, use only components and rope supplied or recommended by DEHONDT SARL or IMN. Using other components (screws, shackles, cable, etc.) may affect the safety or durability of the continuous belay system. Please refer to the CLiC-iT RiDER Pulley, PIN-LOCK, Lanyard, LE CLOU Lifeline, Spacer and Platform instruction manuals for full operating instructions. To avoid premature wear of the pulley, observe the installation recommendations (distances, radii, angles, slopes, etc.). Failure to do so may result in the pulley rubbing against components (anchors, positioners, etc.). To avoid premature wear of the pulley, it is essential to check before opening the course that the pulley passes the anchors and positioners without impact or friction over the entire course. For further information and to test your course design, please contact us.



Structural anchorages compatible with the CLiC-iT RiDER Pulley must meet the requirements of the UNE EN 795:2012 standard to ensure user safety. Moreover the instructions of the lifeline must comply with the EN15767 standard. Below are the dimensional requirements that an anchorage must meet to be considered compatible with the CLiC-iT RiDER Pulley:

The anchorage must be inclined 35° with the vertical axis to ensure correct movement of the MCD, correct stability and avoid collisions in the system.



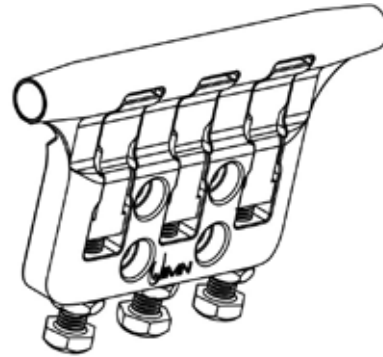
- 1 CLiC-iT RiDER Pulley
- 2 PIN LOCK Carabiner
- 3 Anchor
- 4 Cable

# 2 ANCHOR

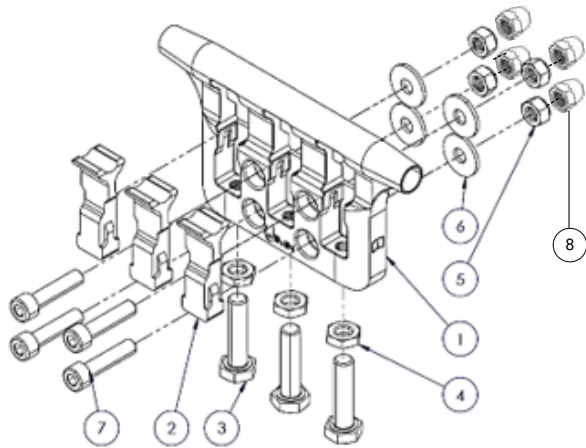
Reference: CR-AN

## 2.1 DESCRIPTION

Anchor allows a continuous movement for CLiC-iT RiDER Pulley along the entire game course. Its function is to guide the IMN&CLiC-iT SafetyLine cable and keeping it fixed at a certain point. To do this, 3 gripping pieces press the cable and prevent any movement.



## 2.2 ANCHOR COMPONENTS



- ① Anchor body
- ② Fastening part
- ③ Fixing screw M10x40 INOX A4-80 DIN933
- ④ Bottom nut M10 INOX A2-70 DIN439
- ⑤ Self-locking nut M8 DIN985
- ⑥\* Washer M8 NFE25514
- ⑦ Screw M8x35 A2 DIN912
- ⑧ Cap nut M8 A2 DIN1587

\*Only to be used when assembled on articulated arms

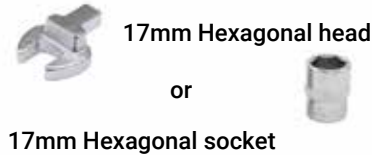
## 2.3 ESSENTIAL INSTRUCTIONS

The Anchor installation and maintenance requires the use of a calibrated torque wrench.

Required tools:



Manual or Digital Torque Wrench  
Ex: Irimo



To fix the safety cable, you must exert a torque of 45 N/m on each M10 screw.

**Check tightening to 45Nm 5 seconds after first tightening.**

A torque wrench must be used to not exceed this value. Finally, manually tighten the nuts of each screw.

**Once the screws have been tightened to the correct torque, do not remove them completely.**



**! The use of an impact wrench is not allowed.**  
**! Never exceed the indicated torque.**  
**! Ignoring these indications can lead to anchor fracture.**



The installation of the anchor on the anchor wedge or on the articulated arm is carried out using the components 5, 6, 7 & 8 according to the assembly procedure of this manual.

## 2.4 CLEANING RECOMMENDATIONS

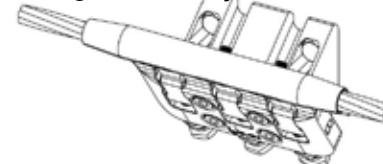
- Don't clean Anchor with soap or water.
- To remove dirt from Anchor use compressed air or a damp cloth.
- Avoid long exposure of the product in saline environments.



## 2.5 ASSEMBLIES

Anchor and Anchor Wedge assembly

3.



Anchor and Articulated arm assembly

4.



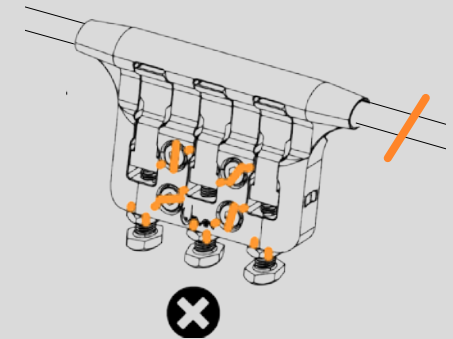
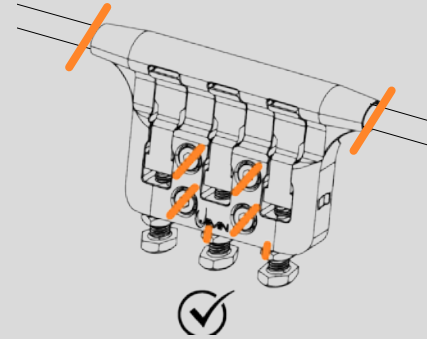


Marking a line on cable will indicate if the cable has slipped.

Marking a line on the screws will indicate if the anchor loosens over time.

The screws will not be tight if the line is not straight.

Use a permanent marker in a visible, weather-protected color



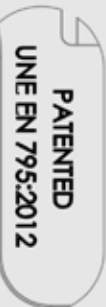
## 2.6 TRACEABILITY AND MARKING

### UNE EN 795:2012

Standard for personal protective equipment against falls in height.

It establishes the technical requirements necessary to cover the possible health and safety risks associated with the use of the product.

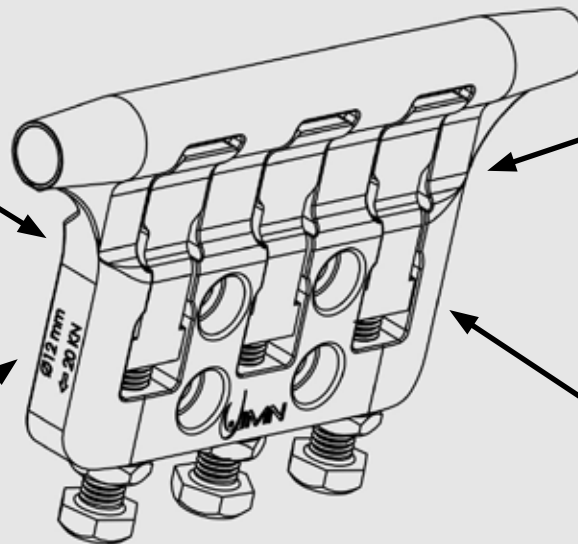
Compliance with European Directive 89/686/EEC: Personal protective equipment (PPE).



### ESSENTIAL TECHNICAL SPECIFICATIONS

**Ø12mm** Anchorage designed for safety lines equipped with 12 mm diameter steel cable.

**20kN** Limit load capacity established by the manufacturer for use in the indicated direction.

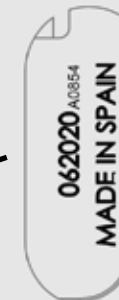


### 062020

Code respective to the production batch and correlative to the part version.

### A0854

Individual identification code. (A):part denomination. (XXXX): unique numeric code.

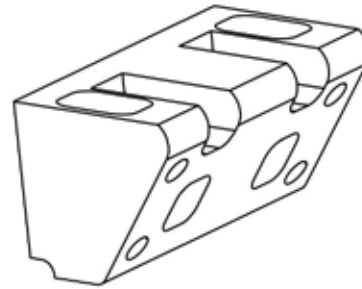


# 3 ANCHOR WEDGE

Reference: CR-AW

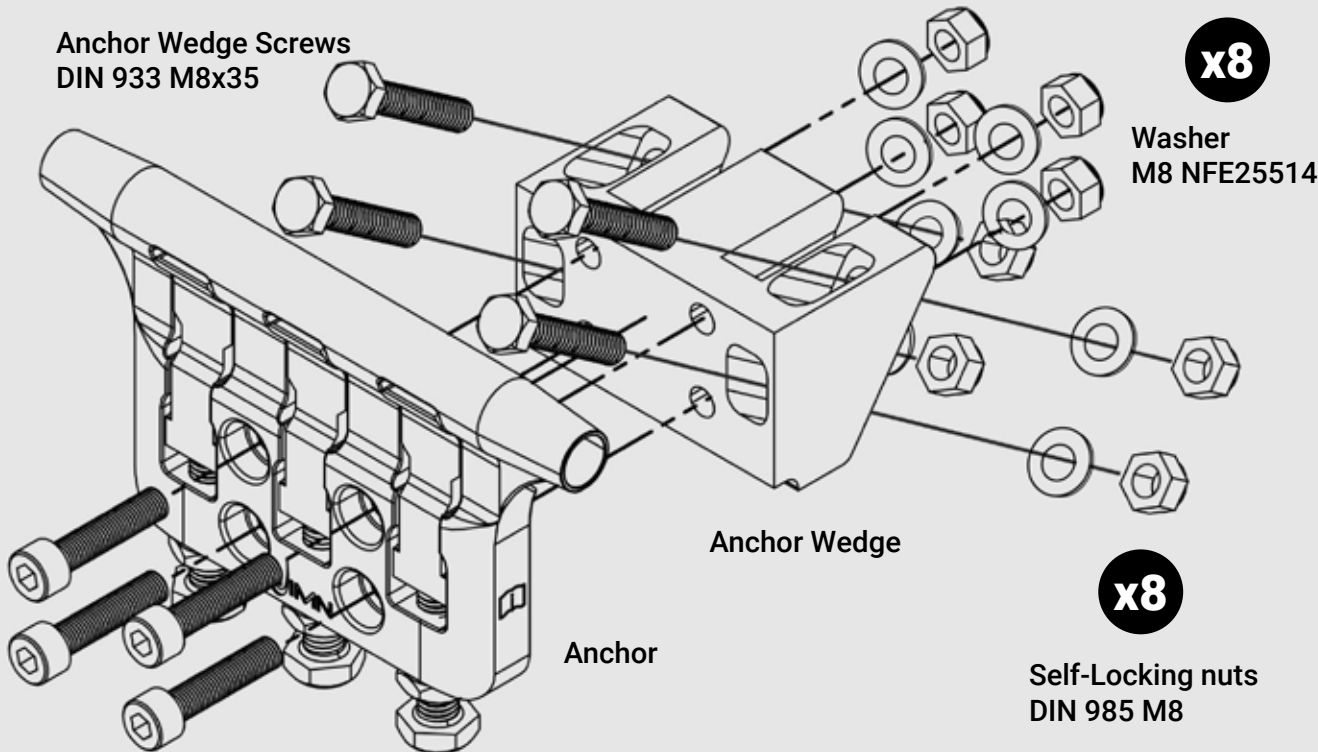
## 3.1 DESCRIPTION

Anchor Wedge is a piece of cast steel whose function is to provide the ideal inclination of 35° for Anchor. This is the standard connecting element for attaching the Anchors to the structural poles of an adventure park.



## 3.2 ANCHOR & ANCHOR WEDGE ASSEMBLY

Anchor Wedge Screws  
DIN 933 M8x35



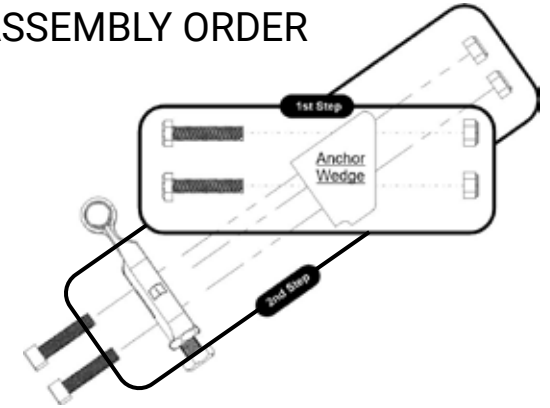
x8

Washer  
M8 NFE25514

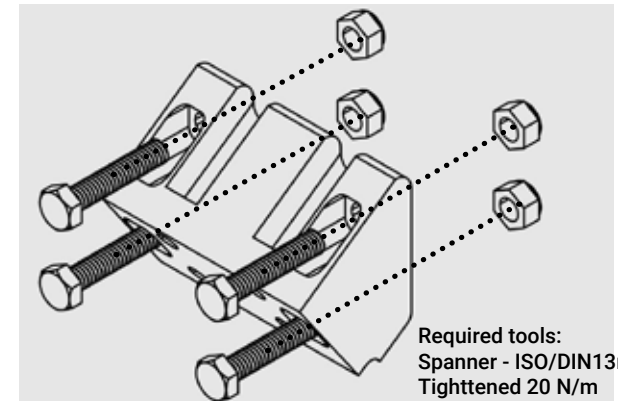
x8

Self-Locking nuts  
DIN 985 M8

## ASSEMBLY ORDER

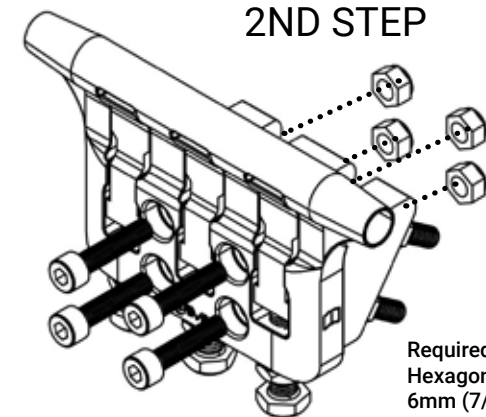


## 1ST STEP



Required tools:  
Spanner - ISO/DIN13mm  
Tightened 20 N/m

## 2ND STEP



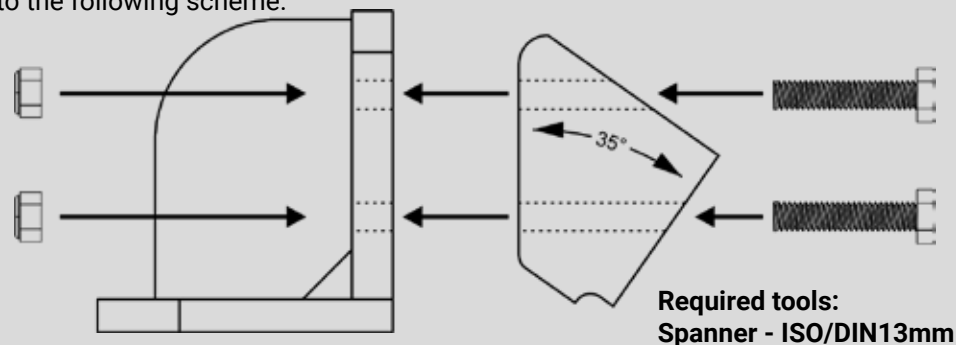
Required tools:  
Hexagonal torque wrench -  
6mm (7/32")  
Tightened 20 N/m

