Instruction manual for guided type fall arresters type VERTILINE certified according to EN 353-2

VERTILINE PRO 215	VERTILINE UNIVERSAL 216	VERTILINE EDGE 217	VERTILINE CLASSIC 220
			
VERTILINE PRO HEAVY 213	**VERTILINE UNIVERSAL HEAVY 214**	**VERTILINE EDGE ULTRA 219**	**VERTILINE CLASSIC HEAVY 218**
			

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 lates version of the instructions overwrites previous

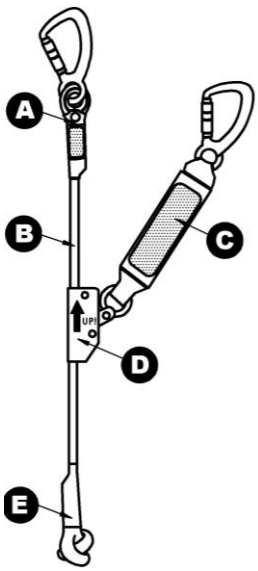
versions and is the only valid version. Please make sure you follow the instructions of the most recent version. You can download the most recent instructions from our website www.vertiqualsafety.com by accessing the section of each product. For help or additional questions, please contact us at office@vertiqualsafety.com 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: Guided type fall arresters are used in fall arrest systems to prevent the free-fall of the user while climbing or descending structures like ladders, poles, buildings, steel structures or other workplaces with risk of falling (at height or in depth). Along with other tested and certified components the guided type fall arresters comprise a fall arrest system. The purpose of this systems is to stop the free fall of the user, absorbing most of the shock and distributing the remaining force evenly until he or she is rescued. These products must be used exclusivelly 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 users position, thus reducing the fall distance and prevent pendullum accidents. 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.

DESCRIPTION: A guided type fall arrester is composed of a semi-static rope (flexible anchor line) having lengths between 5m and 50m, which is equipped at its top end with a carabiner, meant to be connected to a suitable anchor point. The rope is fitted with a fall arester mechanism (rope-grab) that can glide up or down allowing the user to climb or descent. Depending on the model the fall arrester can be detachable or not detachable from the rope and it is manufactured from steel (zinc plated) or stainless steel. An energy absorber with a carabiner is connected to the locking lever of the fall arrester. The carabiner fitted on the energy absorber must be connected to the full body harness only at the sternal or dorsal attachement points. To use this PPEaF the carabiner fitted at the top end of the rope must be attached to a certified anchor point (EN 795) or to a structural anchor (eg. steel beam). Users must ensure that the structural anchor has a propper strength and its shape and sizes cannot allow incorect loading of the carabiner. The rope will be slightly tensioned and the second carabiner on the absorber end will be connected to the attachement points of the harness (only fall arrest approoved attachement points). The user can freeley travel up or down and in case of fall, the lever of the fall arrester will pivot down due to the weight of the falling user and arrest the fall. If force generated by the fall exceeds the equivalent of 200 kg the energy absorber deploys and the shock is reduced below 6 kN.

MAIN COMPONENTS



A - top end with carabiner: for connecting to an anchor point *(label of the ancor line can be found here)*

B – flexible anchor line (rope)

C – energy absorber with carabiner: for connecting to the harness *(main label can be found here)*

D – fall arrester mechanism (can be detachable or not-detachable)

