

Instruction manual for energy absorbing lanyard model CIRRUS

certified according to EN 354:2010, EN 355:2002 and additionally tested according DIN 19427:2017



Thank you for choosing VERTIQUAL®! You have purchased a high quality product that will reliably protect you and will be your companion for a long time when working at heights and depths. This manual must be read and understood before using the product! This product will be used with other equipment (components) thus forming a system for working at heights. Please refer to the instruction manual of each component in your system for compatibility and correct use! Following these instructions accordingly is essential for your safety. Failure to do so can result in serious or even fatal accidents! Keep these instructions together with the product, accessible to all users, so they can consult them whenever is needed!

WARNING! These instructions are a basic comprehensive guide to the safe use of the purchased equipment. They contain general information about the product, intended to help the user, but cannot cover all the situations that may occur in the daily activities and cannot in any case replace the specialized training courses for safety at heights. This PPE against falls from heights can only be used by well-trained users, who are familiar with the relevant legislation and who have successfully completed a special safety training course for working at heights.

WARNING! For works with risk of falling from heights or in depths, a risk assessment must be carried out in advance in accordance with current regulations and legal provisions (EN standards or specific national rules) that will provide adequate measures for safety and rescue!

WARNING! Instructions for use are updated when technical or legislative changes occur. The latest version of the instructions overwrites previous versions and is the only valid version. Please make sure you follow the instructions of the most recent version. You can download the most recent instructions from our website www.vertiqualsafety.com by accessing the section of each product. For help or additional questions, please contact us at office@vertiqualsafety.com or Tel. (+40) 0365/882143.

WARNING! The user must be medically fit and capable to ensure his own safety and act accordingly in possible emergency situations! Seek medical approval according to the national legislation in force!

WARNING! If the product is re-sold outside the original country of destination, the reseller must provide these instructions manual in the language of the country where the product will be used.

FIELD OF USE

Along with other tested and certified components, the energy absorbing lanyards are used in fall arrest systems. The purpose of these systems is to stop the free fall of the user, absorbing most of the shock and distributing the remaining force evenly, while holding the users body in a proper position until he or she is rescued. In case of fall, the energy absorber will deploy and dissipate the energy efficiently, keeping the arising forces below 6 kN. The product must be used exclusively as a PPEaF (Personal Protective Equipment against Fall), in usual environments with temperatures between -30°C and +50°C, without potentially explosive atmospheres, far away from flames, sparks or hot metal splash. Avoid contact with sharp edges, electricity, chemicals, corrosive solutions and substances, excessive heat, oils, paints or any other contaminants. The structures used for anchoring have to meet the requirements of EN 795:2012, must have NO sharp edges and must be capable to withstand minimum 12 kN for full metallic anchors and 18 kN for any other types of anchors. The anchor point must be located as high as possible above the user and as close as possible to the vertical axis of the user's position, thus reducing the fall distance and prevent dangerous swing falls. The minimum free space below the user (fall clearance) must be ensured to prevent hitting the ground or any obstacles while the fall is arrested. The lanyard can be used as a fall protection device in mobile elevating work platforms (MEWPs) following the present instructions accordingly.

DESCRIPTION

CIRRUS is webbing type lanyard with energy absorber, having an integrated length adjuster. The lanyard comprises the following elements: end connector, webbing lanyard, aluminum length adjuster, the energy absorber and its connector. The connector of the energy absorber will be attached to the dorsal or sternal attachment point of a full body harness. The sternal attachment point can be a metallic ring (marked A) or two textile loops (each marked A/2), which will need to be connected simultaneously. The connector(s) at the other end (usually a large opening connector) will be attached to a suitable anchor point. If a structural anchor point is used (e.g. steel beam) make sure it has a breaking load of minimum 12 kN and its size and shape will not cause incorrect loading of the connector. In the event of a fall, impressive forces occur depending on the falling distance and weight of the falling person! The energy absorber is reducing the forces generated below 6kN. A major part of the generated kinetic energy will be dissipated by the special tear-up webbing of the energy absorber, thus keeping the force to a tolerable level. The lanyard is manufactured using high tensile PES webbings and aluminum and steel hardware.

