



Ultimate
Industrial

WORK AT HEIGHT STANDARDS & REGULATIONS 2019

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A brief guide to the regulations

The Work at Height Regulations 2005 consolidate previous legislation on working at height and implement European Council Directive 2001/45/EC concerning minimum safety and health requirements for the use of equipment for work at height (the Temporary Work at Height Directive). 'Work' includes moving around at a place of work (except by a staircase in a permanent workplace) but not travel to or from a place of work. For instance, a sales assistant on a stepladder would be working at height. A place is 'at height' if (unless these Regulations are followed) a person could be injured falling from it, even if it is at or below ground level. As an employer you must do all that is reasonably practicable to prevent anyone falling.

Work at height - The duty holders responsibilities include:

- All work at height is properly planned and organised; all work at height takes account of weather conditions that could endanger health and safety;
- Those involved in work at height are trained and competent;
- The place where work at height is done is safe;
- Equipment for work at height is appropriately inspected;
- The risks from fragile surfaces are properly controlled;
- The risks from falling objects are properly controlled;
- Ensure that no work is done at height if it is safe and reasonably practicable to do it other than at height;
- Ensure that the work is properly planned, appropriately supervised, and carried out in as safe a way as is reasonably practicable;
- Plan for emergencies and rescue

EN354. Personal fall protection equipment. Lanyards.

Conditioning

All test samples need to be conditioned at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and $65\% \pm 5\%$ relative humidity (RH) for at least 24 hours prior to testing. They must also meet the 'wet and cold' conditioning requirements which means the test sample is submerged in water for one hour, then it is placed in a chamber with a temperature of between -4°C and -6°C for at least four hours. Samples are then removed and tested within 90 seconds of removal from the freezer.

Slippage

Adjustable lanyards are subject to a slippage test. A static load of 6kN is applied for three minutes to the test sample. To pass, the adjustment device must not slip by more than 50mm. This test is carried out two or three times, first using the general conditioning of $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and $65\% \pm 5\%$ RH, and then to a sample conditioned to wet and cold.

Static Strength

Lanyards are tested to 22kN static strength, higher than the standard 2.5 times safety factor used in most fall arrest standards as lanyards can be subject to some of the highest levels of wear and tear in a fall arrest system. Lanyards constructed entirely from metal are subjected to a 15kN static strength test, as they are more resilient to wear and tear. Any connectors are removed for the static strength tests. The connectors are still included in the corrosion test.

Dynamic

A 100kg test mass is attached to the test sample via a 2m reference lanyard. This is then raised 2m above the attachment point then dropped the 4 metres. To pass this test, the lanyard must retain the test mass clear of the ground. The generated force isn't measured. The lanyard is then subject to a 3kN static strength test. If the lanyard can withstand this force for three minutes after the drop test, it is considered to have passed.

Corrosion

Metallic products/parts are held within a sealed chamber, which is then filled with a salt water mist, designed to induce rust in unprotected metals. They are kept in the chamber for either a 24 or 48 hours exposure time and then are examined for rusting and function afterwards.



EN 361. Personal protective equipment against falls from a Height. Full body harnesses

Dynamic Performance

Harnesses undergo a performance test that applies a force that will exceed forces likely to be experienced in use. The harness is fitted to a 100 Kg torso dummy and then connected to a 2 metre length of rope that will generate a known force to the harness when dropped. The dummy is then released twice over a 4 metre distance, once from a head-up position and once from a head-down position. This is carried out for each attachment point on the harness. In order to pass the test, the harness must hold the dummy following both drops, with the dummy held in a position not exceeding 50° from the upright position.

Static Strength

Based on the 6kN expected in use, harnesses are subject to a 15kN force in the upward direction and a 10kN force in the downward direction. Lanyards are subjected to either 15kN or 22kN depending on the material it is made from. This is a higher force as lanyards are expected to be more exposed to factors that may age the product e.g. abrasion. These forces are applied and held for at least 3 minutes to ensure the product breaking point exceeds the force specified by the standard.

Corrosion Resistance

Metallic products/parts are held within a sealed chamber, which is then filled with a salt water mist, designed to induce rust in unprotected metals. They are kept in the chamber for either a 24 or 48 hours exposure time and then are examined for rusting and function afterwards.

EN 358. Personal protective equipment for work positioning and prevention of falls from a height. Belts for work positioning and restraint and work positioning lanyards

Dynamic Performance

Work positioning attachments are subjected to a 1 metre drop with a 1 metre length of rope. A lesser force is applied to the harness as the possibility of a period of free-fall is significantly less. To pass, the harness is required to safely arrest the fall of the test dummy.

Static Strength

Belts, harnesses and lanyards are subject to a 15kN tensile force. These forces are applied and held for at least 3 minutes to ensure the product breaking point exceeds the force specified by the standard.