E – lower end of the rope

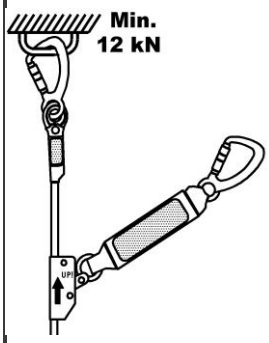
VERSIONS

The guided type fall arresters are available in several versions:
- **VERTILINE PRO**, made with **Ø14 mm** semi-static rope and a detachable **stainless steel** fall arrester;
- **VERTILINE PRO HEAVY**, made with **Ø14 mm** semi-static rope and a detachable **stainless steel** fall arrester;
- **VERTILINE UNIVERSAL**, made with **Ø14 mm** semi-static rope and a detachable **galvanised steel** fall arrester;
- **VERTILINE UNIVERSAL HEAVY**, made with **Ø14 mm** semi-static rope and a detachable **galvanised steel** fall arrester;
- **VERTILINE EDGE**, made with **Ø12 mm** semi-static rope and a not detachable **stainless steel** fall arrester;
- **VERTILINE EDGE ULTRA**, made with **Ø12 mm** semi-static rope and a not detachable **stainless steel** fall arrester;
- **VERTILINE CLASSIC**, made with **Ø12 mm** semi-static rope and a not detachable **galvanised steel** fall arrester;
- **VERTILINE CLASSIC HEAVY**, made with **Ø12 mm** semi-static rope and a not detachable **galvanised steel** fall arrester;

All VERTIQUAL guided type fall arrester have a static strength of minimum 15 kN.
The guided type fall arester models: **Vertiline PRO**, **Vertiline UNIVERSA**L, **Vertiline EDGE** and **Vertiline CLASSIC** are tested and certified according to EN 353-2 with a test mass of **100 kg**. These versions can be used by persons weighing up to 100 kg (including equipment).

Vertiline EDGE ULTRA, Vertiline PRO HEAVY, **Vertiline UNIVERSAL HEAVY** and **Vertiline CLASSIC HEAVY** are tested additionally with multiple test masses of 50 kg, 100 kg and 150 kg thus being subjected to greater loads than requiered by the current standard EN 353-2:2002. Thus the Vertiline EDGE ULTRA, Vertiline PRO HEAVY, Vertiline UNIVERSAL HEAVY and Vertiline CLASSIC HEAVY can be used by persons weighing up to **150 kg** (maximum, including equipment). In this last case the harness must be also approved for persons weighing over 100 kg. We recommend using this guide type fall arrester along with a full body harness from VERTIQUAL series (aprooved for users weighing up to 150 kg).

DETACHABLE FALL ARRESTERS (PRO 215 , PRO HEAVY 213, UNIVERSAL 216 and UNIVERSAL HEAVY 214)



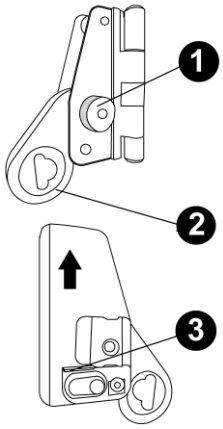
WARNING! The arrow marked on the fall arester **must always point UP, towards the TOP END**!

Detaching fall arrester from the rope:

1.Unscreew the **side wheel (1)** completely and press the **safety lever (3)** from the opposite side then rotate the mobile wall.

Attaching fall arrester to the rope:

1.Slide up the **fall arrest lever (2)** then place the rope inside **(check arrow direction! ↑UP)**
2.Rotate the hinge and press the mobile wall against the fixed one: the **safety lever (3)** will lock! CLICK!
3. Screw the **side wheel (1)** completely and tighten it well!
4. Check again if **safety lever (3)** is locked correctly, the **side wheel (1)** is fastened correctly and if **arrow orientation is correct!**



Vertiline PRO 215 and PRO HEAVY 213

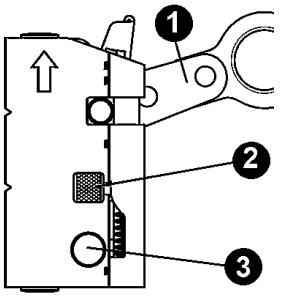
Detaching fall arrester from the rope:

1.Pull down **lock pin (2)** and press it against the **safety button (3)**, then rotate the mobile wall.