MAIN COMPONENTS

A – connector

(for attaching to the anchor point)

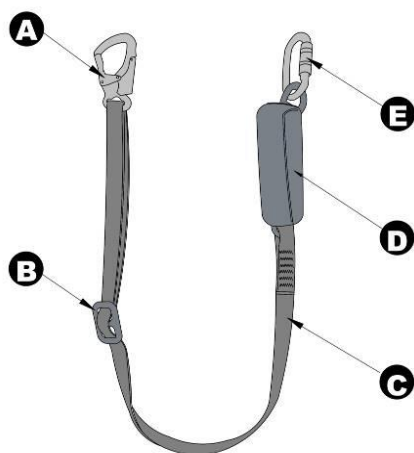
B – length adjuster

C – lanyard (flat webbing)

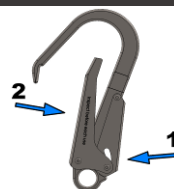
D – energy absorber (shock absorber)

E – connector

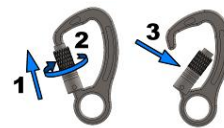
(for attaching to the full body harness)



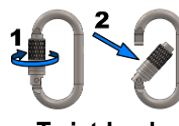
GATE OPENING / CLOSING



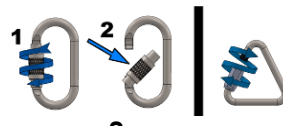
Auto-Lock



Tri-Lock

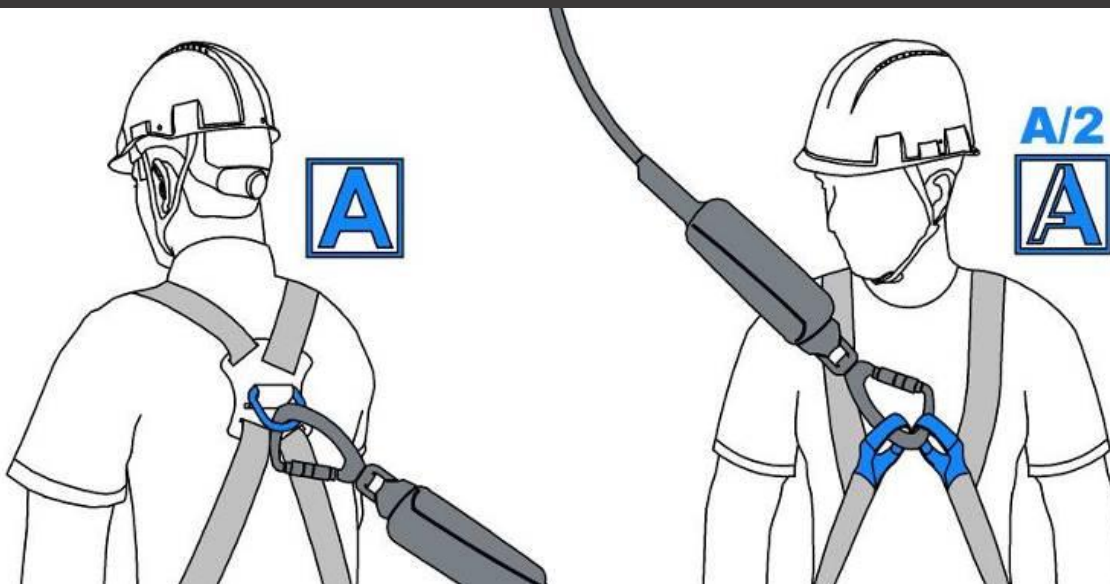


Twist-Lock



Screw

CONNECTING TO THE HARNESS



Use only certified full body harnesses (EN 361)! Connect the absorber end to an attachment point on your harness that is marked with “A” or „A/2”. These are the only points approved for fall arrest. The points are usually metal rings or textile loops and in case of A/2 marking, the two points need to be connected together!

