



# INSTALLATION GUIDE AND USER INSTRUCTIONS

## ANCHORA

Code

# LPP0002

EN 795:2012 Type A

CEN/TS 16415:2013 Type A

[lyon.co.uk/user-instructions](http://lyon.co.uk/user-instructions)



For more detailed user information and to download a PDF copy of these instructions and a Declaration of Conformity follow the link above or scan the QR code with your smart phone

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**This information to be read and kept for the lifetime of the product in conjunction with the Lyon General User Instructions.**

Manufacturers, designers, installers, duty holders and users must read and understand the information in this document.

Certain information is of specific importance to individual customer groups.

At each level of use, the individual must have appropriate training, knowledge and experience to ensure correct use or be working under the direct supervision of such a person.

Please note, for all uses, the ANCHORA is NOT lifting equipment.

**Quality assurance**

Quality management system assessed and certified as meeting the requirements of ISO 9001.

**Certification**

When used for a single-user load: EN 795:2012 Type A “Personal fall protection equipment. Anchor devices”.

When used for a two-user load: CEN/TS 16415:2013 Type A “Personal fall protection equipment – Anchor devices – Recommendations for anchor devices for use by more than one person simultaneously”.

The ANCHORA has been tested in a base material made from steel and a 25 mm thick plywood face. The ANCHORA should not be used with a

plywood face greater than 25 mm thick. The anchor system designer should, by calculation, determine the minimum structural requirements of the base material to be used, e.g. the minimum thickness of the steel.

Installation in other base materials, e.g. concrete, will require the installer to undertake additional testing in accordance with EN 795:2012 Type A and CEN/TS 16415:2013 Type A and/or proving calculations to ensure continuing compliance with the requirements of EN 795:2012 Type A and CEN/TS 16415:2013 Type A.

The designer or installer will need to take into consideration a number of factors affecting the structural limitations of the installation, e.g. method and type of fixing, spacing of fixings, minimum thickness of the base material, depth/length of fixing, the minimum edge distance of fixing.

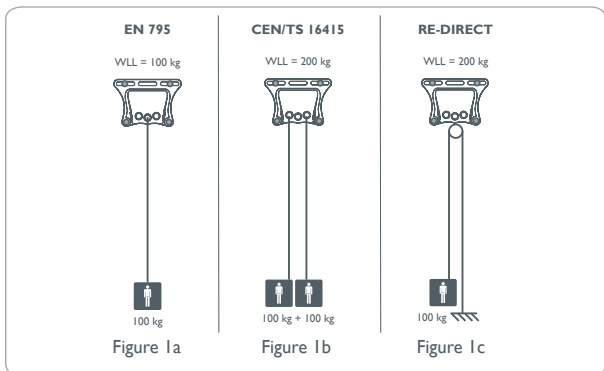
**Approved bodies**

Tested to EN 795:2012 and CEN/TS 16415:2013 by: SATRA, Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD, UK.

**Working Load Limit (WLL)**

Please note that the WLL refers to the total combined load on the ANCHORA. See Figure 1.

The combined load must not exceed the WLL.



Where dynamic loads are envisaged, the WLL may be up to 100 kg for single-users (EN 795:2012), see Figure 1a, and 200 kg for two-users (CEN/TS 16415:2013), see Figure 1b.

Where the load is applied through the use of a re-direction point, e.g. overhead pulley, the load on the anchor may be doubled and thus the WLL must respect the load on the anchor point and be kept within the specified maximum WLL, see Figure 1c.

### Breaking load

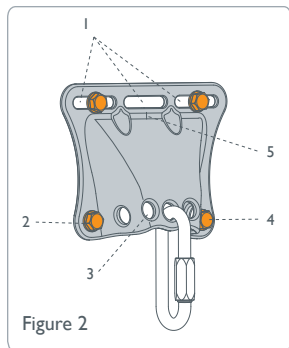
The ANCHORA has a minimum breaking load (MBL) of 20 kN.

For a single-user load:  
EN 795:2012 requires a MBL of 12 kN.

For a two-user load:  
CEN/TS 16415:2013 requires a MBL of 13 kN.

### Nomenclature of parts (Figure 2)

- |                       |                  |
|-----------------------|------------------|
| 1. Upper fixing slots | 3. Anchor points |
| 2. Lower fixing holes | 4. Fixings       |
|                       | 5. Centre line   |



## **Use**

The ANCHORA is an anchor device with five different anchor points allowing alternative attachment points for the attachment of Personal Fall Protection Equipment.