Attaching fall arrester to the rope:

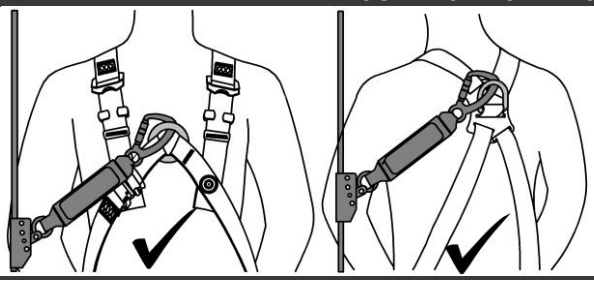
1.Slide up the **fall arrest lever (1)** then place the rope inside **(check arrow direction! ↑UP)**
2.Rotate the hinge and press the mobile wall against the fixed one: the pin and the safety button will lock! CLICK!

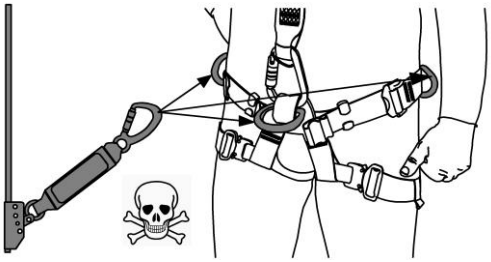
3. Check again if **pin (2)** and safety button **(3)** are in correct locked position and if the **arrow orientation is correct!**



Vertiline UNIVERSAL 216 and UNIVERSAL HEAVY 214

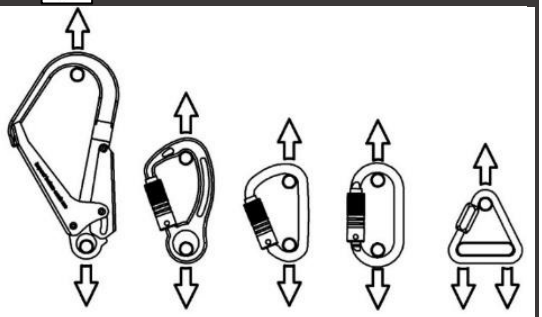
CONNECTING THE GUIDED TYPE FALL ARRESTER TO THE HARNESS



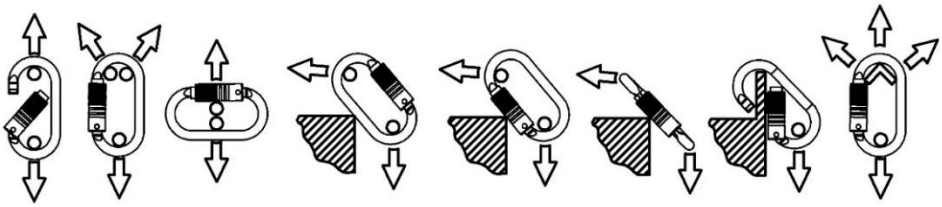


Connect the carabiner of the energy absorber only to a fall arrest attachment point of the full body harness!
(marked with A or A/2)

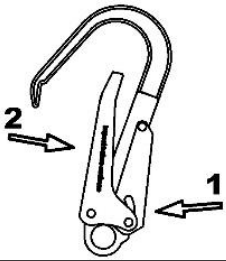
CORRECT USE (CARABINERS)



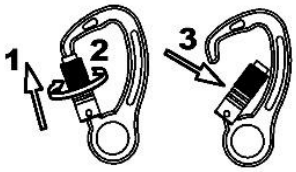
INCORRECT AND DANGEROUS USE (CARABINERS)



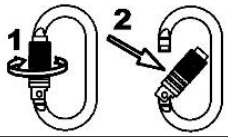
GATE OPENING / CLOSING (CARABINERS)



Auto Lock



Tri Lock



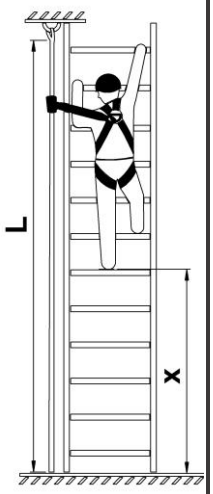
Twist Lock

Screw

WARNING! Before use, the integrity and compatibility of the equipment must be checked! If the guided type fall arrester is equipped with SCREW locking carabiners, make sure these are completely closed and tightened. In case of self-locking carabiners make sure they are fully closed and locked properly before use. For a 100% compatibility we recommend using it along other VERTIQUAL® equipment. If damage is identified, the equipment must be immediately withdrawn from use! If there is any doubt regarding the condition of the equippment it must be sent to the manufacturer or to an authorised representative of the manufacturer for a professional evaluation.