Refer to your full body harness manual for complete attachment instructions!

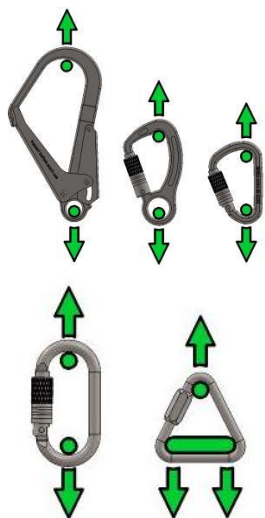
(!) ALLOWED USER WEIGHT (user + equipment):

▪ **CIRRUS** energy absorbing lanyards are tested additionally with test mass 140 kg thus being subjected to far greater and more diversified loads than required by EN 355 standard. **CIRRUS energy absorbing lanyards are approved for users with a total weight (person + equipment) of maximum 140 kg.**

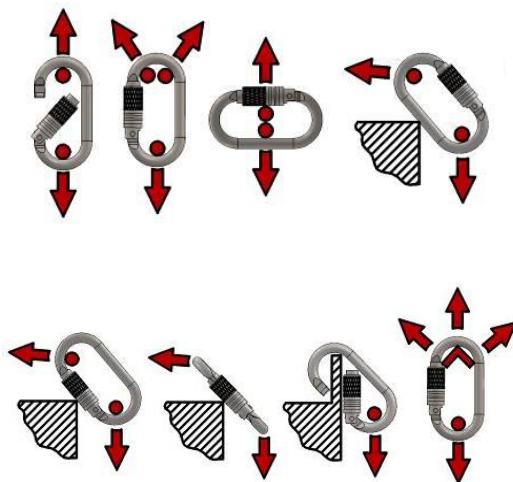
WARNING: If the total weight of the user exceeds 100 kg, make sure that the full body harness and the other components of your fall arrest system are approved for that weight as well!

WARNING! It is strictly forbidden to expose your PPE to flames or extreme heat! Keep clear from hot and incandescent objects! Below some examples of correct / incorrect use of shock absorbing lanyards and carabiners are presented. Note that these are the most encountered situations in use, but a full list of all possible incorrect uses cannot be covered by this manual. Use only certified components (carabiners, lanyards, etc.) and read/follow their instructions carefully!