### 3.3 ANCHOR WEDGE INSTALLATION

The location where the IMN&CLiC-iT CBS elements will be installed shall meet the following requirements:

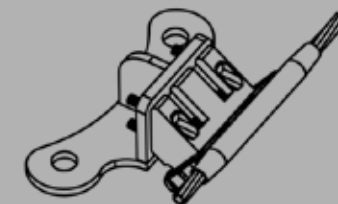
- Must have sufficient mechanical strength to install the system
- A vertical surface is required to install Anchor Wedge
- This vertical surface must have the necessary holes to screw Anchor Wedge

The connection of Anchor Wedge on a vertical surface is carried out according to the following scheme:

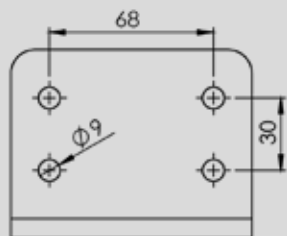


#### Example for structural parks

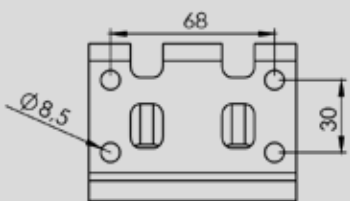
Anchor + Anchor Wedge + Connection part



Holes dimensions to install Anchor Wedge



Example of connection part design for structural parks

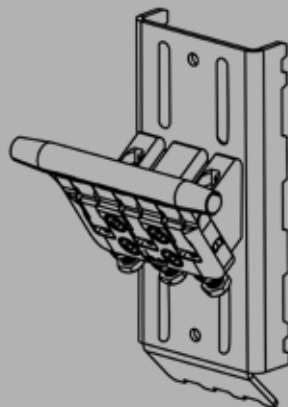


Anchor Wedge holes dimensions

6.

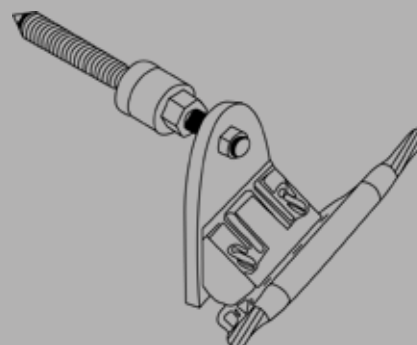
#### Example on anchor adapted for trees

Anchor + Anchor wedge + Anchor adapted for trees



#### Example on wedge adaptor LE CLOU

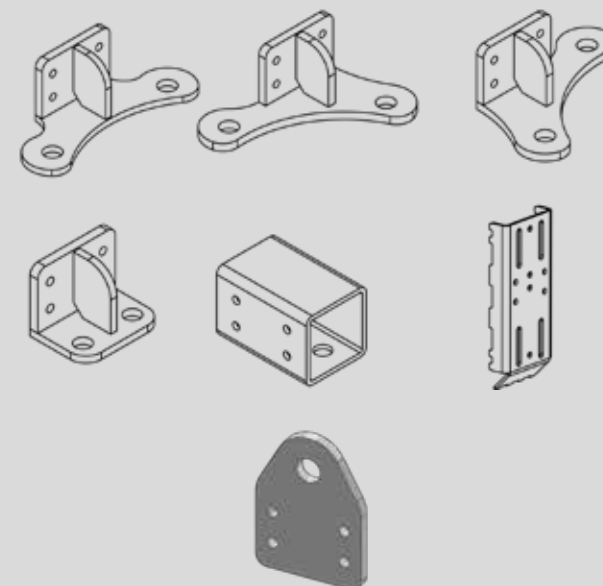
Anchor + Anchor wedge + Wedge adaptor LE CLOU (ref. CR-AN-AD) + LE CLOU SPACER (ref. CL-CBUM22)



For starts and finishes courses only



Before the purchase of IMN&CLiC-iT CBS items it is necessary to know the park characteristics and design the structural components necessary for the installation of the system



# 4 ARTICULATED ARMS

## 4.1 ARTICULATED ARMS. TYPES AND CONNECTIONS

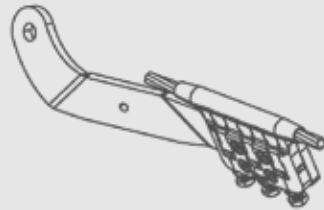
Reference: CR-SAL

Simple articulated Arm (Left side)



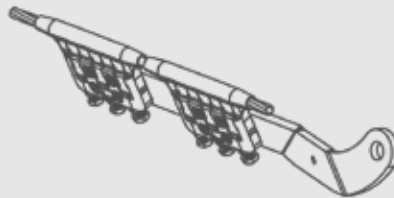
Reference: CR-SAR

Simple articulated Arm (Right side)



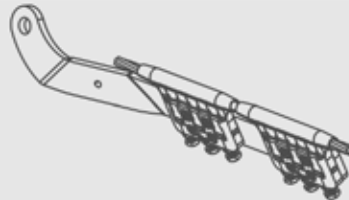
Reference: CR-DAL

Double articulated Arm (Left side)



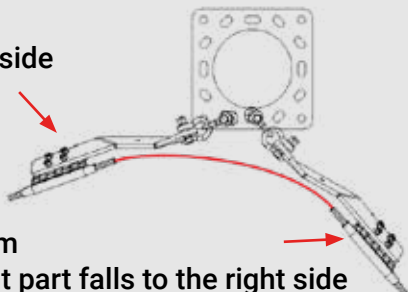
Reference: CR-DAR

Simple articulated Arm (Right side)



Left arm

The front part falls to the left side



Right arm

The front part falls to the right side

## 4.2 ANCHOR AND ARTICULATED ARMS ASSEMBLY

Required tools:  
Spanner ISO/DIN13mm  
Hexagonal torque wrench  
6mm (7/32)

For a smooth passage of the pulley over the anchors, install articulated arms with this part vertical

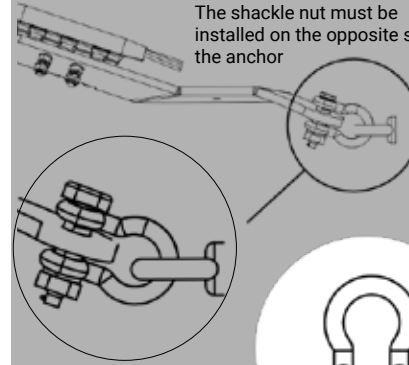
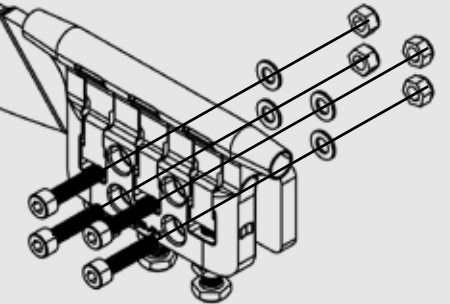
Articulated arm

TO BE USED TO FIX  
ARTICULATED ARMS

Shackle with safety bolt CMU2T MR 1/2 inch  
Reference : CR-MLA

The shackle nut must be installed on the opposite side to the anchor

Anchor



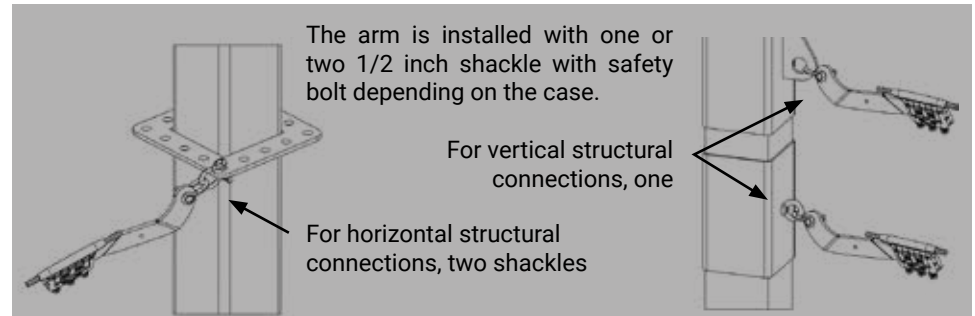
Average resistance to slippage on the cable after anchor tightening: 28 kN

## 4.3 ARTICULATED ARMS INSTALLATION IN STRUCTURAL PARKS

The arm is installed with one or two 1/2 inch shackle with safety bolt depending on the case.

For vertical structural connections, one

For horizontal structural connections, two shackles





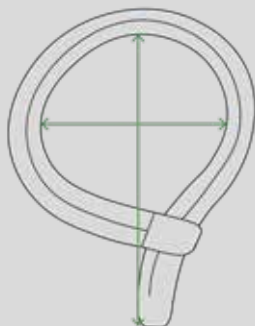
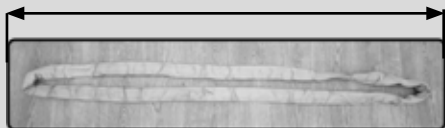
## 4.4 ARTICULATED ARM INSTALLATION ON TREES USING LIFTING SLING

To install an Articulated Arm on a tree, a sling with a strength greater than 2000 Kg is recommended.

The remaining length after the knot should protrude between 10 and 15 cm.

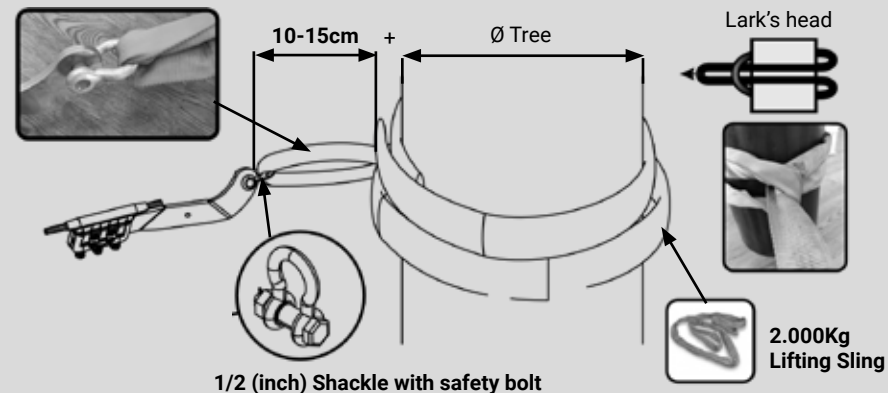
Be sure to measure the diameter of the tree at the height where the installation will be made.

