# Using Instructions for CARABINERS/SNAP HOOKS acc. to EN 362:2004 Classes A/B/T and SCREW LINK acc. to EN 362:2004 Class Q



#### **DESCRIPTION:**

VERTIQUAL® connectors are made from high tensile steel or aluminum alloy and allow a safe and fast connection to other components for working at heights. There are various shapes and sizes that can be chosen to suit a specific application. The connectors can be either detachable (classes B and Q) or permanently attached to a product for working at heights (e.g. a shock absorbing lanyard) having a separate eyelet for this purpose (classes A and T). The gate is the element that allows the connecting / disconnecting and stays in a normally closed position which will need several deliberate user actions in order to open it. The class Q screw-link has a simple nut-gate for connecting/disconnecting and it is recommended in applications where opening/closing of the nut-gate) is not needed frequently.

#### **PURPOSE:**

Vertiqual **snap hooks** and **carabiners** are designed to be used as **connectors** in fall arrest systems, restraint systems, work positioning systems, rope access systems, or rescue systems and are meant to be used with other certified components for working at heights.

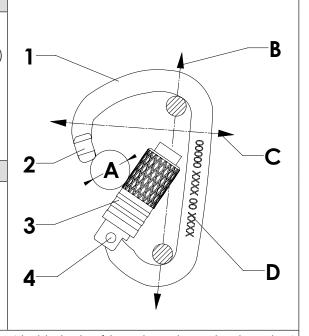
### **CARABINER ELEMENTS/CHARACTERISTICS**

- 1 Carabiner body (frame)
- 2 Nose
- 3 Gate and locking gear (spring loaded in "closed" position with manual/automatic locking)
- 4 Rivet(s)
- **A Max. gate opening:** maximum gap possible for attaching to a given element [mm]
- **B Major Axis** (maximum strength is achieved when loading on this axis with the gate closed and locked correctly)
- C Minor Axis (WARNING! loading on this axis will decrease overall strength)
- D Marking

#### **CONTENT OF THE MARKING**

- Manufacturer identification: e.g. "VERTIQUAL®"
- Model identification: e.g. "523 / TOUR"
- "read instructions before use" icon:
- CE marking and ID No. of the Notified Body that issued the certificate: e.g.
- European Norm (EN number: year of issue / Class): e.g. EN 362:2004/B
- Batch No./other method of identification / date of manufacture
- Minimum Breaking Strength on the Major Axis
- Minimum Breaking Strength on the Major Axis
- Minimum Breaking Strength with gate opened





## LIMITATIONS/IMPORTANT RULES TO FOLLOW WHEN USING THIS PRODUCTS:

- Manual locking (SCREW locking) connectors shall NOT be used at workplaces where the user must connect/disconnect frequently!
- Make sure that there are NO elements that can rub or put pressure on the gate while in use, thus causing damage to it or even accidental unlocking!
- If a connector has been involved in a fall arrest it must be immediately withdrawn from use!
- It is strictly forbidden to hoist materials or weights using this connectors! (e.g. to hoist construction materials up or down).
- Take into account the length of the connectors used and check with the instructions of the other components of your system not to exceed any length limitation! (e.g. EN 354 lanyards must have max. 2 m length including its connectors).
- Check the shape and size of the elements that connectors are attached to (e.g. attaching to wide webbings can distribute the load differently and decrease the strength of the connector). WARNING! Do NOT attach the connector to elements/structures that have sharp edges!
- **Fall clearance**: Before starting the work make sure that you have enough clearance below the workplace (to prevent hitting the ground or an obstacle). The needed clearance depends greatly on the type of connecting subsystem used (shock absorbing lanyard, self-retractable lifeline, guided type fall arresters etc.) and location of the anchor point. Refer to the manufacturer instructions for indications on how to ensure the minimum fall clearance before starting the work!
- **Corrosive environments:** using these connectors in corrosive environments (e.g. near sea water) may require more frequent inspections and checks to make sure that corrosion has not affected the strength of this product and its capability to protect the user!
- Electrical and chemical hazards: Do not install this connectors in places where they can come in contact with electric power lines, acid solutions and caustic chemicals!
- Other hazards include, but are not limited to: severe heat, severe cold, corrosive fluids, abrasive surfaces, sharp edges and moving parts of nearby machinery. Contact VERTIQUAL® or reseller if you have any doubts before use!
- Training: This equipment will be used only by persons who have been properly trained for working at heights and in this product's correct use!
- A rescue plan must be made before starting the work for each specific workplace!
- **Check the compatibility** of this connectors with the other components (equipment) used! Examples of components that can be used with this connectors: EN 361 full body harnesses (fall arrest systems);