FALL CLEARANCE

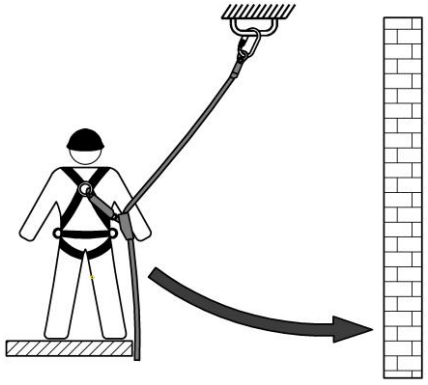
Before each use the user must ensure that there is enough free space below his workplace (measured from his feet to the ground or to the nearest obstacle). This free space (fall clearance) depends on the total length of the flexible anchor line **(L)** and must correspond to the values **(X)** indicated below or to exceed them.



Length of the anchor line [m] - L	5	10	15	20	25	30	40	50
Fall clearance [m] - X	3,5	3,8	4,1	4,3	4,6	4,8	5,3	5,8

SWING FALL HAZARD

WARNING! During use ensure that the anchor point is centered above user's head, as close as possible to the vertical axis of the body! Lateral distance from the anchor point will create dangerous swing falls which can lead to serious accidents!



Some examples of correct / incorrect use are illustrated below. These are the most common situations, but this cannot cover all possible correct / incorrect uses.

CORRECT USE

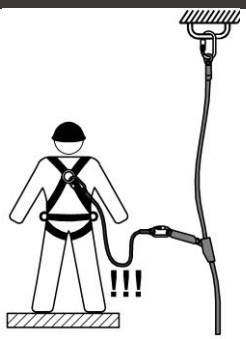
INCORRECT USE

WARNING! During use, avoid slack in the rope!

Slack in the rope will greatly increase the fall factor and stopping distance which can lead to serious or even fatal accidents !

WARNING! It is strictly forbidden add any element in between the absorber's carabiner and the attachement point of the harness.

This carabiner must be connected directly to the attachment point of the harness!



Note! To ensure easy gliding of the shuttle and to avoid slack, the rope should be under slight tension. This can be achieved by adding a weight or by attaching the lower end of the rope to a structure.

SAFETY KNOT

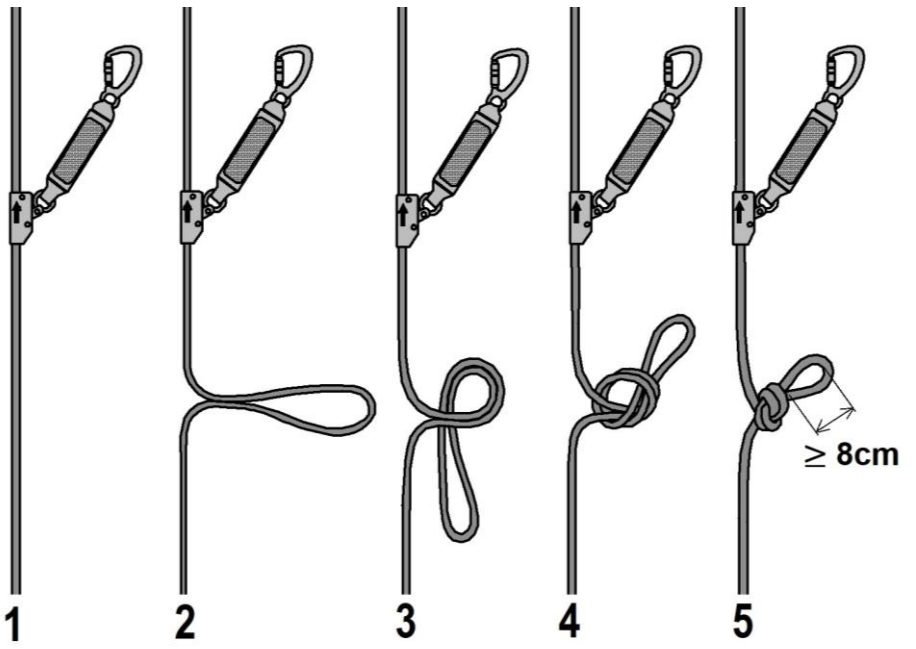
In certain situations, the user can form a temporary knot on the rope to limit the movement of the fall arrester and thus prevent accidental entry into an area where there is imminent risk of falling. The knot can be used also to avoid entering areas where there are other hazards at a specific workplace.