*Slings are measured end to end*



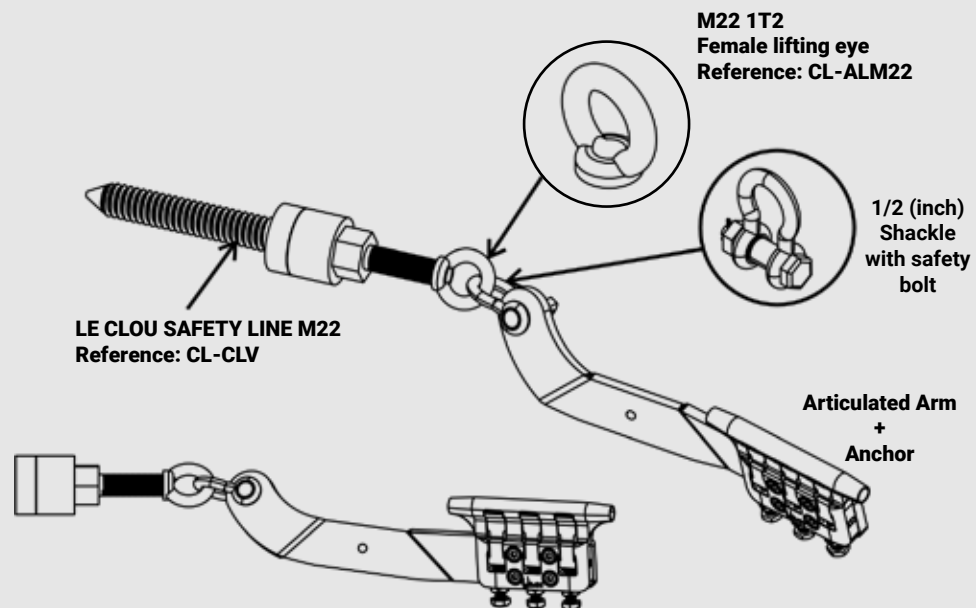
In meters :

Tree diameter (with wedges)	Length of sling required
D	=D*3,14+0,3
1	3,4
0,9	3,1
0,8	2,8
0,7	2,5
0,6	2,2
0,5	1,9
0,4	1,6
0,3	1,2

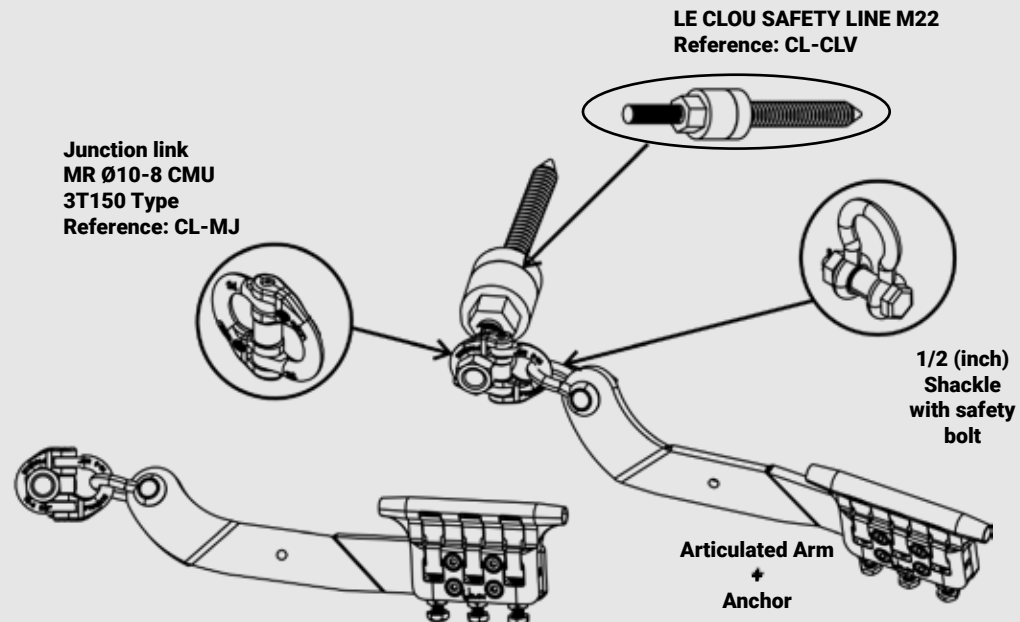


## 4.5 ARTICULATED ARM INSTALLATION ON TREES USING LE CLOU SYSTEM

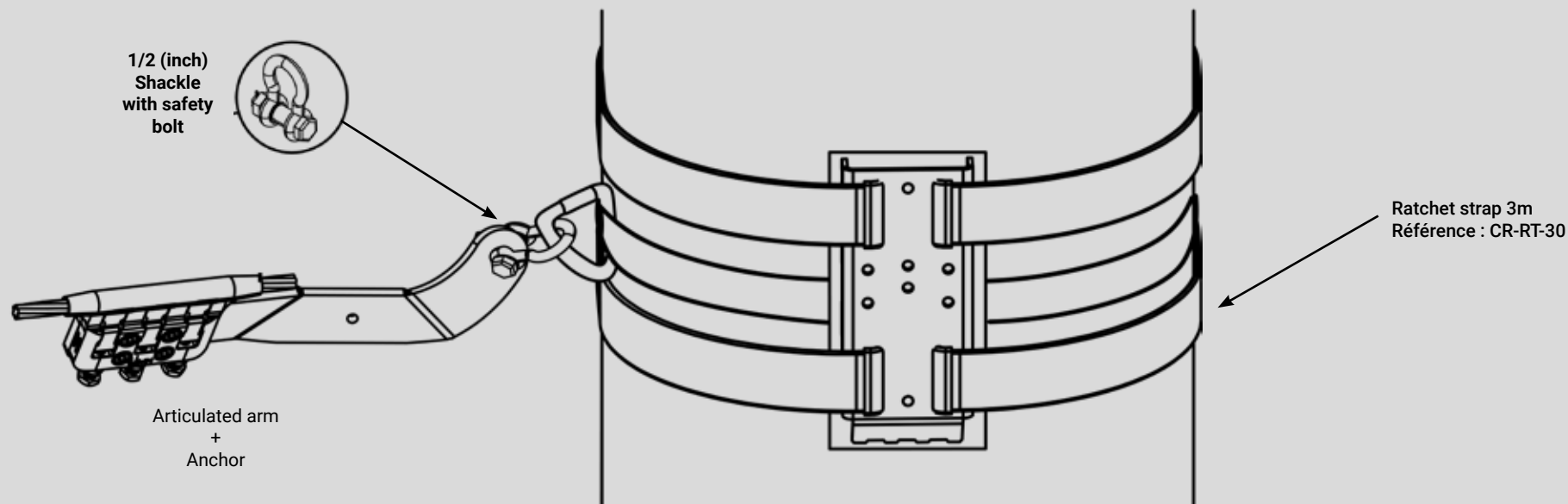
FOR AXIAL LOAD ONLY



FOR AXIAL & RADIAL LOAD



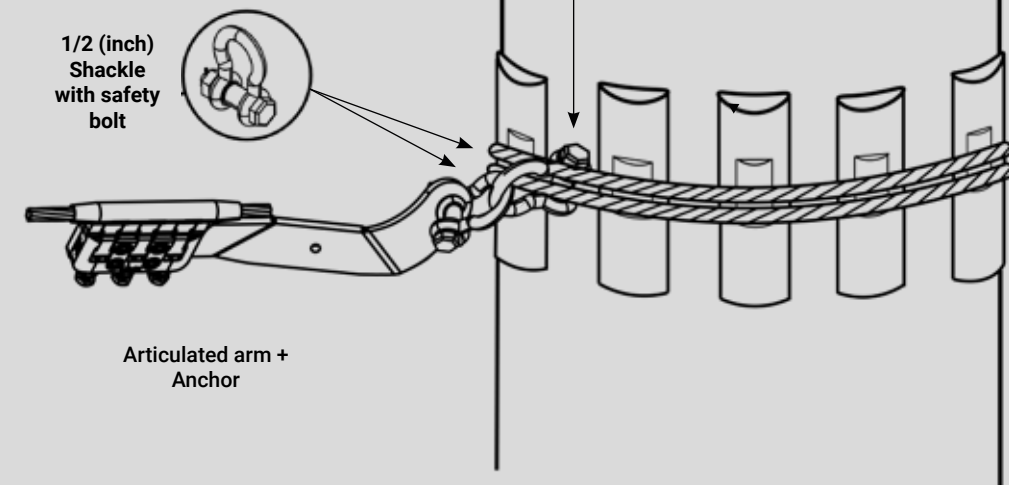
## 4.6 INSTALLATION OF ARTICULATED ARM ON TREE WITH RATCHET STRAP



## 4.7 INSTALLATION OF ARTICULATED ARM ON TREE WITH CABLE SLING

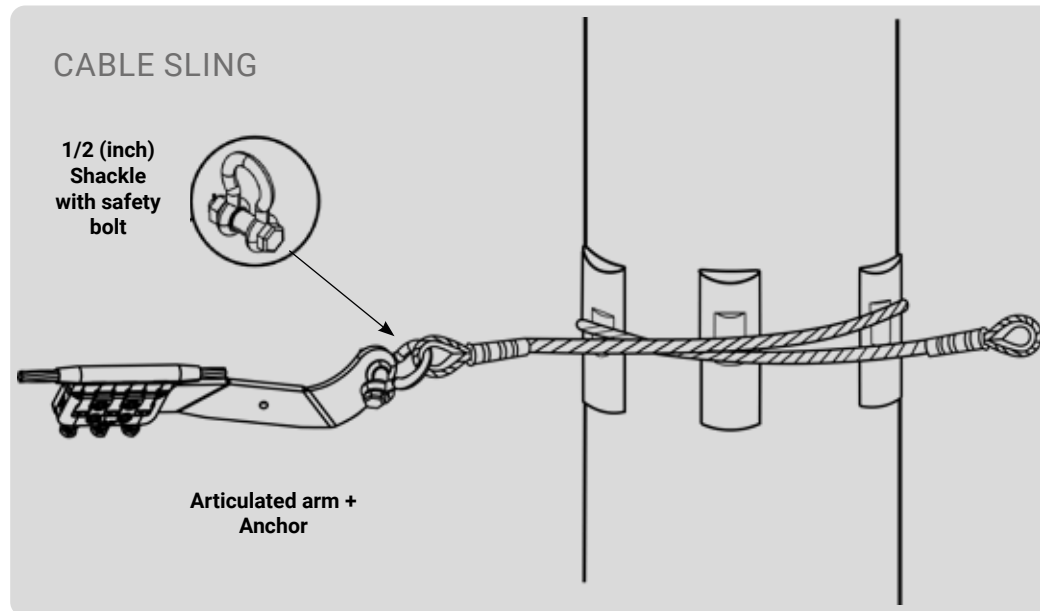
### DOUBLE SHACKLES

Preferred for zipline installations



### CABLE SLING

1/2 (inch) Shackle with safety bolt



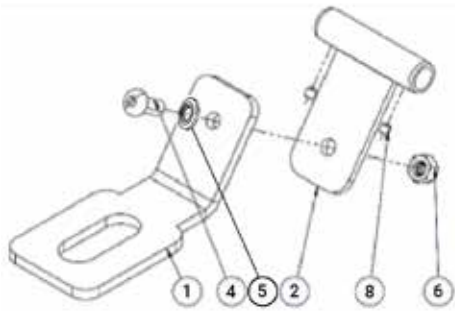
# 5 POSITIONNEURS

## 5.1 DESCRIPTION

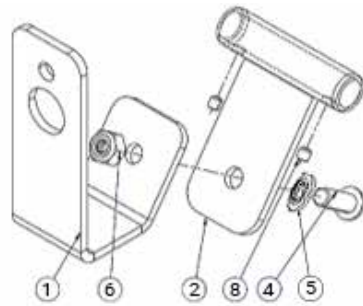
Positioners are an economical option to guide the safety line cable at points where the structural strength provided by an Anchor is not required. This devices can rotate to accommodate the path inclination required by the safety line.

1. Positioner body	2. Positioner tube	3. Upper positioner tube	4. Screw M8x20 A2 DIN7380	5. Washer M8
6. Nut M8 DIN985	7. Position screw	8. Set screw M5x5 A2 DIN916 STHC	9. Screw TCZX M2x8	10. Wedge

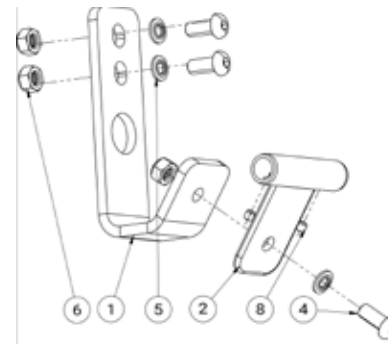
**DURING INSTALLATION:** There are two types of positioner, depending on whether the required installation is vertical or horizontal.



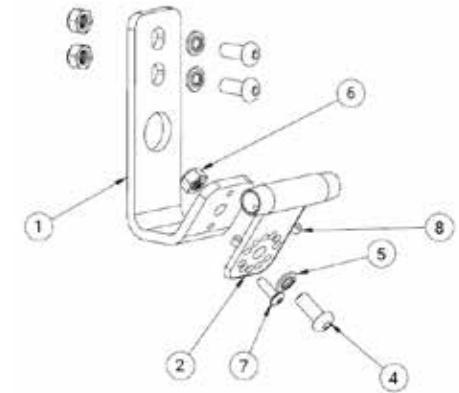
Horizontal positioner  
Reference: CR-HP



Vertical positioner for LE CLOU  
SPACER Reference: CR-PO-AD

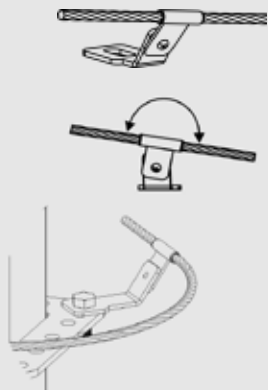


Universal vertical positioner  
Reference: CR-VP-STD

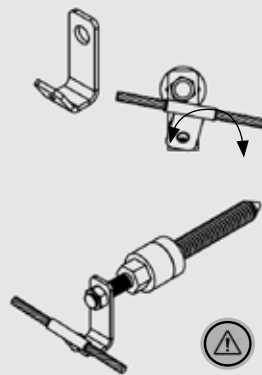


Openable universal vertical positioner  
Reference: CR-VP-STD\_rev A

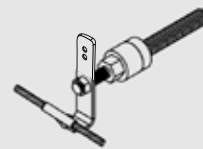
### Installation examples:



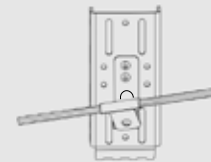
Ex: Installed on a column structure



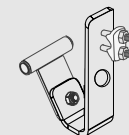
Ex: Installed on LE CLOU  
Safety Line or BABO BOLT



LE CLOU /  
BABO BOLT



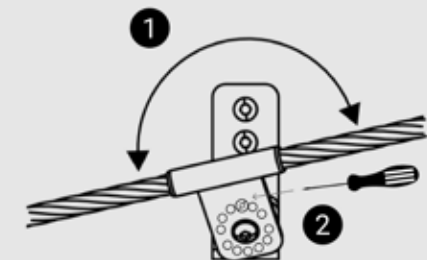
Anchor adapted  
for trees



Cable clamp

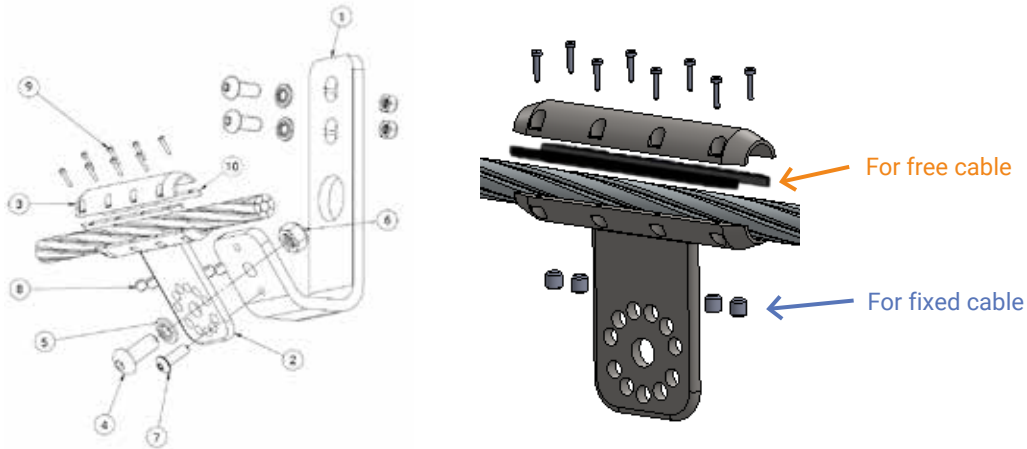
This positioner can be installed in the same way as the classic universal vertical positioner. Its special feature is that the positioner tube can be locked in rotation by means of a fixing screw, to adapt to the direction of the cable.

