











Instruction manual for reflective vests HIGHLIGHT, HIGHLIGHT PLUS, INTELLIVEST FR 551 and INTELLIVEST FR 552, compatible with VERTIQUAL full body harnesses type V3, C3, V5, and C5

HIGHLIGHT	HIGHLIGHT PLUS	INTELLIVEST FR 551	INTELLIVEST FR 552
			
<p>EN ISO 20471:2013 EN ISO 20471:2013/A1:2016</p>  (all sizes) 		<p>EN ISO 20471:2013 EN ISO 20471:2013/A1:2016</p>  sizes S and M /  sizes L, XL, XXL and XXXL  <p>EN ISO 11612:2015 </p> <p>A1 + A2 B1 C1 F1</p> <p>Materials acc. to EN ISO 14116:2015 flame spread index "3"</p>	

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. Personal protective equipment against falls (PPE) may only be used by persons with the necessary training and good technical knowledge for safe working in areas where there is a risk of falling! For work in areas where there is a risk of falling, a risk assessment must be carried out on the basis of DIN/EN, the applicable regulations and the resulting specifications for protective measures. Before using a specific type of PPE for the first time, users of this PPE must be instructed in its correct and safe use! The person carrying out the work must be aware of and able to assess the hazards and risks and be able to act and make decisions accordingly. The user must be familiar with the properties and limitations of this product, and must be aware of and accept the risks associated with its use. Beginners must be under the constant supervision of experienced users of this PPE! Each user is responsible for the performance of their tasks and for their own safety. If they are unable to do so, or if they lack the necessary knowledge, skills, and authority, they must not use this PPE!

Rescue! Working in areas where there is a risk of falling requires good health, good physical fitness, good training in the use of PPE and rescue equipment, and the ability to correctly assess risks. Before each use, a rescue plan must be drawn up for the relevant location. Any necessary rescue must be ensured and a rescue team must be ready for action at short notice. Work in areas at risk of falling must only be carried out by teams of at least two workers, one of whom must always be ready and equipped for a possible rescue or emergency situation.

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! When using combinations such as a safety harness and protective vest, the operating instructions and safety regulations of both products must be read and followed accordingly!

WARNING! Before each use, the PPE must be thoroughly inspected and all components must be tested to ensure they are in good working order! If there is any visible damage, torn or worn seams, abrasion, cuts, discoloration, fire damage, hardening, rusted and/or deformed metal parts, faulty buckles, or other abnormal changes, the harness or lanyard must be discarded. Before using the equipment for the first time, the user should try it on and adjust it. Ensure that the harness is adjusted to the user's body size and fits snugly, but not so tightly that it causes constriction.

DESCRIPTION

HIGHLIGHT & HIGHLIGHT PLUS

The **HIGHLIGHT** and **HIGHLIGHT PLUS** high-visibility safety vests are certified according to **EN ISO 20471 Class II**. They are made up of two layers. The outer layer is made of a highly visible (HiViz) fabric and has 50 mm wide reflective strips. The inner layer is made of a cotton blend fabric. To make it easy to attach and remove the safety harness, both layers are equipped with press studs and can be separated if necessary. To protect the harness effectively, the vest covers all parts and fasteners of the harness where possible. There are two openings in the chest area for access to the sternal anchor loops. These **loops are marked „A/2“** and may only be used when connected together. The opening for the dorsal anchor point is located in the back, between the shoulder blades. The dorsal anchor point is **marked with „A“** symbol. If these vest is to be used with C5 and V5 combined-full body harnesses, these versions will be equipped with additional openings for the positioning rings. The **HIGHLIGHT version** is equipped with 2 pockets in the front in which various small items can be stored (e.g. a cell phone). The **HIGHLIGHT PLUS version** has 4 large hanging pockets (2 in the front and 2 in the back) for various small tools. These pockets are made of the same HiViz material and are sewn strongly on the lower hem of the vest.

These vests are compatible with full body harnesses V3, C3, V5, and C5 manufactured by VERTIQUAL.

INTELLIVEST FR 551 & INTELLIVEST FR 552

The **INTELLIVEST FR 551** and **INTELLIVEST FR 552** are certified according to **EN ISO 20471** as high-visibility safety vests and according to **EN ISO 11612 + EN ISO 14116** as heat and flame protective vests. They are made up of two layers. The outer layer is made of a highly visible (HiViz) and flame retardant PES+Cotton fabric and has 50 mm wide flame retardant reflective strips. The inner layer is made of a flame retardant cotton blend fabric. To make it easy to attach and remove the safety harness, both layers are equipped with press studs and can be separated if necessary. To protect the harness effectively, the vest covers all parts and fasteners of the harness where possible. There are two openings in the chest area for access to the sternal anchor loops. These **loops are marked „A/2“** and may only be used when connected together. The opening for the dorsal anchor point is located in the back, between the shoulder blades. The dorsal anchor point is **marked with „A“** symbol. If these vest is to be used with C5 and V5 combined-full body harnesses, these versions will be equipped with additional openings for the positioning rings. **INTELLIVEST FR 551 version** has the outer layer made of yellow HiViz and flame retardant fabric. **INTELLIVEST FR 552 version** has the outer layer made of orange HiViz, flame retardant fabric that also include antistatic conductive yarns. Both versions are equipped with 3 pockets in the front in which various small items can be stored. **These vests are compatible with full body harnesses V3, C3, V5, and C5 manufactured by VERTIQUAL.**