CONNECTORS



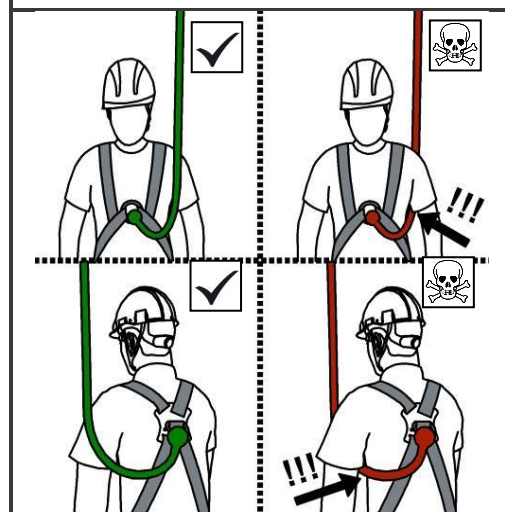
CORRECT USE



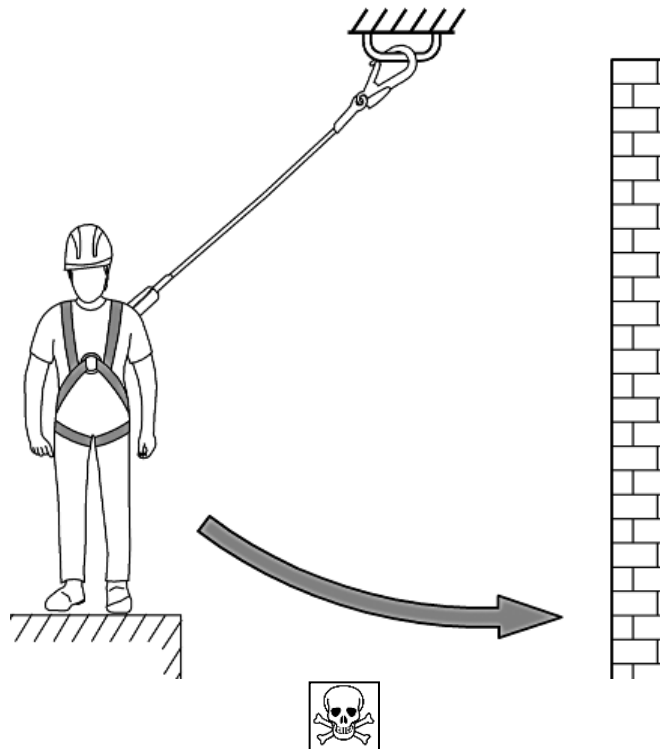
INCORRECT AND DANGEROUS USE

WARNING !

Connect and use your shock absorbing lanyard making sure that the rope / webbing is NEVER passed under your arm(s). Failure to do so can result in serious or even fatal accidents!



SWING FALL HAZARD



The anchor point must be located as high as possible above the user and as close as possible to the vertical axis of the user, thus reducing the fall distance and preventing dangerous swing falls!

DANGER: SHARP EDGES!

KEEP CLEAR of sharp edges, abrasive surfaces or any other factors that can inflict damage to your equipment!

USE

I. Use as a shock absorbing lanyard in mobile elevating work platforms (DIN 19427)



This lanyard was tested and approved according to **DIN 19427** and can be used as a fall protection device in Mobile Elevating Work Platforms (MEWPs). The user must be equipped with a suitable full body harness according to EN 361 and the mobile elevating work platform must have suitable anchor point.

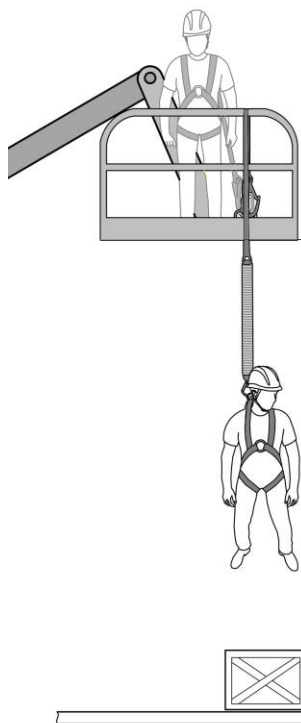
Check carefully the instructions of the mobile elevating work platform used!

Before starting the work, please make sure that:

WARNING! The lanyard may be used only in MEWPs that are equipped with anchor point(s) suitable for use in fall arrest systems. **These anchor point(s) must be capable to withstand at least 6 kN!**

WARNING! The anchor point(s) **must be located at least 35 cm below the top edge of the guardrail!** Using anchor points located higher than this may compromise the safety function of the system and greatly increase the risk of the MEWP being tipped over!

!!! FALL CLEARANCE - use in Mobile Elevating Work Platforms (MEWPs) !!!

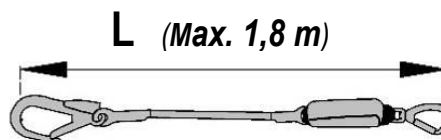


minimum
4m

WARNING! Check that there is enough free space / fall clearance below the floor of the work platform at all times! Take into account the influence of the movement of the work platform during a fall arrest!

In mobile elevating work platforms ensure a **fall clearance of at least 4m** under the floor of the platform!

WARNING! The length of the shock absorbing lanyard, including connectors **must NOT exceed 1,8m!** Adding any extensions, slings or additional connectors in order to achieve a lanyard longer than 1,8m including connectors is strictly prohibited!