In this case the safety knot will be tied under the fall arrester and will limit its movement (stopper knot). To tie a simple knot, follow these steps and at the end, make sure to tighten the knot firmly:

WARNING! Before starting the work, make sure that the length of the rope (from top end to safety knot) is correct and will not allow you to reach the hazard zone! If the length is not correct, untie the knot and adjust accordingly (following the same steps)!

WARNING! Tying the safety knot will form a rope loop close to it! It is not allowed use this loop for anchorage or for any other purpose!

WARNING! Use the safety knot only for the purpose described in these instructions, at workplaces where limiting the movement is needed for safety reasons!



USE ON HORIZONTAL OR INCLINED SURFACES (edge tested fall arresters)

Models VERTILINE EDGE 217 and VERTILINE EDGE ULTRA 219 have been sucessfully tested according to CNB/P/11.075 and are approved for use over edges (horizontal /inclined use).

The allowed user weight (user + equipment) is:
Max. 100 kg for VERTILINE EDGE 217
Max. 150 kg for VERTILINE EDGE ULTRA 219

Warning: Use over edges poses greater risks to the user, compared with regular use! When the fall is arrested, the user can hit the building or any other obstacles below the workplace! Avoid or try to minimise use over edges, as much as possible!

For horizontal/inclined use (use over an edge), the following precautions must be taken BEFORE starting the work:

► If the risk assesment shows that **the edge is particulary „sharp" and/or „not free from burrs"** (e.g. an unclad proof parapet, a sharp concrete edge) **you need to take all necesary measures to rule out the risk of falling over the edge or to install adequate protection** (e.g. edge protectors)! Seek advice from the manufacturer if there are any doubts!

► MAKE SURE that the edge has a **rounding radius (r) of more than 0,5 mm** and **a deflection angle (α) of more than 90° (fig. A)** !

► The anchor point must be located ABOVE the work surface! Anchoring below foot level is NOT allowed!

► Make sure the there is enough **fall clearance** beaneath the edge! For your safety, a fall clearance of minimum **5.8 m** must be ensured, before starting the work. If the shock absorbing lanyard is connected to an EN 795 - C anchor device (e.g. horiziontal lifeline with wire rope line), the **deflection of the anchor device must be taken into account!**
This will increse the fall clearance required! Refer to the instruction manual of the anchor device for this value!
► **The lanyard must be used in such way that NO SLACK is created in the rope!**

► Make sure that **lateral movement** in relation to the fixed anchor point **does NOT exceed 1,5 m! (fig. B)** In other cases, no individual (fixed) anchor points should be used, but rather a Class C or D anchor device pursuant to EN 795 (e.g. lifeline systems with cable or rail).

► **KEEP CLEAR of areas where the fall can occur over an inclined edge! (fig. C) (e.g. the edge of an inclined roof)**.

► **Special rescue measures** must be determined and practiced, in order to rescue a person that felt over an edge!