Install the screw in either a top or bottom hole, depending on which holes are aligned.



# 5 POSITIONNEURS

**AFTER INSTALLATION** : use an open universal vertical positioner to add it after the course has been installed

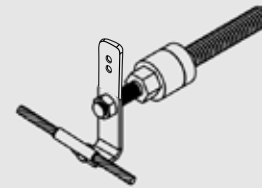


Openable universal vertical positioner  
Reference: CR-VPO-STD

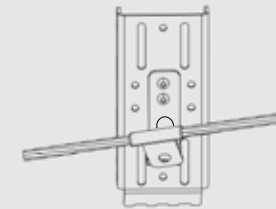


The universal vertical positioner is supplied with wedges and adjustment screws.  
**Caution:** do not use both at the same time. Wedges are used to obtain a free cable. Set screws are used to obtain a fixed cable.

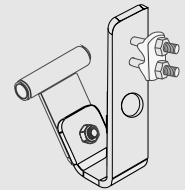
## Exemples d'installation :



LE CLOU / BABO BOLT

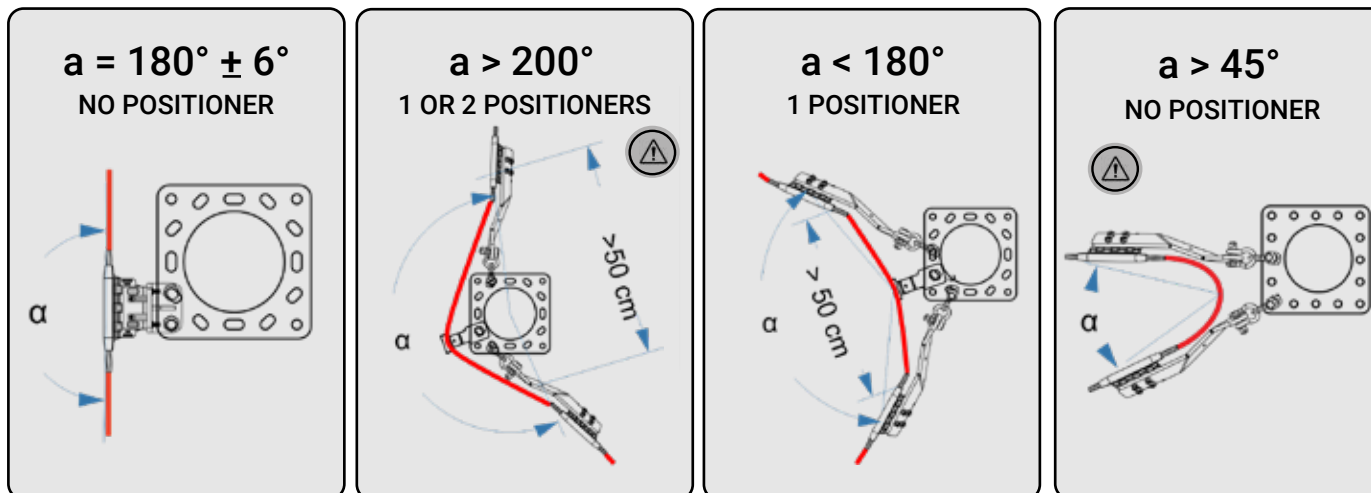


Anchor adapted for trees



Cable clamp

## 5.2 HOW TO USE POSITIONERS

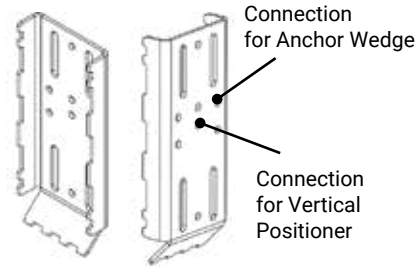


# 6 ANCHOR PLATE FOR TREES

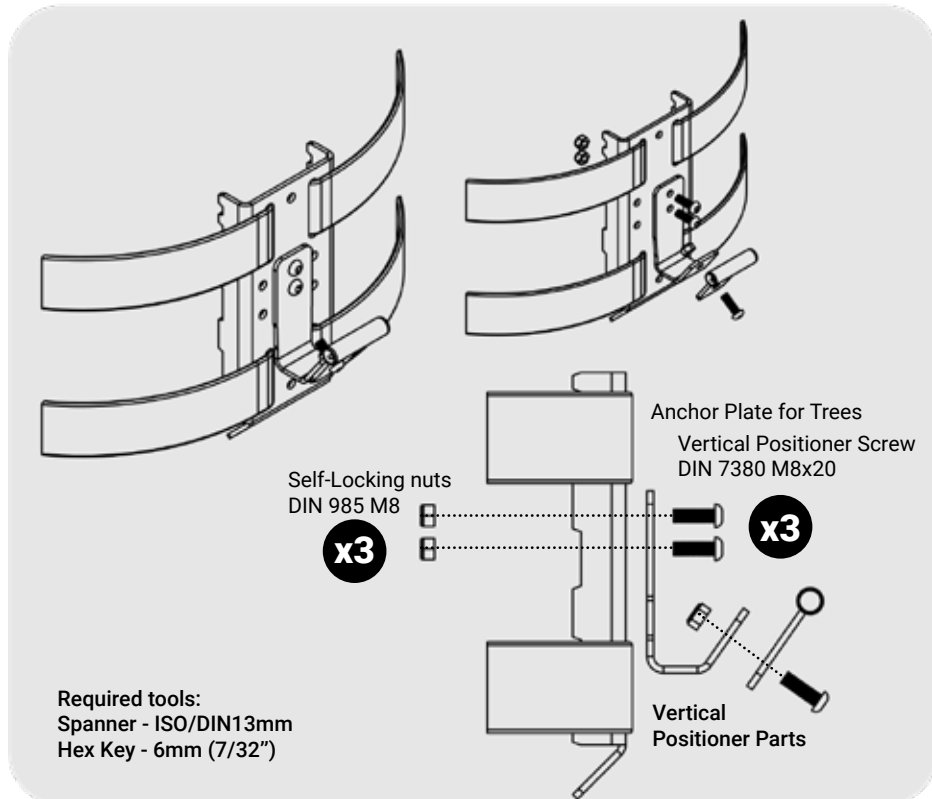
Reference: CR-AP

## 6.1 DESCRIPTION

Anchor Plate for Trees is used in adventure parks installed on trees. On this are mounted the necessary elements to drive the IMN & CLiC-iT CBS in the desired direction. The installation system prevents damage to the natural environment.



## 6.2 VERTICAL POSITIONER AND ANCHOR PLATE FOR TREES ASSEMBLY



## 6.3 ANCHOR PLATE FOR TREES INSTALLATION USING RATCHET TAPE

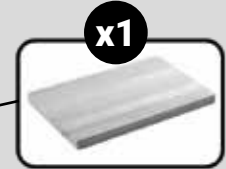
### Required items:



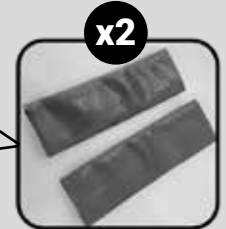
Ratchet Tape  
1.500Kg x (?)m  
Width 35mm



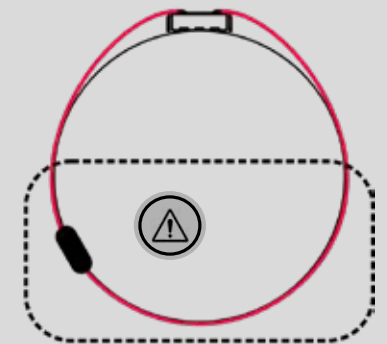
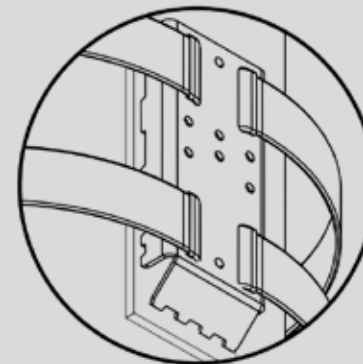
Secure the ratchet  
with a cable tie



Wood Plank  
Tree protector



Plastic tube  
Ratchet tape protector  
D32mm x L160mm



The ratchet strap must be located in an inaccessible position to the user

# 7 NON-RETURNS. TYPES AND CONNECTIONS

Non-Return devices are used to stop and prevent the MCD move back at certain points in the path. It is useful in inclined sections, in entrances or exits of the park or to control the flow of users in ziplines.

Depending on the type of anchorage, there are different types of Non>Returns.

Non>Returns Type AW, VP and IN consist of a folded sheet metal for each of the cases and a piece of silicone, which is valid for any system:

**DIN 7380 Screw**  
**M8x20 (min.)**  
**A2**



**x2**

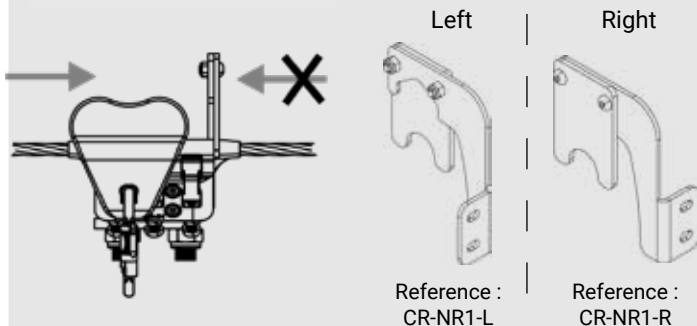
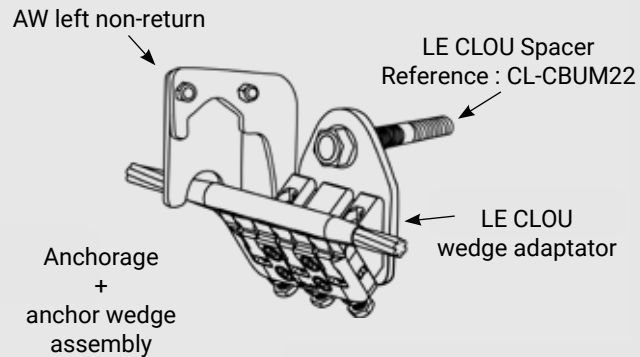
**DIN 933 Self-Locking nut**  
**M8**  
**8.8**



**x2**

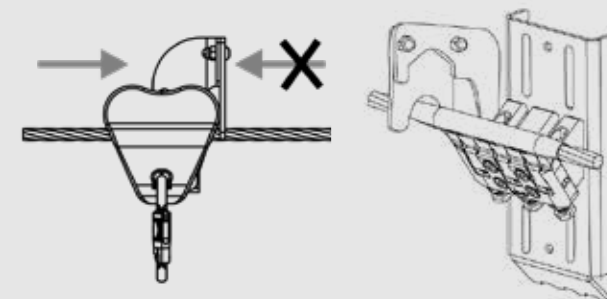
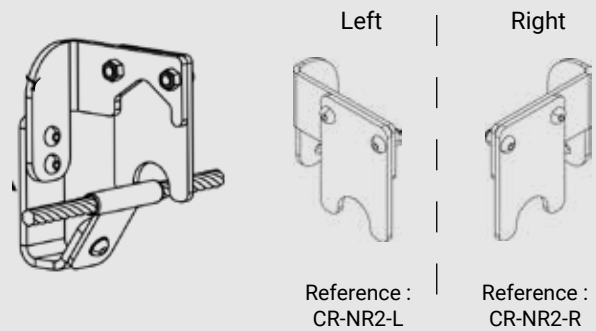
## AW non-return

For LE CLOU wedge adaptor



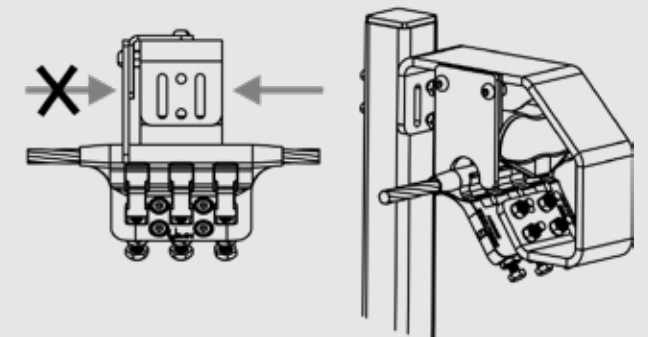
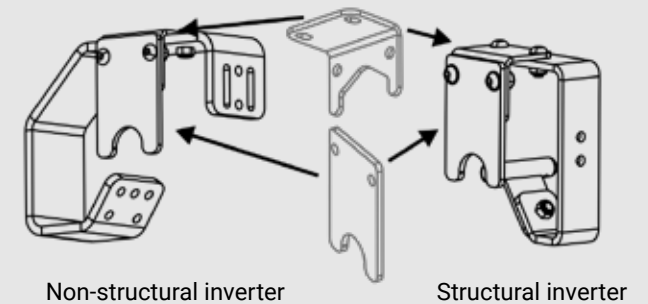
## VP non-return