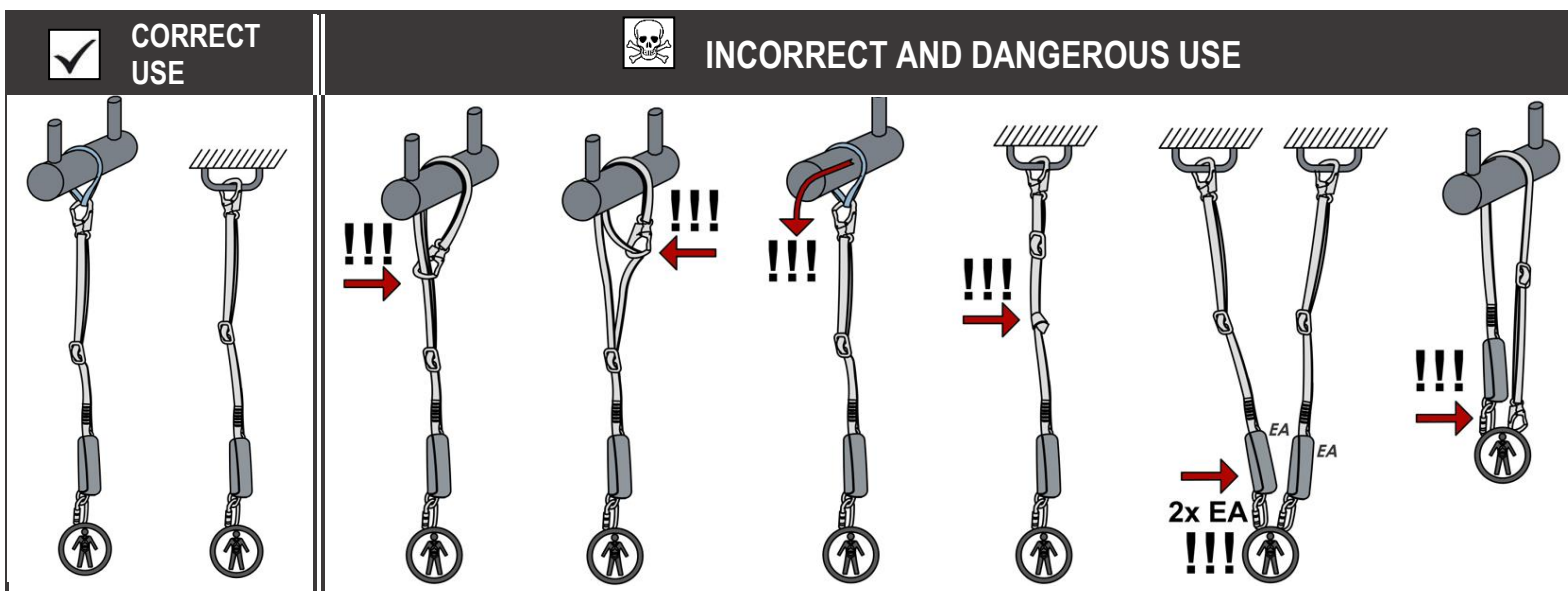
WARNING! In order to minimise the risk of ejection, the shortest connection possible between the anchor point of the lift platform and the fall arrest point of the full body harness, must be selected! Use the aluminium adjuster buckle to set the length of your lanyard!

WARNING! For safe operation please make sure the lanyard is connected and oriented correctly, having **always the energy absorber end connected to the sternal or dorsal attachment point of the EN 361 full body harness!**