FIELD OF USE

HIGHLIGHT & HIGHLIGHT PLUS

Reusable protective vest that ensures the user's visibility in all lighting conditions when seen by operators of vehicles or other mechanized equipment, in daylight and in the light of headlights at night - can be used in normal environments without a potentially explosive atmosphere.

INTELLIVEST FR 551 & INTELLIVEST FR 552

Reusable protective vest covering the torso and providing protection against flames, reducing the possibility that the garment and/or its materials will burn when in occasional / short-term contact with small flames. against convective, radiant and contact heat- low risk exposure, it is ensuring the visibility in all lighting conditions when user must be seen by operators of vehicles or other mechanized equipment. The vest must be used according to these instructions as a complementary garment worn together with protective clothing (with at least the same type and level of protection against heat and/or fire) in normal environments without potentially explosive atmospheres.

SIZES

(HIGHLIGHT, HIGHLIGHT PLUS, INTELLIVEST FR 551, INTELLIVEST FR 552)

Size	Chest circumference [cm]	User height [cm]
S	86-94	160-180
M	94-102	160-180
L	100-110	175-190
XL	110-120	175-190
XXL	118-130	180-196
XXXL	129-141	180-196

Attention!

1. This equipment must not be modified or supplemented with parts from other manufacturers!
2. This equipment is designed and manufactured for use as personal protective equipment only; all other uses are prohibited!
3. For safety reasons, each user should have their own personal protective equipment against falls and their own equipment for holding and rescue.
4. The user must be familiar with the function of the equipment. If in doubt, consult the manufacturer for advice.

Storage, care, and transport! Store PPE in a dry, well-ventilated, and cool place, if possible in the original packaging or in a designated textile bag/box. The PPE must be protected from UV radiation, heat, sunlight, sparks, metal drops, chemicals, sharp objects, heat sources, dust, cement, oils and greases, and any kind of contamination. If necessary, the textile parts can be washed in lukewarm water at 30°C and then rinsed thoroughly with clean water.

The **HIGHLIGHT & INTELLIVEST** protective vests can be washed up to 50 times without the reflective strips losing their characteristics.

Wet equipment should be dried in a closed, well-ventilated room, far away from any direct heat source, and hung up. The equipment is then laid out loosely and packed in its storage bag. The equipment is best transported in a designated transport bag or transport box.

Repairs! Repairs, modifications, and additions to the equipment may only be carried out by the manufacturer!

INSTALLING THE FULL BODY HARNESS (V3, C3, V5 and C5)

1. Open all SNAP BUTTONS

- Check side of the armholes;
- Check the lower hem;



2. Insert the full body harness upwards, having the chest buckle open. (IF APPLICABLE: open the buckle on the waist belt as well)



3. Place the shoulder straps over the armholes of the vest, as depicted below



then close the snap buttons of the armholes (to hold the upper part of the straps)



4. Insert the DORSAL RING through the corresponding window in the back

OK



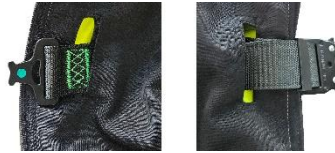
then both STERNAL LOOPS to the corresponding windows in the front.

OK



(IF APPLICABLE: insert the LATERAL POSITIONING RINGS to the corresponding windows on the lower sides of the vest)

5. Pass the chest strap ends through the corresponding windows of the inner layer (black fabric) as depicted below.



(IF APPLICABLE: pass the waist strap ends through the corresponding windows of the inner layer (black fabric). These are located below the windows for the chest strap in the front, close to the lower hem)

Make sure the straps are not twisted!

6. Close all SNAP BUTTONS

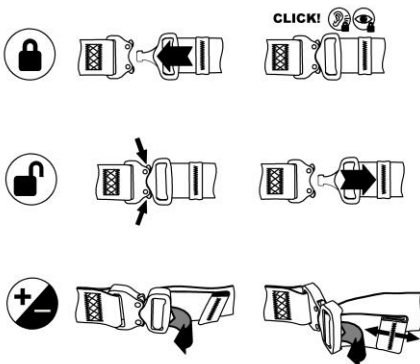


DONNING THE VEST & FULL BODY HARNESS

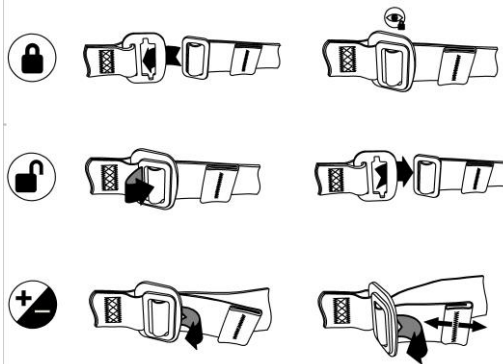
After having the full body harness correctly installed in the vest:

1. Open the main zipper of the vest;
2. Open all buckles of the full body harness (check below illustrations for buckle operation). Warning! For your safety it is necessary to check the complete instructions of the full body harness and of the vest, before use!