This ANCHORA forms only one part of a fall arrest system. The ANCHORA should be regarded as having no energy absorption, and they are not designed to absorb dynamic impacts.

The ANCHORA will transmit any force applied directly to the base material. The direction in which it is applied is dependent upon the direction of the load applied and the type and position of fixings.

Under normal operating conditions, the ANCHORA will not show any obvious deflection/displacement.

The ANCHORA allows the load on the anchor point(s) to be shared by a minimum of four fixings, and places the anchor points away from the base material, reducing wear on connectors, ropes and the surface of the base material.

Ropes must never be threaded directly through any part of the ANCHORA.

The ANCHORA may be used with compatible items of mountaineering or personal fall protection equipment of suitable specification, with due consideration to the limitations of each individual piece of equipment in the safety chain.

Use of stainless steel connectors will reduce the likelihood of corrosion where connectors are in contact with the ANCHORA.

Use of connectors which are of different hardnesses to the ANCHORA may lead to greater wear on the least hard item.

All other uses not described are forbidden without the written approval of Lyon Equipment Ltd.

## **Installation**

The ANCHORA should only be installed by competent persons or competent organisations.

There are three fixing slots in the top of the ANCHORA and two fixing holes in the bottom of the ANCHORA.

The ANCHORA must always be installed with a minimum of four fixings.

Before installation, check that the proposed location of the ANCHORA allows the fixings to be installed into, or through, a base material capable of supporting the foreseeable loads on the ANCHORA.

## **Upper fixing slots**

One fixing on either side of the centre line.

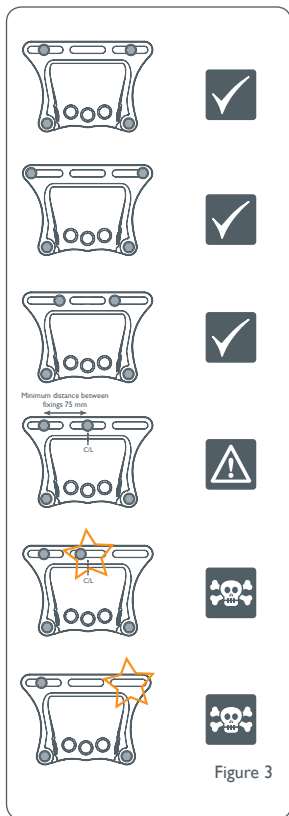
Minimum spacing between fixings = 75 mm (taking into account any minimum fixing spacing permitted by the manufacturer of the fixings, e.g. considering potential cone failure when installed in concrete).

No more than one fixing in each slot.

## Lower fixing holes

One fixing in each hole.

See Figure 3 for examples of fixing configurations.



The base material where the ANCHORA is installed must be of uniform density and structural stiffness to prevent localised stresses on the ANCHORA or its individual fixings.

Where the adequacy of the base material is not confirmed, a structural engineer or other competent authority should be consulted and the installation verified, e.g. by calculation or testing, before the ANCHORA is installed.

Where calculations are and/or testing is to be undertaken before an ANCHORA is installed, the installer should take into account the loads applied to the ANCHORA during the dynamic strength and integrity tests undertaken in accordance with EN 795:2012 and CEN/TS 16415:2013.

If the marking of the ANCHORA is not accessible after installation, additional marking near the ANCHORA is recommended.

Please visit [lyon.co.uk/user-instructions](http://lyon.co.uk/user-instructions) for guidance on documentation to be supplied after an installation and guidance on periodic examination procedures.

Where an intermediate surface, such as plywood, is between the load-bearing base material and the ANCHORA, the intermediate surface must be physically stable and structurally dense enough to prevent changes in form and thickness that could cause localised stresses, loosening, deformation or damage to the ANCHORA or any of the fixings securing it to the base material.

Ensure the surface the ANCHORA is to be mounted on is flat and free from surface defects and/or irregularities.

If fitting the ANCHORA to a steelwork base material, attach the ANCHORA to the base material using a minimum of four stainless steel M12 bolts (not set screws) of grade A4 70 or higher, M12 A4 stainless steel washers (under the bolt head and the nut) and M12 A4 stainless steel locking nuts, e.g. Nylocs.

Where dissimilar metals are in contact with each other, the installer should take into account the possibility of galvanic corrosion and take necessary steps to prevent this occurring.

Nuts and bolts through steelwork should be torqued to 50 Nm. For fixings in other bases materials, information on correct torque settings should be sought from the fixing manufacturer.