For vertical positioner and anchor adapted for trees



## IN non-return

For Inverters  
 Reference: NR3-V1



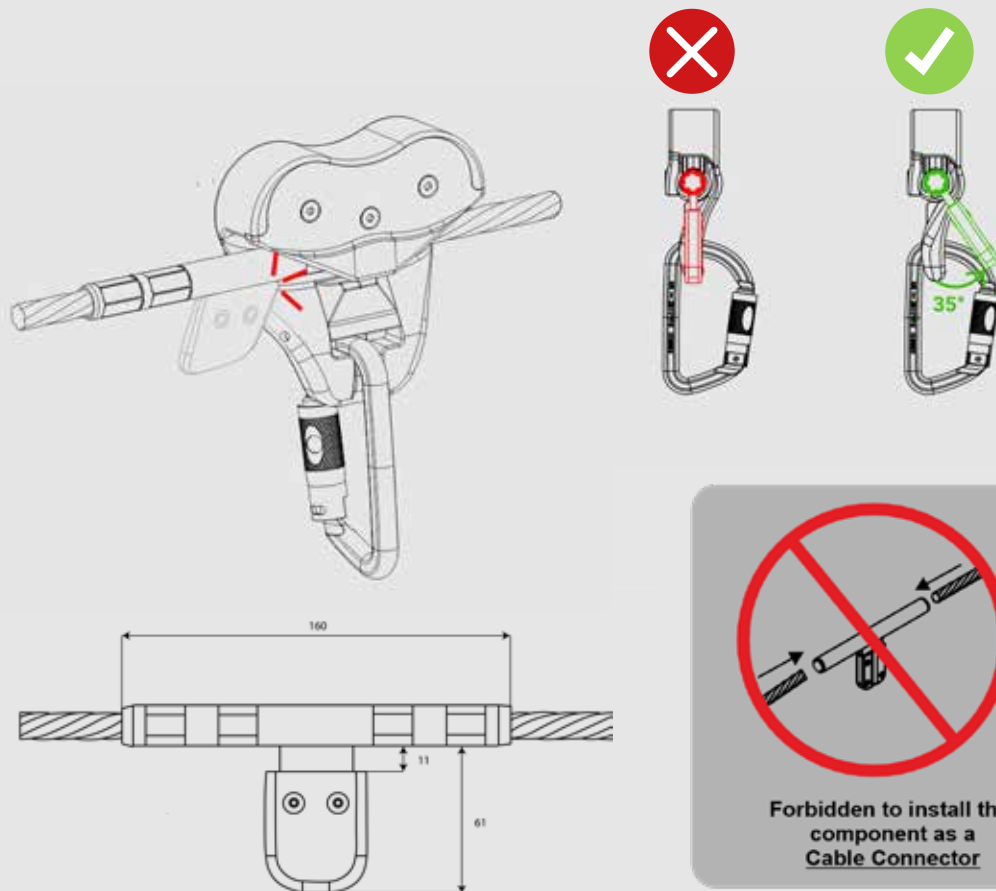
# 7 NON-RETURNS. TYPES AND CONNECTIONS

## Structural non-return

Reference: CR-NR4

The structural non-return is an obstacle to the pulley which must be passed through by turning the MCD 35°.

Its function is to stop the MCD and prevent it from sliding backwards in an inclined section of element for adventure parks. It's used as a structural component to prevent falls. We recommend its installation in games with a slope higher than 6°.



## How to install it ?

The cable crimping must be done with a crimping tool capable of exerting a force of 130 KN.

**Necessary tool:**  
**Manual hydraulic crimping tool**  
**Ex: reference CR-SER**

Hexagonal crimping die **K18**  
according to DIN48083  
Reference: CR-MAT

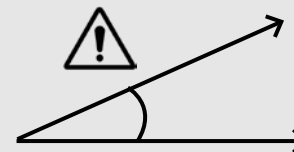
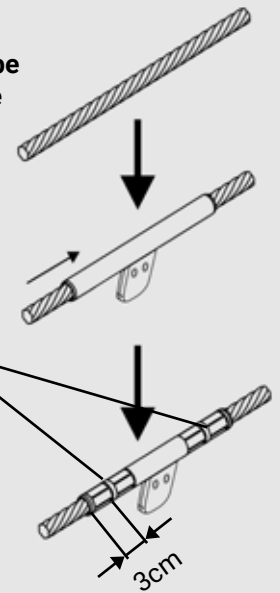


It must be entered during the installation of the rope course section.

Do not lubricate parts to ensure optimum assembly strength.

x2 crimpings must be made on each side

The distance between two crimps must be 3cm for optimum strength of 40kN.



from 6° to 40° every 2 meters

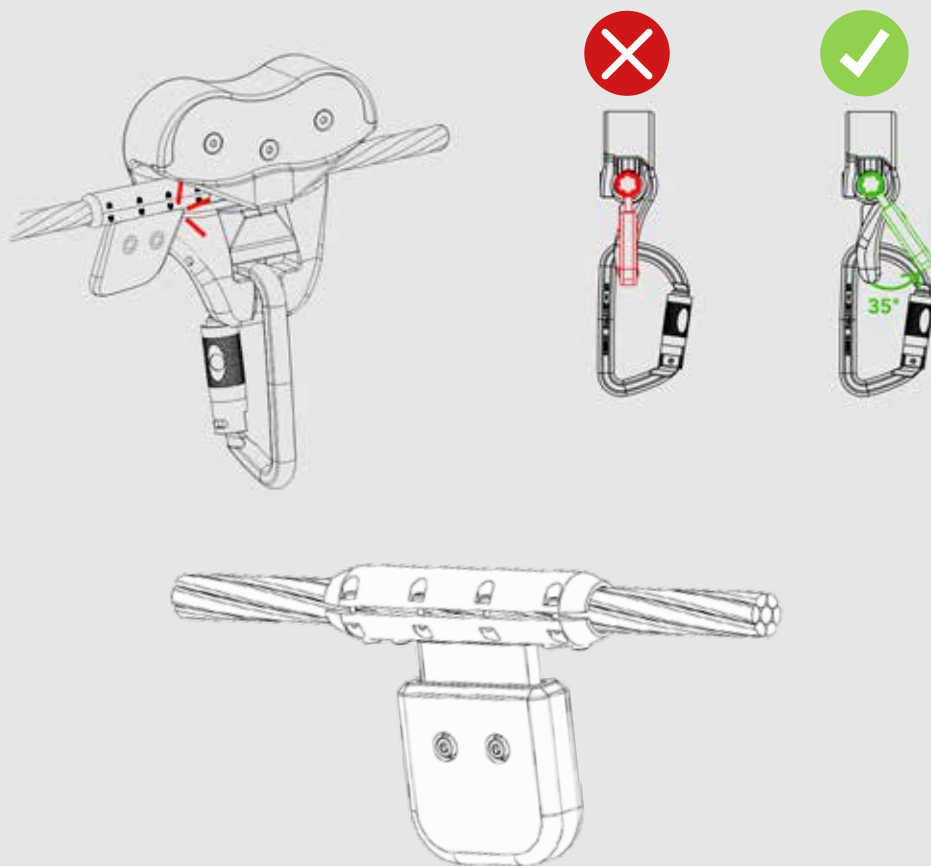
# 7 NON-RETURNS. TYPES AND CONNECTIONS

## Structural non-return

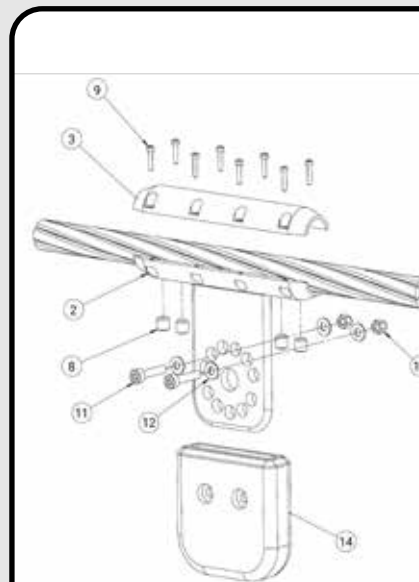
Reference: CR-PTO-AR

The structural non-return is an obstacle to the pulley which must be passed through by turning the MCD 35°.

Its function is to stop the MCD and prevent it from sliding backwards in an inclined section of element for adventure parks. It's used as a structural component to prevent falls. We recommend its installation in games with a slope higher than 6°.



## How to install it ?



The bumper is assembled in the workshop.

Place the non-return device on the cable in the desired position and screw the top and bottom tubes in place. Secure to the cable with screws 8.

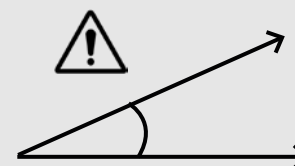
2 / 3 / 8 / 9 : cf p.11

11. Screw CHC M3x16 DIN912

12. Washer M3

13. Cap nut M3 A2 DIN 1587

14. Plastic structural bumper CR-PTO



from 6°  
to 40° every  
2 meters



# 7 NON-RETURNS. TYPES AND CONNECTIONS

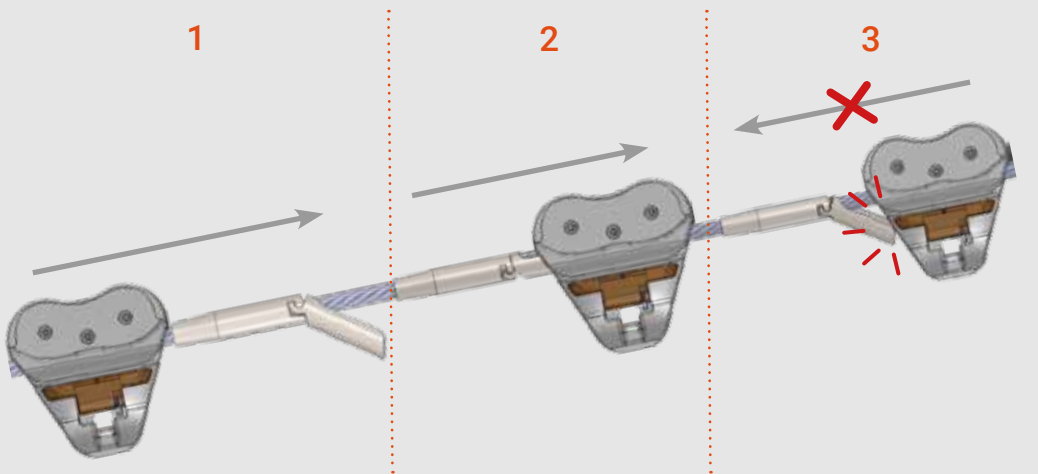
## Non-return with mechanical stop

Reference: DAS466

Material: stainless steel

Dimensions: diameter 20 mm x 150 mm

The mechanical non-return device allows the CLiC-iT RiDER pulley to pass in the direction of travel on the slope, while at the same time acting as a safety stop in the event of a fall by a person weighing up to 120 kg.



It is imperative to check the condition of the mechanical stop (condition of the pressure screws and bushes), the lifeline cable and the CLiC-iT RiDER pulley after a fall and consequent stopping of the CLiC-iT RiDER pulley by the mechanical non-return stop. As the mechanical non-return stop is a one-off component, it is not designed to withstand repeated shocks. Every month, check that the stops are correctly tightened on the cables. Failure to comply with these recommendations may result in loss of its stopping function in the event of a fall.

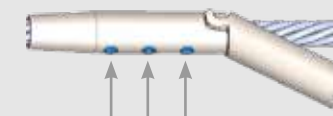
## How to install it?

Can be installed on Ø12mm metal cables

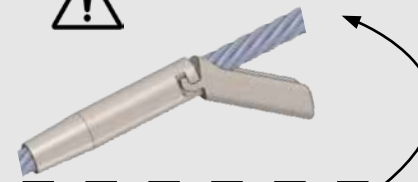
Pass the non-return device over the cable



Tighten pressure screws



Check that the non-return device is firmly attached to the cable and that it swings out correctly



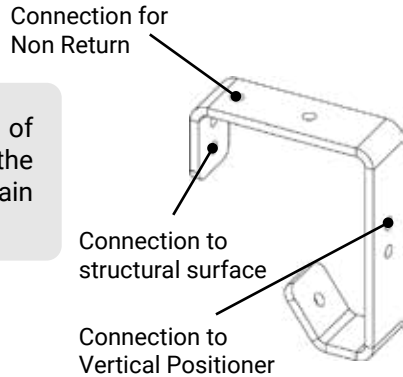
Maximum gradient: 45°  
Install a non-return with mechanical stop every 2 meters

# 8 INVERTER

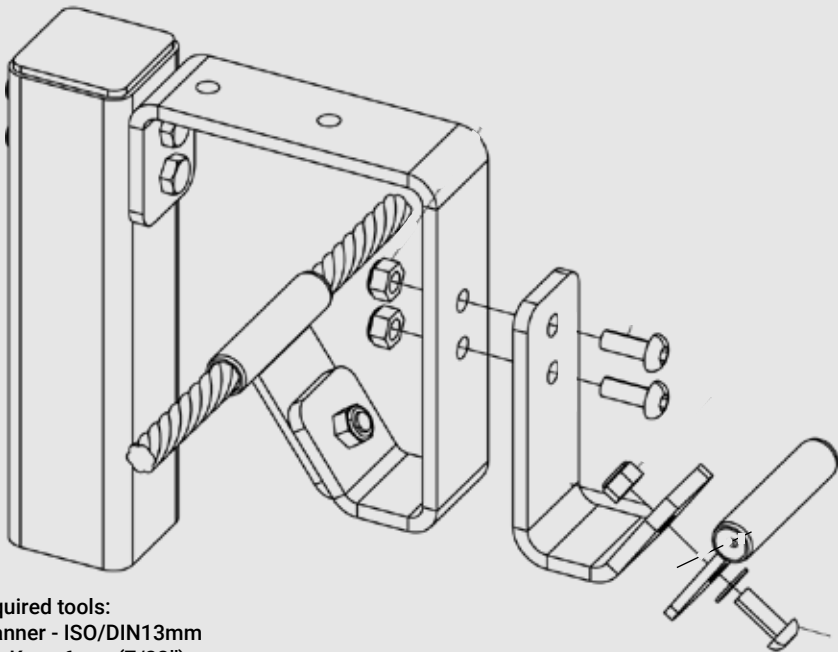
## 8.1 DESCRIPTION

Reference: CR-IN

This element inverts the positioning of the anchorage and allows to adjust the inclination of this to adapt to a certain trajectory of IMN & CLiC-iT CBS.