Corrosion Resistance

Metallic products/parts are held within a sealed chamber, which is then filled with a salt water mist, designed to induce rust in unprotected metals. They are kept in the chamber for either a 24 or 48 hours exposure time and then are examined for rusting and function afterwards.

EN 813. Personal fall protection equipment. Sit harnesses

Dynamic Performance

Sit harnesses are dropped over a distance of 2 metres with a 1 metre length of rope. A lesser force is applied to the harness as the possibility of a period of free-fall is significantly less. To pass, the harness is required to safely arrest the fall of the test dummy.

Static Strength

Belts, harnesses and lanyards are subject to a 15kN tensile force. These forces are applied and held for at least 3 minutes to ensure the product breaking point exceeds the force specified by the standard.

Corrosion Resistance

Metallic products/parts are held within a sealed chamber, which is then filled with a salt water mist, designed to induce rust in unprotected metals. They are kept in the chamber for either a 24 or 48 hours exposure time and then are examined for rusting and function afterwards.



EN355. Personal protective equipment against falls from a height. Energy absorbers

Dynamic Performance

A minimum solid mass of 100Kg is dropped over a distance of twice the length of the lanyard. The performance of the lanyard is then examined to see if it passes the following criteria; the lanyard should not deploy, stretch, open or tear beyond a length of 1.75 metres and the maximum force of 6kN should not be exceeded.

Static Strength

Lanyards are subject to a 15kN tensile force. These forces are applied and held for at least 3 minutes to ensure the product breaking point exceeds the force specified by the standard.

Corrosion Resistance

Metallic products/parts are held within a sealed chamber, which is then filled with a salt water mist, designed to induce rust in unprotected metals. They are kept in the chamber for either a 24 or 48 hours exposure time and then are examined for rusting and function afterwards.

EN362. Personal protective equipment against falls from a height. Connectors

Static Strength

Tensile loads are applied and held for 3 minutes. Depending on the connector the test subject undergoes a range of tensile strength tests, applied in several directions. Where the application could result in loading being applied in directions other than the direction the connector is designed for, additional testing is required.

Corrosion Resistance

Metallic products/parts are held within a sealed chamber, which is then filled with a salt water mist, designed to induce rust in unprotected metals. They are kept in the chamber for either a 24 or 48 hours exposure time and then are examined for rusting and function afterwards.

Care Instructions:

Cleaning

Träega® Products can be wiped down with a mild detergent and wiped with a clean cloth to remove detergent. The hardware can also be wiped down with a clean, dry cloth to remove grease or dirt. If wet, allow the product to air dry. Bleach, solvents, corrosive chemicals or any other chemical that may damage/weaken the harness must not be used to clean the products as they can affect the product performance.

Storage and transport

When being transported or stored, the Träega® product should be stored in a cool, dry, ventilated place out of direct sunlight. Do not store in areas where damage from environmental factors such as heat, light, excessive moisture, oil, chemicals and their vapours, or other degrading elements may be present. It must be kept away from any sharp edges that may damage the product in transit. Do not store/transport damaged equipment or equipment in need of maintenance in the same location as product approved for use. Equipment must be cleaned and dried prior to storage. Equipment that has been stored for an extended period must be inspected as described in these User Instructions prior to use



Pre-Check

When instigating the pre-use check, all aspects of the equipment must be tested to ensure that it will perform correctly. Check all aspects of the harness for any signs of damage or any defects that may affect the performance of the product. If in any doubt, replace the product.

How to inspect the product

- Bend a portion of the webbing, 15-20 cm, into an upside-down 'U' shape. Continue along all webbing inspecting for tears, cuts, fraying, abrasion, discolouration, burns, holes, mould, pulled or broken stitches, or other signs of wear and damage.
- Adjust all keepers, buckles, padding, and D-rings to inspect webbing hidden by these components.
- Sewn terminations must be secure, complete, and not visibly damaged.
- Check all buckles for damage, distortion, cracks, breaks, and rough or sharp edges. Inspect for any unusual wear, frayed or cut fibres, or broken stitching of the buckle attachments. Make sure buckles properly engage.
- Ensure that the Quick-Connect buckle's dual-tab release mechanism is free of debris and engages properly. Double-check the buckle locking mechanism by tugging on both halves of the buckle to make sure it is firmly connected and will not disengage.
- All markings must be legible and attached to the product.
- All hardware must be free of cracks, sharp edges, deformation, corrosion, or any evidence of defect.

Any of the Träega® height safety products listed in this User Information Sheet must be withdrawn from use and destroyed if;

1. Under inspection it is found to be defective or have excessive wear, damage, deterioration or anything else that may prevent the product working correctly. If in doubt remove the product from use immediately.
2. In the event of a fall, the Träega® Full Body Harness must be removed from service and destroyed immediately.



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