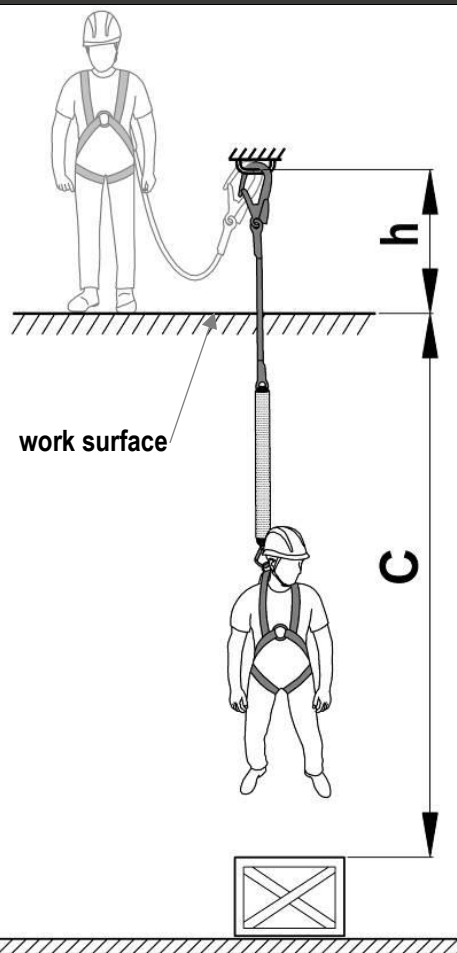
WARNING! Check that the connector attached at the anchor point of the lift platform closed and locked properly and that there is a certain degree of movement in such way the connector will NOT be loaded incorrectly during a fall arrest (eg. Connector loaded over an edge, elements around putting pressure on its gate etc). Monitor your equipment during use!

WARNING! In real fall arrest situation, injuries resulted from hitting the work platform or the boom arm cannot be excluded! Make sure you are following the instructions of the fall protection equipment and of the lift platform, but also use all required PPE for your application (e.g. helmet, high-visibility clothing, appropriate footwear etc).

II. Use as a shock absorbing lanyard (EN 354 + EN 355)

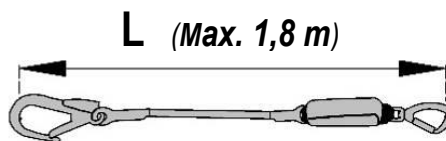


!!! FALL CLEARANCE - use as regular shock absorbing lanyard (EN 354 + EN 355) !!!



The **fall clearance (C)** or the minimum free space below the work surface is the distance from the surface the user walks on, to the nearest obstacle!

Make sure that there is enough clearance (C) below your work surface, **before starting the work!**



$$C = (L + 4,5m) - h$$

C = fall clearance [m];

L = length of the shock absorbing lanyard including connectors [m];

h = height of the anchor point, measured from the work surface to the bearing point of the anchor [m];

WARNING! If there are any doubts / uncertainties regarding the calculated fall clearance (C) ensure a minimum safety height of 6,5 m below the work surface!

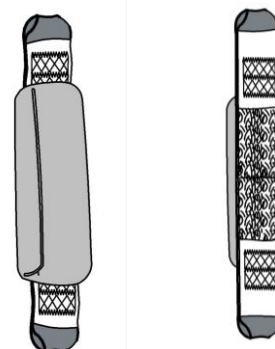
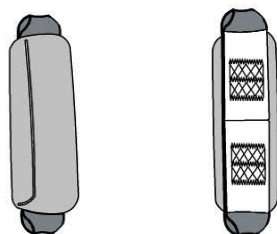
WARNING! Before use, the integrity and compatibility of the equipment must be checked. If damage is identified, the equipment must be immediately withdrawn from use! If the lanyard is equipped with SCREW locking carabiners, please make sure that the gate is fully closed and tightened correctly, before using it! Note: **SCREW locking** carabiners shall NOT be used at workplaces where the user must connect/disconnect frequently! If the lanyard is equipped with AUTO-LOCK, TRI-LOCK or TWIST-LOCK carabiners, make sure that the gate is fully closed and secured before use. We recommend to use this PPE with other components from VERTIQUAL®, to have guaranteed 100% compatibility of the elements! If there is any doubt regarding the condition of the equipment DO NOT USE IT, instead send it to the manufacturer or to an authorized representative of the manufacturer for a professional evaluation.