## 8.2 INVERTER AND VERTICAL POSITIONER ASSEMBLY



Required tools:  
Spanner - ISO/DIN13mm  
Hex Key - 6mm (7/32")

# 9 CABLE CONNECTOR

## 9.1 DESCRIPTION & INSTRUCTIONS

At times during installation there may be a need to connect two ends of the safety line cable.

**The cable crimping can only be done between two anchors and on a platform. It must never be done on a course element.**

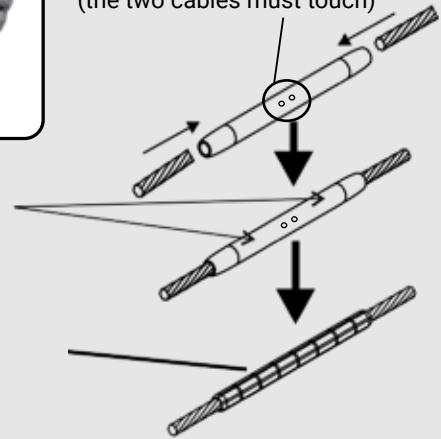
**The cable crimping must be done with a crimping tool capable of exerting a force of 130 KN.**

Necessary tool:  
Manual hydraulic crimping tool  
Ex: reference CR-SER

Hexagonal crimping die K18  
according to DIN48083  
Reference: CR-MAT



Use the holes in the center of the tube (the two cables must touch)



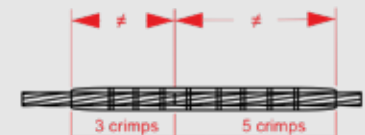
4 crimps must be made on each cable connection

A total of 8 crimps must be made on the crimp sleeve for optimum resistance of 40kN

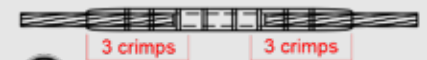
Slip resistance > 40kN  
(1 crimp = 10 kN)



Do not lubricate parts to ensure optimum assembly strength.



Not equal distance. Risk of death



Not fluggy plugged. Risk of death

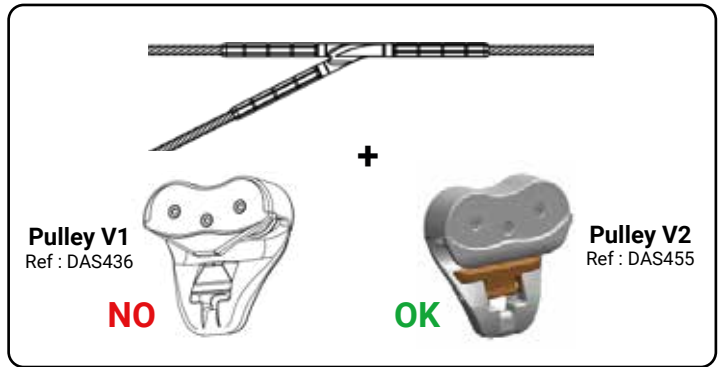
# 10 ROUTE SWAPPER

Reference: CR-RS

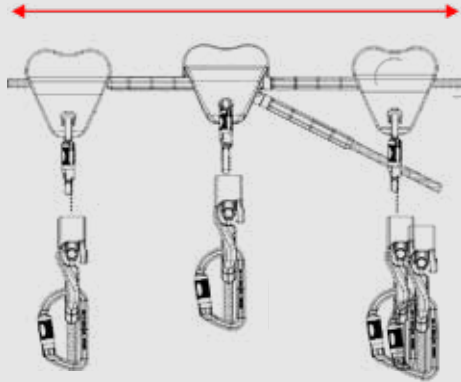
Route Swapper is a device designed to alternate between safety line routes in an high rope course. It should be installed at a comfortable height where the user will have to manipulate CLiC-iT RiDER Pulley. It works by turning the MCD to orient it towards the alternative route or by maintaining original orientation to continue on the route.



Do not grease parts to ensure optimum assembly strength

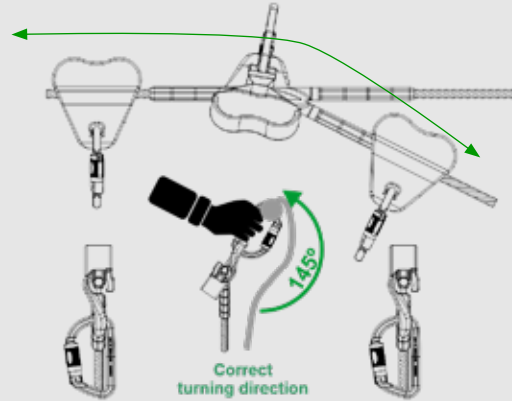


## Primary route procedure

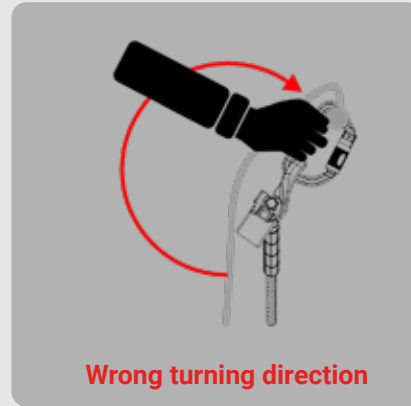


It is not necessary to handle the MCD if the product has been installed at 35° respect to the vertical axis

## Secondary route procedure



Misure of the product:



## Where to install it ?

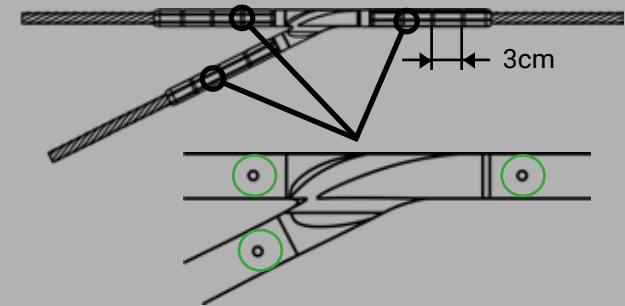


## How to install it ?

The cable crimping must be done with a crimping tool capable of exerting a force of 130 KN. The crimp die used must be of type K18 according to DIN 48083.

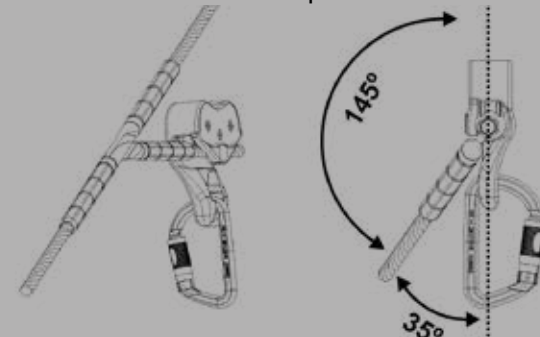
**Necessary tool:**  
Manual hydraulic crimping tool  
Ex: reference CR-SER

Hexagonal crimping die K18  
according to DIN48083  
Reference: CR-MAT



4 crimps must be made on each cable connection

Product inclination with respect to the vertical axis :

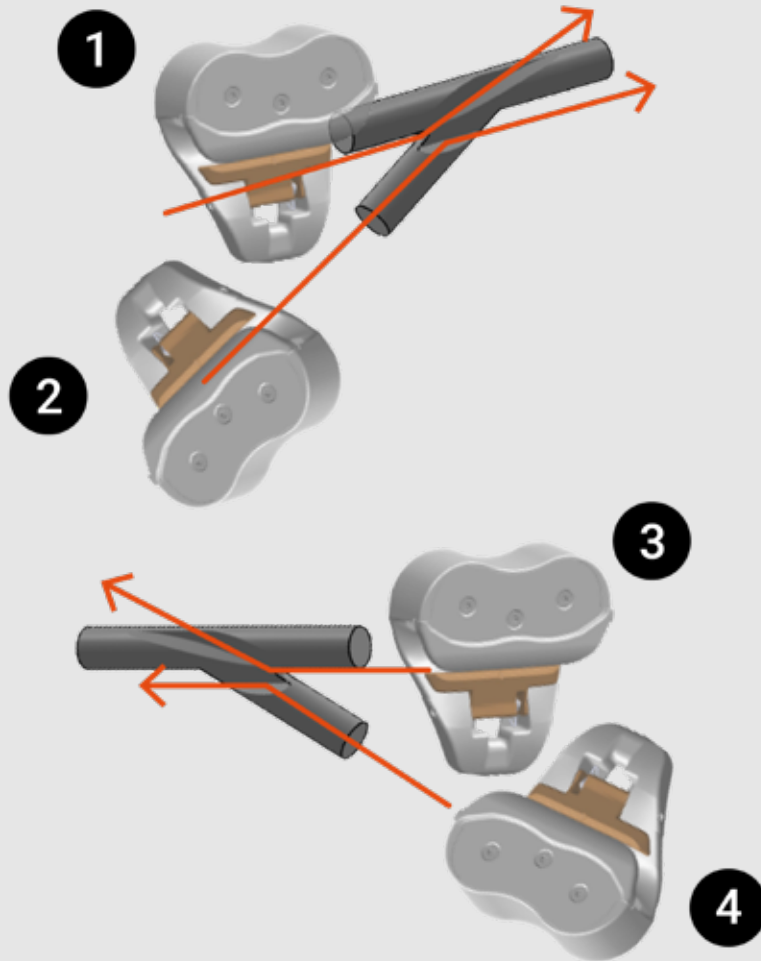


# 10 ROUTE SWAPPER

Reference: CR-RS

## Contrôle du bifurcateur

Reference: RS-V1-CTRL



**Regularly check the pulley for wear if using a route swapper.**

Use the pulley bifurcator inspection jig (ref: RS-V1-CTRL) to check whether the pulley is safe to come off the bifurcator. Follow the 4 steps on the left.

**If the pulley comes out of the route swapper during any of these 4 operations, discard it.**

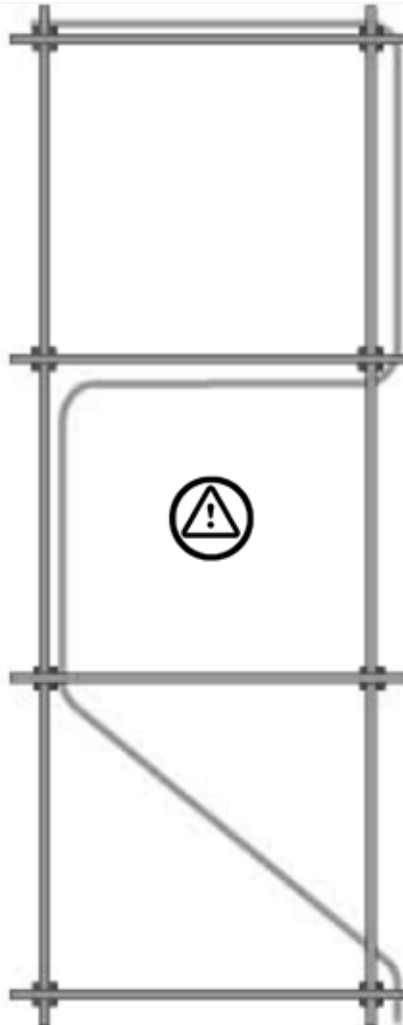
# B. PARCOUR DESIGN

## 1 OPTIMAL PATH

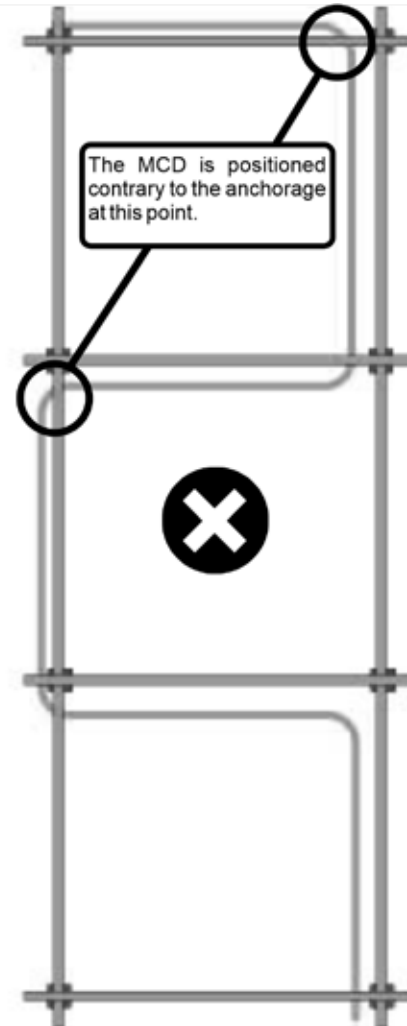
Optimal path. This is the most optimal configuration for the safety line. Installation is done easily and quickly. It is very safe during use.



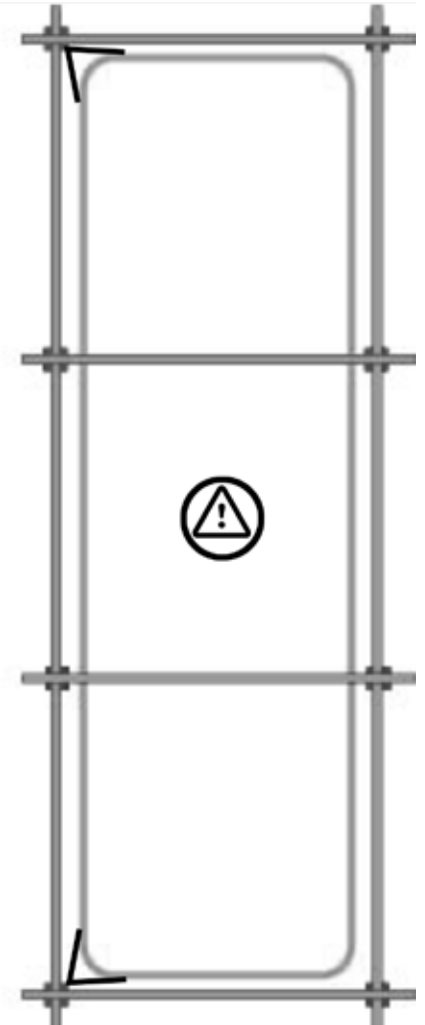
Attention. In configurations where the safety line moves from exterior to interior positions. Each case requires a specific installation



Invalid path. The safety line positioning must be consistent with the path of the MCD. Incorrect points may occur.