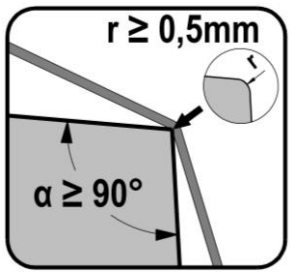


Fig. A

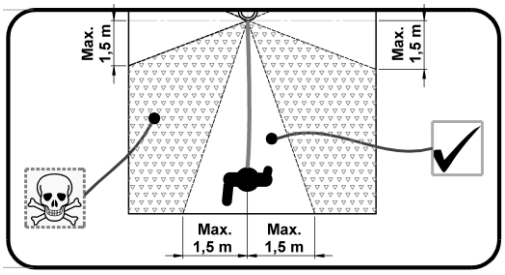


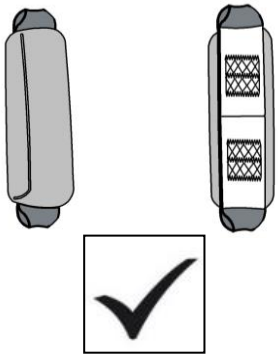
Fig. B

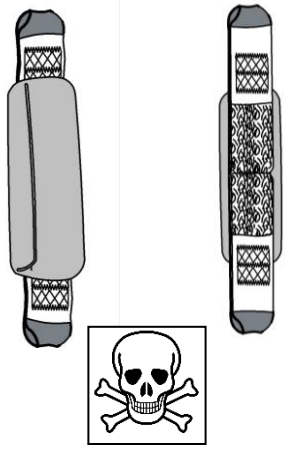

Fig. C

CHECK BEFORE EACH USE!!!

The equipment must be immediatelly removed from service if:
1.The marking/label is missing or is unreadable.
2.**Damage has been identified (incisions, worn seams, discoloration, hardened or thinned areas, burns, rusted or deformed metal parts), the energy absorber is deployed or if any abnormalities of the parts or structure have been found.**
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**.

Check the energy absorber!





WARNING! DO NOT USE the equipment if the energy absorber had deployed or if any damage is identified!

WARNING!
This product is developped as a Personal Protective Equipment against Fall (PPEaF). Bringing modifications to it or asigning 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 limitations of his equipment! In case of uncertainty regarding the equipment seek advice from the manufacturer or distributor.

RESCUE!
A rescue plan must be made before starting the work at heights or depths! It is mandatory to setup 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. Buckles and metal parts can be cleand using a soft cloth or using compressed air. If necessary, the textile parts can be claned 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 equippment can be storred 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 infromation: name of the manufacturer, name of

the model and version (if applicable),size, manufacturing date (month and year), standards/norms the product complies to, European CE marking with identification number of the notified body that issued the certificate, international symbol/icon for reading the instructions before use, the product's serial number and a warning regarding the required fall clearance. 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 authorised 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 manufacturers instructions, the warranty is lost and the manufacturer declines any responsability 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, unauthorised 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 has to be aware that 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 (425/2016)** and the harmonized standard **EN 353-2:2002.**

The EU type examination was carried out by: INCDPM (The National Research and Development Institute for Occupational Safety-Bucharest). European NB: 2756.

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

(RO) REGISTRU INSPECȚII **(EN) INSPECTION LOG** **(DE) PRÜFBUCH** **(IT) REGISTRO DI CONTROLLO** **(FR) JOURNAL D'INSPECTION** **(ES) REGISTRO DE INSPECCIÓN**	**PROPRIETAR / OWNER / EIGENTUMER / PROPRIETARIO / PROPRIÉTAIRE / DUEÑO** **UTILIZATOR / USER / BENUTZER / UTILIZZATORE / USAGER / UTILIZADOR** **PRIMA UTILIZARE / FIRST USE / ERSTBENUTZUNG / PRIMO UTILIZZO / PREMIÈRE UTILISATION / PRIMER USO** ***dd / mm / yyyy***	**PRODUCT DETAILS** **ITEM:** _____ **SERIAL N°:**_____ **MANUFACTURED:**_____ **MANUFACTURER:**_____

Inspection date *dd / mm / yyyy*	**Results of the inspection:**	**Inspection passed**		**Signature of the inspector:**	**Next inspection due latest:** ***dd/mm/yy***
		YES	**NO**		

Manufacturer: Vertiqual Engineering S.R.L.
RO-547367 Corunca, St. Calea Sighisoarei, No. 110
www.vertiqualsafety.com