WARNING! This product is designed as a Personal Protective Equipment against Fall (PPEaF). Modifying it or assigning other uses are strictly forbidden! Each user shall use his own PPEaF as well as his own rescue equipment. The user must know the performances and also the limitations of his equipment! In case of uncertainty regarding the equipment or its safe use, seek advice from the manufacturer or your qualified distributor.

RESCUE! A rescue plan must be made before starting the work at heights or depths! It is mandatory to set up and know the specific rescue plan for every situation and to have designated personnel and appropriate means of intervention!

VISUAL CHECKS!

Check your equipment BEFORE EACH USE!



•DO NOT USE the equipment if the energy absorber had deployed (was involved in a fall arrest or was subjected to loads) or if any damage had been identified!

The equipment must be immediately removed from service if:

1. The marking/label is missing or is unreadable.
2. **DAMAGE has been identified (incisions, cuts, tearing, worn seams, discoloration, hardened or thinned areas, burns, melted areas, rust, plastic deformations)** if any other abnormalities of the parts or structure have been found or if the **product had suffered any changes compared to its original condition!**
3. Contact with paints or unknown chemicals had occurred (irreversible contaminations).
4. The equipment was involved in a fall arrest or had been subjected to heavy loading.
5. The integrity of the equipment is questionable and the inspection log is incomplete or missing.
6. The equipment was in service longer than **10 years**.

RESCUE! A rescue plan must be made before starting the work at heights or depths! It is mandatory to set up and know the specific rescue plan for every situation and to have designated personnel and appropriate means of intervention!



The SERVICE LIFE * of PPE against falls, made of textile materials is 6-8 years under normal conditions, but a **maximum of 10 years** * from the date of first use. The date of the first use must be noted in the logbook, otherwise the date of manufacture is considered as the date of the first use. **The storage** of new, unused products under optimal conditions (darkness, dryness, original packaging, constant temperature, without chemical vapors, etc.) should not exceed **2 years**. * PPE that belongs to a single user, has not been used excessively and not often, has been subjected to regular checks by experts, has been found to be "safe" and recorded in the test book, has a complete product history, has not been involved in a fall, is carefully treated and cared for, have been stored in accordance with regulations, have not come into contact with oils, fats or aggressive chemicals, (attention - incomplete list) can remain in use for up to 10 years. Intensive use, heavy and demanding working conditions, incorrect application, incorrect maintenance and care can greatly reduce the service life of the equipment. Certain events, such as falls, high exposure to heat, exposure to corrosive chemicals, can limit the use of your equipment to a single time. A generally valid, binding statement about the duration of use of textile PPE cannot be made, as this depends on a large number of factors such as UV light exposure, working conditions, contact with various substances, etc. The service life of the equipment ends when one of the cases mentioned in the previous chapter occurs or when the inspector / certified expert decides this on the basis of other facts. The theoretical total service life of textile PPE against falls (Storage time + Service life) is limited to a maximum of 12 years from the date of manufacture.

STORAGE, MAINTENANCE, TRANSPORT

The equipment should be stored in a dry, cool and well-ventilated room, if possible, in its original packaging. While in storage, this PPEaF must be protected from UV radiation, solar radiation, heat, sparks, incandescent metal splash, electricity, chemicals, sharp objects, heat sources, dust, cement, oils and greases or any kind of contaminants. If necessary, the textile parts can be cleaned using warm water (30°C) then rinsed. Drying the wet equipment will be made by hanging it in well-ventilated room away from any heat source. When fully dried, the equipment can be stored accordingly in its packaging (bag or box). Transport of the equipment must be made in its protective bag or box, away from any factor that could contaminate or inflict damage.