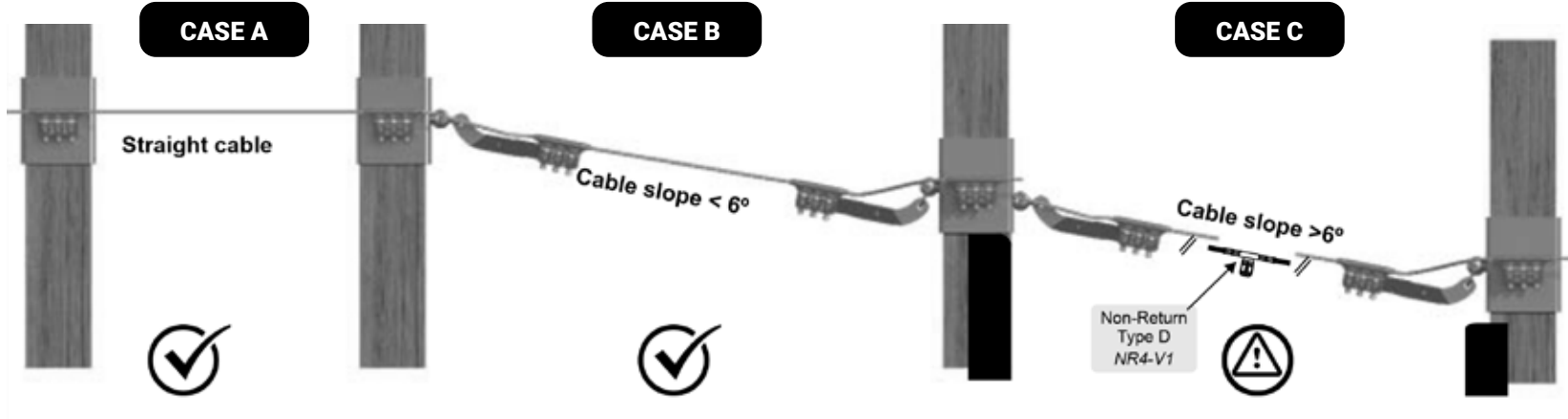


Attention. If the trajectory runs internally a proper curvature must be executed by positioning anchors on articulated arms.



## 2 INSTALLATION ACCORDING TO DIFFERENT SLOPES & INCLINATIONS

Cable slip resistance: 28 kN  
Anchor resistance: 35 kN



When the cable is relatively straight it is recommended to use Anchor with Anchor Wedge, screwed on the pole directly or indirectly.

When the safety line has less than 6°, an Articulated Arm shall be used to allow the change of inclination in the cable

Sections of more than 6° slope are not recommended because the user can slide towards the post.

In cases where the slope exceeds 6°, it is recommended to install padding on the poles, place an element for adventure park that avoids backward or install Structural Non-Return devices.

This section must be installed with Articulated Arms.

**3 SAFETYLINE HEIGHT**

The recommended safety line height for public from 4 to 14 years is 1.50m. For strictly adult circuits it is possible to increase the height up to 2.10 m or even more.

Adjustable lanyard is recommended.

Two safety cables can overlap in the same path if they maintain a certain vertical and horizontal distance.

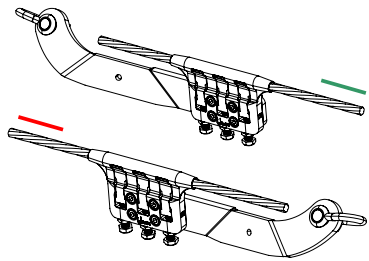
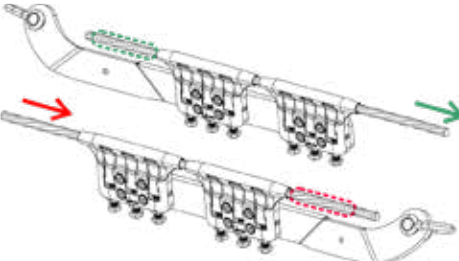
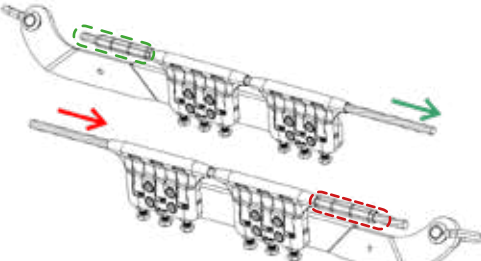
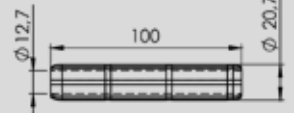


**a**  
Standard distance between a safety cable and wall.  
>19cm

**b**  
Minimum horizontal distance between safety cables.  
>6cm

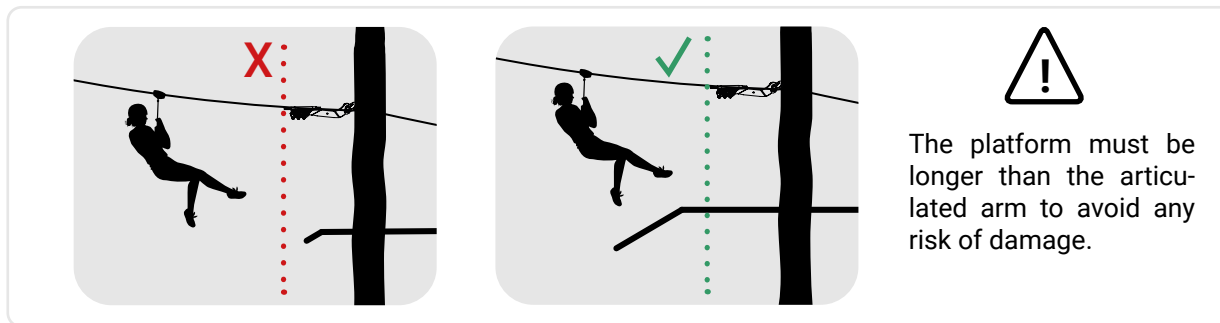
**c**  
Minimum vertical distance between safety cables.  
>20cm

# 4 ZIPLINES

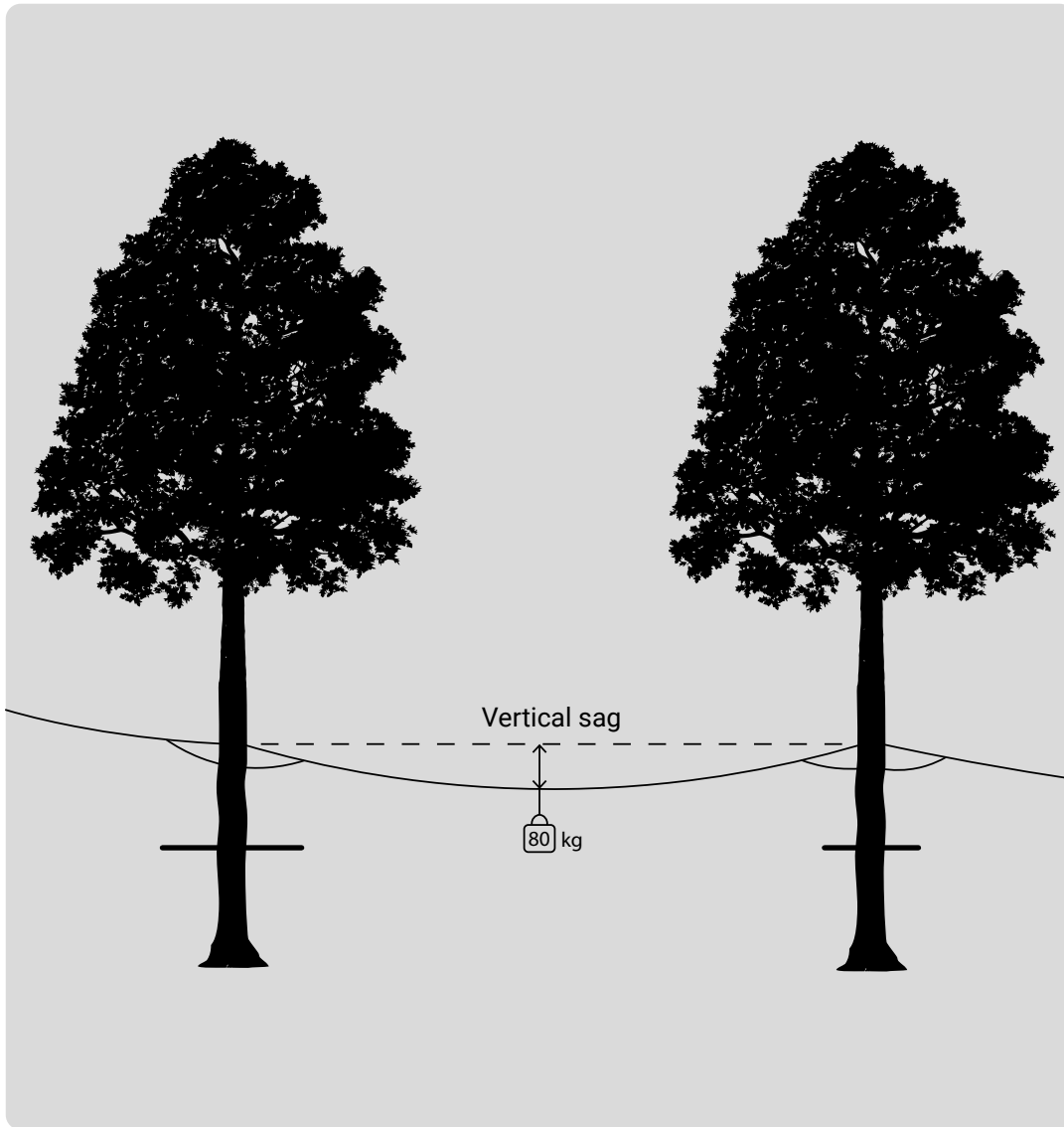
The maximum zipline extension compatible with IMN & CLiC-iT system is 250m. Arms should be placed at the entry and at the exit of the zip line.

Length	30m		70m		150m		250m	
Arms	 <p>Simple arm</p>		 <p>Double arm</p>		 <p>Double arm with crimp sleeve</p>		<div data-bbox="1796 481 2132 737" style="border: 1px solid gray; padding: 5px;"> <p><b>Crimping for zipline:</b> A total of 3 crimpings must be made on the crimp sleeve</p>  </div>	
Average slip resistance of the cable	25kN*				90 kN*			
Slope	2,8% à 3%		2,4% à 2,8%				To be defined	
Pulley sheaves			Nylon 				Steel 	

\* These values are for information only and may vary according to part dispersion, test conditions and environment.



## 4 ZIPLINES



The maximum applied forces on the anchors have to be a third of the average resistance to slippage on the cable

To limit the peak tension in the case of dynamic force (i.e. Falls) on the lifeline and anchors, it is recommended to tension the cables with a load of 175 lbs halfway through the span with a minimum of 5% vertical sag on the lifeline.

*Example: it is recommended in a 30 ft lifeline to have a vertical sag of at least 1½ ft when loaded*

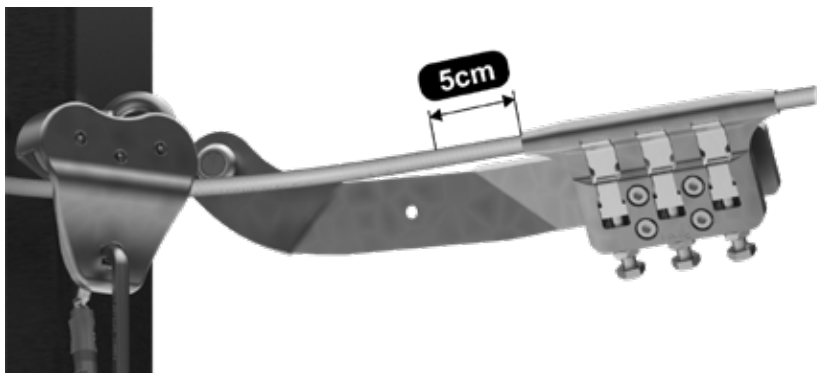
**It's important to verify the pitch of a zipline before commissioning.**



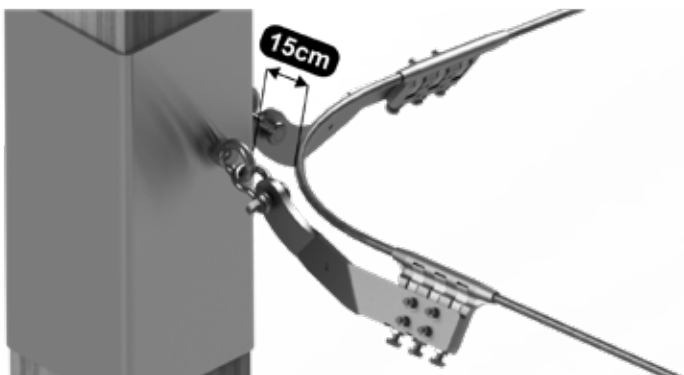
## 5 SAFETYLINE CABLE INSTALLATION



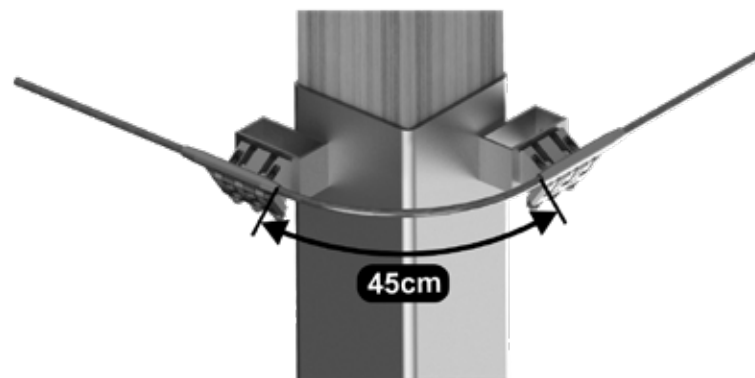
These points must be dimensionally checked according to the annual maintenance protocol present in this manual. Remember to perform a visual inspection prior to the start of the activity.