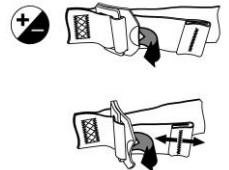
Automatic (CLICK) buckles



Manual (CLASSIC) buckles



Adjuster buckle



Checking straps adjustment





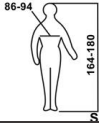

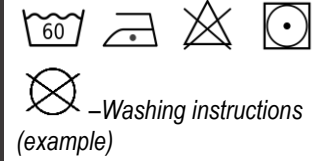



3. Dress the vest, then close and adjust all straps of the full body harness.
4. Check that each buckle is closed and locked correctly!
5. Close the main zipper of the vest;

CHECKS! The user must carefully check their equipment, especially their PPE, before each use. The equipment must also be monitored during use and checked after use! Make sure that the buckles of the safety harness are properly fastened at all times!

Rescue! Working in places where there is a risk of falling requires good health, good physical fitness, good training in the use of work equipment and rescue equipment, and the correct assessment of risks. 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!

Service life: the HIGHLIGHT & INTELLIVEST protective vests generally have no disposal date. However, in the event of heavy wear, soiling or damage, we recommend replacing the protective vest. If, during use, more than 50 wash cycles are reached, the reflective characteristics of the reflective tape decreases noticeably and the requirements of EN 20471 are no longer met. The storage of new, unused products under optimal conditions (darkness, dryness, constant temperature) should not exceed 2 years. Intensive use, heavy and demanding working conditions, incorrect use, incorrect maintenance and care can significantly shorten the service life of the equipment. Some events, such as impact stress, exposure to intense heat, or contact with corrosive chemicals, may limit the use of your equipment to a single occasion. The service life of the equipment is over if one of the cases mentioned in the previous chapter occurs or if the inspector/certified expert decides this based on other facts.

MARKING: All VERTIQUAL® PPE are fitted with a label which contains the following elements and essential information. The label must be present and always legible!

 <p>Vertiqua Engineering – name of the manufacturer</p>	<p>Reflective vest..... – PPE type and name of the model Example: Reflective vest INTELLIVEST FR 551</p>	<p>Art. No. 14-0553-02-01-00– article number (example)</p>
<p>mm/yyyy – manufacturing date (month and year)</p>	 <p>European CE marking</p>	 <p>Symbol regarding the size of the vest and the dimension range for which it is suitable [cm]</p>
<p>Max. 50x – Number of washings allowed</p>	<p>External layer: 50%PES + 50% Cotton (example) Lining: 87% cotton, 12% nylon, 1% AS (example) – Materials</p>	 <p>International symbol/icon for reading the instructions before use</p>
 <p>–Washing instructions (example)</p>	<p><u>In case of HIGHLIGHT & HIGHLIGHT PLUS:</u> EN ISO 20471:2013 EN ISO 20471:2013/A1:2016 standards/norms the product complies to  2 symbol for reflective vest with number indicating the visibility class</p>	<p><u>In case of INTELLIVEST FR 551 & INTELLIVEST FR 552:</u> EN ISO 20471:2013 EN ISO 20471:2013/A1:2016 standards/norms the product complies to symbol  2 and number indicating the visibility class; EN ISO 11612:2015 A1 + A2 B1 C1 F1 standards/norms the product complies to with performance levels; Materials according to EN ISO 14116:2015 flame spread index “3”; </p>

Warranty and liability! The manufacturer generally grants a warranty of 24 months from the date of purchase on its products. The first use must be noted in the inspection log. The warranty covers hidden material defects and manufacturing defects. Damage resulting from normal wear and tear, rust, improper maintenance, care, and use, accidents, falls, and tampering with the equipment is not covered by the warranty. The springs of the connecting elements and click fasteners are not covered by the warranty, as incorrect use/care/storage can lead to premature failure of these parts.

Warranty claims only apply to the product. Claims by users or third parties for consequential damages arising directly or indirectly from use are excluded from warranty and liability coverage.

The user must be aware of the dangers of working at heights and depths. They personally assume the risks and responsibility for any damage, accidents, or even death that may result from the use of this equipment. If the user is unable to do so, lacks the competence to do so, or is unable to do so, they must not use this PPE. The manufacturer accepts no liability for direct, indirect, incidental, and all types of damage and/or consequential damage resulting from the use of the PPE or arising from its use.

The EU type examination certificate was issued by the INCDPM Institute for Research and Development in Occupational Health and Safety in Bucharest, European notified body having the identification number 2756.