MARKING

All VERTIQUAL® PPEaF are fitted with a label which contains the following elements and essential information:

Vertiquel Engineering - name of the manufacturer	Lanyard with energy absorber CIRRUS - name of the model and version	Length = max. 1,8 m – maximum length
mm/yyyy – manufacturing date (month and year)	354:2010 ; EN 355:2002 ; DIN 19427:2017 - standards/norms the product complies to	 International symbol/icon for reading the instructions before use
CE 2756 European CE marking with identification number of the notified body carrying production control	000000 - product's serial number	Max. 140 kg Maximum weight allowed for a fully equipped user
 Pictogram indicating the specific intended use, for use in the access platforms of mobile elevating work platforms;	CAUTION: Before use, please make sure that there is enough free space below your working area! This device should be used only with full body harness according to EN361! – Warning regarding use of the lanyard only with appropriate type of harness!	

Other markings:

“A” - capital letter "A" close to the connector intended for connection to the full body harness (the one installed in the end loop of the energy absorber)

The label must be always present and readable!

PERIODIC INSPECTIONS AND CHECKS

The user must perform a visual and functional inspection of his equipment before and after each use! During use, it is important to monitor your equipment in order to identify possible damages inflicted in use, without being aware of it. The equipment must be inspected **at least once every 12 months** or more often if required, depending on the working conditions and compulsory after every incident it has been involved in. Inspections can be carried out only by the manufacturer or by an authorized inspections center. **If the periodic inspections were not performed at least once every 12 months, were carried out by unqualified persons, or without strictly respecting the manufacturer's instructions, the warranty is lost and the manufacturer declines any responsibility related to the equipment!**

Inspection Log! Every PPEaF is delivered with an Inspection Log. This document must be kept safely and sent along with the product for every inspection.

The Log (table) contains important data regarding your equipment. The date, signature of the inspector and the results are also recorded. The **date of first use** must be written in the Inspection Log by the user!

Repairs or any other modifications can be performed only by the manufacturer! Any repairs, modifications or additions (even minor ones) performed by anyone else are strictly forbidden, lead to the loss of the manufacturers guarantee and any responsibility related to this product!

WARRANTY AND LIABILITY!

The manufacturer offers a **24 month** warranty for this PPEaF from the date of first use. The user has the obligation to write the date of first use in the Inspection Log. If the date of first use was not filled in, the warranty period will be calculated from the manufacturing date. The warranty is applicable only for material or manufacturing defects! Damage resulting from normal wear and tear, corrosion, poor maintenance (or no maintenance at all), those resulted from carelessness, accidents, fall arrest, unauthorized repairs or modifications, wrong use of this PPEaF or any other reasons are NOT covered by the warranty! The warranty does NOT cover the springs of the carabiners as these can be damaged due to inadequate storage or improper use.

Warranty claims only apply to the product. All claims by the user or any other party for the direct, indirect or any consequential damages resulting from the use of this PPEaF are excluded from guarantee and liability assumptions. Any claims in this regard are hereby expressly rejected.

The user must be informed regarding the dangers of work at heights and depths. He should be aware of the risks and he is the only responsible for eventual damage, accidents or even death which may result from the use of this equipment. If the user is unable to do so or if he does not have the competence to do so, he cannot use this PPEaF.

VERTIQUAL Engineering SRL herewith rejects any liability claims for direct, indirect, accidental or consequential damages resulting from the use of this PPEaF (Personal Protective Equipment against Fall).

This products comply with the European **PPE Regulation (2016/425)** and the harmonized standards **EN 354:2010 & EN 355:2002**. **The EU type examination** was carried out by: NB 1019 (VVUÚ, a.s. Adress: Pikartská 1337/7, 716 07 Ostrava-Radvanice, Czech Republic). The production control is carried out by NB 2756 (INCDPM - The National Research and Development Institute for Occupational Safety-Bucharest).

Additionally, this product was tested and approved according to **DIN 19427:2017** for use in MEWPs. The evaluation was carried out by TÜV AUSTRIA GmbH, Deutschstraße 10, 1230 Wien).

The **EU Declaration of Conformity** can be downloaded from our website www.vertiqualsafety.com by accessing the product's dedicated section.

INSPECTION LOG

Product:

Owner / Company:

Serial/Batch No:	Date of purchase:	User:	Date of first use:
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Inspection date

Results of the inspection

Signature of the inspector