The curve described by the cable must be 40-45 cm long, measured from the outlet of the Anchor to the entry into the next Anchor.



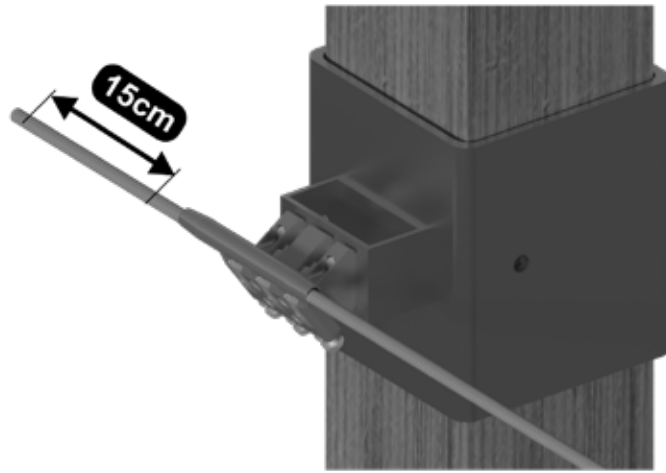
The point where the cable enters the Anchor must be at least 5 cm long in straight extension with respect to the direction of the Anchor, to prevent the MCD from hitting the Anchor. These two points must be marked in order to carry out inspections and check that the cable does not slide.



It must be ensured that the cable curve is separated from the structural element (pole or other game elements), at least 15 cm, to avoid possible MCD collisions.



At the anchorage points where the curve is resolved using Articulated Arms, it must be ensured that all connecting elements, including structural elements, support a minimum load of 20kN.



At the safety line terminals, both at the beginning and at the end, we must leave at least 15 cm of free cable that leaves in excess of the Anchor cylinder. At these two endpoints, one additional Anchor must be installed directly on the tree or on the pole of the last workshop.



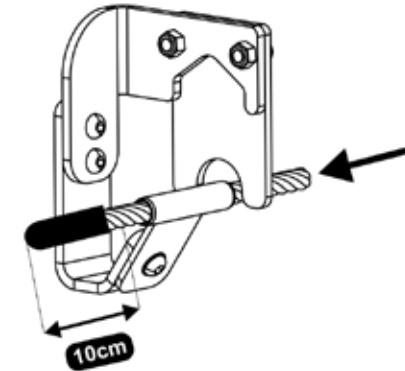
At the beginning and end of the rope course should also be inspected to check that has not suffered some kind of displacement due to an improper screw tightening or some other defect. For such checks it is useful to make marks on the cable to notice possible sliding.



The ends of the safety cable must be protected by a heat shrinkable plastic plug that fits the cable. A space of 10cm must be left from the Anchor element to the plastic termination.



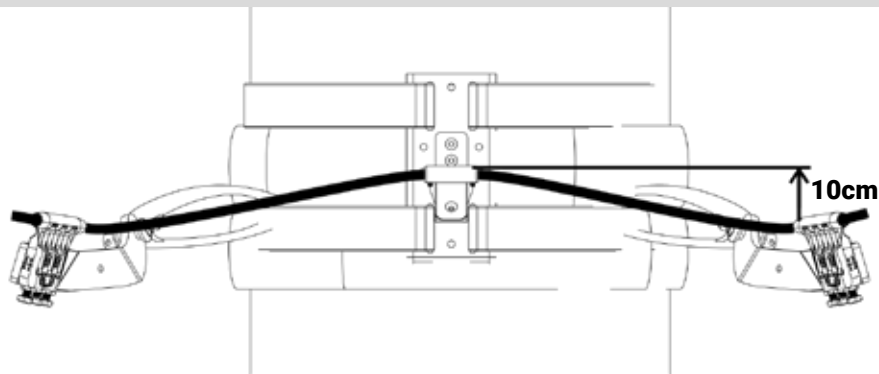
At the beginning and at the end of the rope course, a device Non Return must be placed in the opposite direction to stop the MCD.



In situations where the safety cable has a large curve, the Positioners is used to provide stability to the trajectory.



In tree installations an Vertical Positioner should be used 10cm approximately above the arms to properly guide the safety cable.



# C. RESPONSABILITY & GENERAL RECOMENDATIONS

IMN & CLiC-iT Continuous Belay System components are intended for activities involving a risk to safety and health. Both the installation and the use of this product must respect the specifications provided by the manufacturer in this manual. In addition, the user must respect the preliminary usage indications of monitors and instructors. In short, both the user and the installer are responsible for their decisions, actions and finally for their security.

DEHONDT SARL & IMN are not liable for direct, indirect, accidental or any other consequences occurring or due to the use of its products. DEHONDT SARL & IMN waive any responsibility if the storage, transport, use, maintenance and cleaning instructions are not met.

## Before performing an installation make sure:

- Accept the intrinsic risks of the installation and its use.
- Read and understand all the instructions in this manual.
- Receive all the specific training for the installation and use of all the elements of the lifeline.
- To know and be accustomed to the use of these equipments and to acquire all the knowledge on the performances and limitations of these.
- Check the correct condition of the constituent products for installation.
- Have the necessary tools and material for installation.
- Ensure the viability of the medium for the installation of the system.



Check the correct orientation of the mobile devices and the appropriate conditions of the CLiC-iT RiDER Pulley.



During the maintenance and control of safety line elements, special attention should be paid to the points where direction changes.



Store the MCDs in a cool, dry place and free of chemical agents to avoid deterioration. Avoid unnecessary exposure to UV light.



This product should be used by users trained for the use and recognition of risks related to the activity. And under visual control of competent and responsible personnel.

## Before the first use make sure:

- The manufacturer has previously checked the technical and safety parameters to guarantee the installation quality to the customer.
- To have the personal protective equipment (PPE) necessary for the development of the activity. And make sure these are in good condition.
- Have read the operating and safety instructions in this manual.
- Have previously received the manufacturer's training and initial briefing.

- Failure to comply with these instructions could cause serious or fatal physical harm
- If this product is resold as new in another country, the present notice should be translated in the language of the country of destination

## 1 FURTHER INFORMATIONS

The use and storage temperature range should be between - 10 and +50°C. Outside this temperature range, the product resistance could be affected.

Avoid any rubbing on abrasive or sharp areas which may damage the product.

Damp equipment, or which has frozen up, may not operate properly. These products must be thoroughly checked annually by a qualified professional with a prior written certification from SARL DEHONDT & IMN. It is forbidden to modify or repair these products yourself without prior training and written authorisation from SARL DEHONDT or IMN.

## 2 CAUTION

Climbing and using personal protective equipment carry inherent risks, regardless of the safety equipment being used. Falls of any kind can lead to serious injury or death.

Among other risks, neck entrapment is one of the risks inherent to this activity.

There are many factors that have to be taken into consideration and contribute to raising or lowering the risk of neck entrapment, including but not limited to the following:

- Hardware : Design of the park, PPE
- Operation : Fitting PPE to participant, training of the staff, briefing, supervision, quality of rescue / evacuation.

## 3 TRAINING OF THE STAFF

All staff members must be aware of their responsibilities in order to establish a safe environment. They must be properly trained in assist and rescue techniques as well as in briefing and coaching methods.

All staff must receive professional briefing regularly in which all information for the proper operation of the park is conveyed.

Assessments of the staffs ability to perform competent rescue procedures and conduct proper and complete guest briefings must be done on a regular basis.

The awareness of all involved risks throughout the park must be raised within your instructor and rescue team. The staff must know all possible dangers associated with using life safety systems and how different components interact with each other.

A helpful and supportive attitude towards the guests is important.

## 4 SUPERVISION

The staff team must be vigilant, have taken part in the training process and is required to have experience in supervising the course. Good supervision covering all parts of the course must be ensured. The rescue team must be prepared and capable of reacting quickly in case of emergency and have good and fast access to all parts of the course. All instructors should carry a system or device for lifting, not just rescuers or rescue teams. Participants who faced difficulties during the briefing must be given additional attention and helped, verbally or physically, if needed. Participants should not be left alone on a course. Enhanced supervision must be in place where the participants are faced with special circumstances (zipline, Tarzan swing, etc).

# D. CONTROL AND MAINTENANCE SHEET

The equipment must be functionally checked after each use and periodically. An inspection log must be completed every 12 months, and after any relevant event occurring at the installation (shocks, rescues, sudden changes in environmental conditions, structural modifications to the plant, etc.).

To perform the installation inspection, read and use the following maintenance table:

## MANUFACTURERS:

**SARL DEHONDT CLiC-iT**  
5 rue des Terres (Cellule 7)  
51420 CERNAY-LES-REIMS (France)

**INSTALACIONES EN MEDIO NATURAL S.L**  
Avda Mairena del Aljarafe, N° 34-B  
CP 41110 Bollullos de la Mitación, Sevilla (Spain)

## INSTALLATION NAME:

User identification:  
Name:  
Address:  
Tax Number:  
Model:  
Serial Number:  
Purchase date:  
Date of first use:

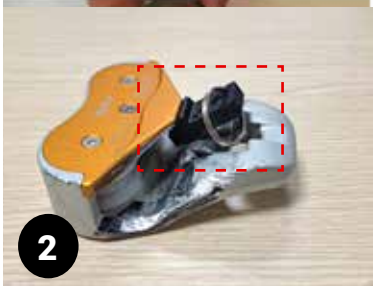
				<b>1</b> MCD and CBS Anchor serial number readability check.
				<b>2</b> Checking of MCD wear with inspection tool ref: DAS449 (Free space between Locking Part and Plate $7,5 < x < 8,7$ mm)
				<b>3</b> Checking the correct operation of MCD wheels
				<b>4</b> Check that components of specified qualities are being used. And tools used are suitable for installation.
				<b>5</b> Check the correct condition of all components before installation
				<b>6</b> Check that IMN & CLiC-iT CBS anchorages have not suffered deformations due to shocks, deformations due to overstress in the screw housings or in the hole where the safety cable passes.
				<b>7</b> Corrosion check on MCD components.
				<b>8</b> Corrosion check on every installed IMN&CLiC-iT CBS devices (Anchorages, Arms, Non Returns, etc...)
				<b>9</b> Checking cable displacements at the beginning and end of Double Arms intended for ziplines.
				<b>10</b> Checking the tightness of the M10 screws in CBS Anchors (= 40 N*m).
				<b>11</b> Checking for cable displacement at junctions with Cable Connectors.
				<b>Once IMN &amp; CLiC-iT CBS is installed, must be checked:</b>
				<b>12</b> The lock of CLiC-iT Rider Pulley works properly when carabiner is inserted and removed
				<b>13</b> The passage of the pulley in the anchor points of IMN & CLiC-iT CBS are smooth and without relevant collisions.
				<b>14</b> There are no collisions with the structure. And the dimensional specifications described in the manual are met.
				<b>15</b> Checking the efficiency of non-returns: no deformation or displacement
<b>GOOD CONDITION</b>	<b>TO PAY ATTENTION</b>	<b>NEED FIXING</b>	<b>INOPERATIVE</b>	



MCD refers to  
CLiC-iT RiDER Pulley



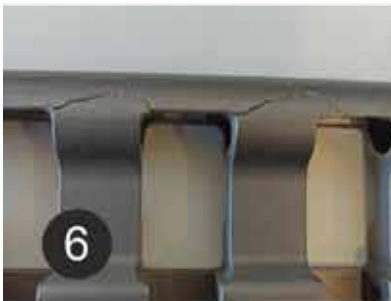
**1**  
MCD and CBS Anchor serial number readability check.



**2**  
Checking of MCD wear (Free space between Locking Part and Plate  $7,5 < x < 8,7\text{mm}$ )



**3**  
Checking the correct operation of MCD wheels



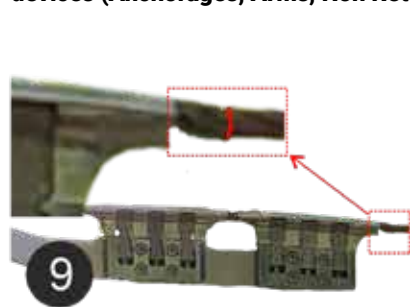
**6**  
Check that IMN & CLiC-IT CBS anchorages have not suffered deformations due to shocks, deformations due to overstress in the screw housings or in the hole where the safety cable passes.



**7**  
Corrosion check on MCD components.



**8**  
Corrosion check on every installed IMN & CLiC-IT CBS devices (Anchorage, Arms, Non Returns, etc...)



**9**  
Checking cable displacements at the beginning and end of Double Arms intended for ziplines.



**10**  
Checking the tightness of the M10 screws in CBS Anchors (= 40 N\*m).



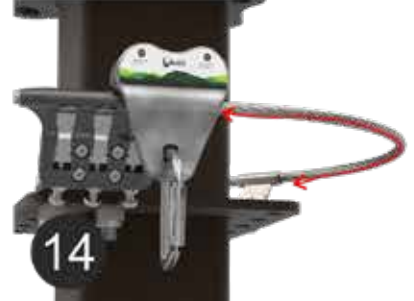
**11**  
Checking for cable displacement at junctions with Cable Connectors.



**12**  
The lock of CLiC-IT Rider Pulley works properly when carabiner is inserted and removed



**13**  
The passage of the pulley in the anchor points of IMN & CLiC-IT CBS are smooth and without relevant collisions.



**14**  
There are no collisions with the structure. And the dimensional specifications described in the manual are met.

**Installation history. (disassemblies, replacements, environmental accidents, repairs ...)**

**Description**

**Date**

Description	Date

**Comments regarding product conditions and usability:**


MAINTENANCE CONCLUSION:
<b>SUITABLE</b> <input type="radio"/>
<b>UNSUITABLE</b> <input type="radio"/>

**Inspected by:**  
**Company name:**  
**Signature:**

**Date:**

**Next inspection date:**

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