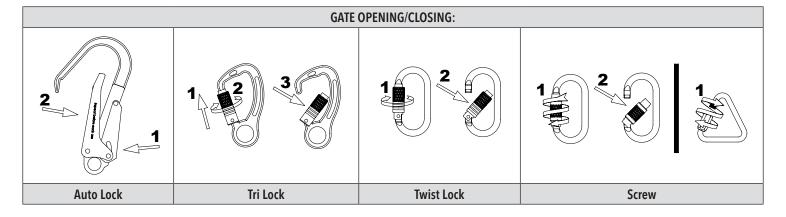
EN 353-1, EN 353-2, EN 355, EN 354 and EN 360 - fall arrest devices and lanyards with energy absorber;

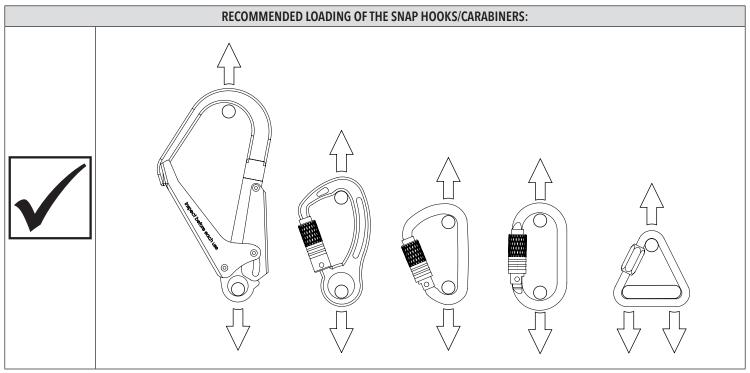
EN 341 - rescue equipment;

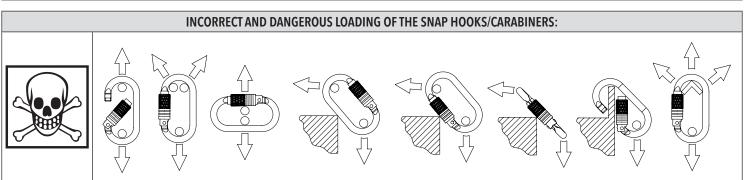
EN 358 - work positioning equipment;

EN 813 – sit harnesses (rope access systems);

EN 795 - anchor devices.







BEFORE EACH USE a close visual inspection of the snap hook must be carried out, to identify mechanical, chemical damage that can affect safety (NOTE: Damage to the snap hook can be inflicted without user/owner knowledge, e.g. negligence of a co-worker). Check carefully all components of the snap hook for cracks, bends, shape distortions, sharp edges, rivet heads thinning due to abrasion, dents or grooves and the functionality of the gate (gate must fully close and lock without any difficulty!). WARNING! If any damage is identified it must be immediately withdrawn from use. If there is any doubt regarding the safe operation of the carabiner after the visual inspection DO NOT USE IT! (Instead send it for inspection to the manufacturer or to an authorized representative of the manufacturer).

**DURING USE** the snap hook must not come in contact with acids, solvents, bases, open fire, electric arc, intense hot metal splash and sharp edges. If there is any doubt regarding conditions of use contact the manufacturer / distributor.

WARNING! Make sure that in use other elements present at the workplace (e.g. beams, edges, pipes, other ropes etc.) cannot rub or put pressure on the gate thus causing damage to it or even accidental unlocking of the gate!

**STORAGE AND TRANSPORTATION:** Store unpacked in a cool, dry, dark place away from excessive heat or heat sources, high humidity, sharp edges, corrosive agents or other possible causes of damage. **Do not store wet!** Care must be taken not to inflict any damage to the connectors during transportation! It is recommended they are packed individually to avoid surface damages and none of the damaging factors mentioned above must not come in contact with the connectors during transport.

**CARE:** Wash in warm water of domestic supply quality (maximum temperature 40° C). To clean effectively is possible to use a soft brush or a soft sponge. Cleaning using pressurized water is forbidden! (e.g. pressure washer pump). Rinse and dry naturally in a warm room away from direct heat sources. Lubricate the gate mechanism with a silicone based lubricant. This should be carried out after cleaning. Note: Cleaning and lubrication is recommended after every use in marine environment.

**REPAIRS:** Repairs or modification can be performed **only by the manufacturer!** 

**SERVICE LIFE:** The snap hooks /carabiners have UNLIMITED service life **as long as its condition before each use is proven to be safe for use.** Every user must perform its own visual inspection BEFORE EACH USE! (\*check BEFORE EACH USE section for more details). PERIODICAL INSPECTIONS must be performed by the manufacturer or authorized representative and the results must be written in the inspection log. Incorrect use or exposure to extreme conditions (eg: contact with corrosive agents, electric arc etc.) **can limit the service life to a single use!** 

**WARRANTY AND LIABILITY!** The manufacturer warrants its products for a period of **12 months** from first use. This must be recorded in the log book. The guarantee is applicable in case of material or manufacturing defects. Damage resulting from normal wear, corrosion, improper maintenance, negligence, accidents, fall arrest, tampering with the equipment and use of the equipment for other purposes rather than the one prescribed by these instructions are not covered by the warranty. The warranty does NOT cover the springs of the locking mechanism (the gate) as intensive usage and poor maintenance (no cleaning regularly, no

lubrication of the gate) can cause failure of the spring without visible clues at the exterior (the springs are covered by the elements of the gate mechanism). Warranty claims apply only to the product. Claims of third parties and consequential damages resulting directly or indirectly from warranty and liability assumptions are excluded.

The user must be informed regarding the dangers of work at heights and depths. He should be aware of the risks and is responsible for eventual damage, accidents or even death which may result from the use of this equipment. If the user unable to do so or if he does not have the competence to do so, he cannot use this PPE. VERTIQUAL® accepts no liability for direct, indirect, accidental or consequential damages resulting from the use of the fall arrest PPE.

**EC type inspection is carried out by:** SATRA- European Notified Body 0321, SATRA Technology Centre, Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD, United Kingdom & INCDPM Institute for Research and Development in Labour Safety and Protection – Bucharest. European Notified Body no. 1805. Manufacturer: VERTIQUAL® ENGINEERING

#### **KEYPOINTS FOR PERIODICAL INSPECTION:**

- 1. Check all components of the snap hook carefully for cracks, sharp edges, burrs, dents or bends.
- 2. Check for excessive corrosion or chemical damage. The gate must operate smoothly (open / close and lock completely without any difficulty).
- 3. Check the markings (should be fully legible).
- **4.** Check every component of the system or subsystem according to manufacturer's instructions.
- 5. Write the results of the inspection in the inspection log accompanying the product.

  If damage is identified the snap hook must be immediately withdrawn from use and destroyed (or sent for repair to the manufacturer).

INSPECTION LOG			
Product:			
Owner/Com	pany:		
User:			
Id. No./ Batch No.	Manufactured:	Purchased:	First use:
Inspection date:		Results of the inspection:	Signature of the inspector