Check the fixings after any proof load test. If the ANCHORA has 'settled' into the surface of the base material it indicates the base material is not adequately dense. An alternative placement or base material should be sought.

Before use, ensure that any connectors are able to hang freely from the ANCHORA whether loaded or unloaded. Choose the most suitable connector for the expected direction of loading. Connectors must never be loaded over an edge – refer to the specific connector instructions for further information.

Ensure that the connector is able to freely rotate within each operational direction(s). If using connectors with captive bars or other accessories, ensure that any movement of the connector does not interfere with the connector's operation and free rotation of the connector.

### **Proof tests**

After installation, the installer of the ANCHORA should prove by calculation or undertake appropriate tests on the fixings. Fixings in steelwork should be torque tested to 50 Nm. For fixing types in other bases materials, e.g. resin studs, information on appropriate testing, e.g. tensile testing, to confirm the fixing has been installed correctly, should be sought from the fixing manufacturer. Refer to BS 7883 for further information on testing of fixings and anchor devices.

### **Information to be supplied after installation**

The installer should provide the duty holder, or user, with installation documentation that provides evidence that the installation of the ANCHORA has been carried out properly. This documentation should be kept for future inspections of the ANCHORA.

The installation documentation should contain at least the following information:

- Address and location of the installation
- Name and address of the installer
- Name of the person in charge of the installation

- Product identification
- Fixing details (manufacturer, product, permissible tensile and transverse forces)
- Schematic installation plan

The schematic plan should be affixed to the building/base material so as to be visible or available for everybody.

A signed declaration provided by the installer should contain at least information that the ANCHORA:

- Was installed in accordance with the manufacturer's installation instructions
- Was carried out according to the planned installation
- Was fixed to the specified base materials/substrate
- Was fixed as specified (e.g. number of fixings, correct materials, correct position/location)
- Was commissioned in accordance with the manufacturer's instructions
- Was supplied with photographic information/documentation, especially where fixings and the underlying base material/substrate are no longer visible after completing the installation

It is recommended that, where more than one ANCHORA is to be installed, for identification purposes, use the idN marked on the ANCHORA and incorporate this idN into the anchor device inspection records and the schematic plan of the installation.

Further information may be found in BS 7883.

### **During use**

It is essential to regularly check all fixing elements, connectors, attached equipment and devices, e.g. shear reduction blocks, karabiners, during use, for correct function and security.

Do not allow equipment, clothing or hair to become trapped between the ANCHORA and attached equipment and devices.

Never place fingers into the anchor points – risk of serious injury.

### **Artificial Climbing Structures**

The following section is of specific importance to Artificial Climbing Structure (ACS) manufacturer's, designers, installers, duty holders and should be read in conjunction with the whole content of this document.

### **Certification**

The ANCHORA has been independently tested by SATRA and passed the static strength test requirements (20 kN) in accordance with clause 4.3.2 of EN 12572-1:2017.

It is the responsibility of the ACS designer, manufacturer and/or installer to ensure that when installing the ANCHORA onto an ACS, that the other relevant sections of EN 12572-1:2017 are satisfied.

The ACS designer, manufacturer and/or installer will need to undertake additional testing/proving calculations to ensure continuing compliance with EN 795:2012 Type A, CEN/TS 16415:2013 Type A and EN 12572-1:2017.

### **Test laboratory**

Static strength testing in accordance with clause 4.3.2 of EN 12572-1:2017 was undertaken by:

SATRA, Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD, UK.

### **Artificial Climbing Structures Use**

The ANCHORA is designed for use as an individual top protection point of an ACS. The ANCHORA provides a suitable structural point for attachment of connector(s) for a top-roped and lead climbing system, or a shear reduction block, such as the Lyon Equipment FRIXION SRB™ for a top-roped climbing system.

The ANCHORA must not be used as an intermediate anchor - risk of quickdraw rotation and connector cross-loading. The ANCHORA may be used at a stance on a multi-pitch route on an ACS for the construction of a belay anchorage system providing the applied loads remain within the limitations indicated in Figure 4.

The ANCHORA is not itself a redirection point – ropes must never be threaded directly through any part of the ANCHORA.

The ANCHORA must only be used for one top-roped or lead climbing system at any one time.

### **Artificial Climbing Structures Installation**

Read in conjunction with the main section on installation.

Always refer to the relevant design and loading criteria sections of the latest version of EN 12572-1 before installation to ensure the structure and the ANCHORA are capable of supporting the foreseeable loads.

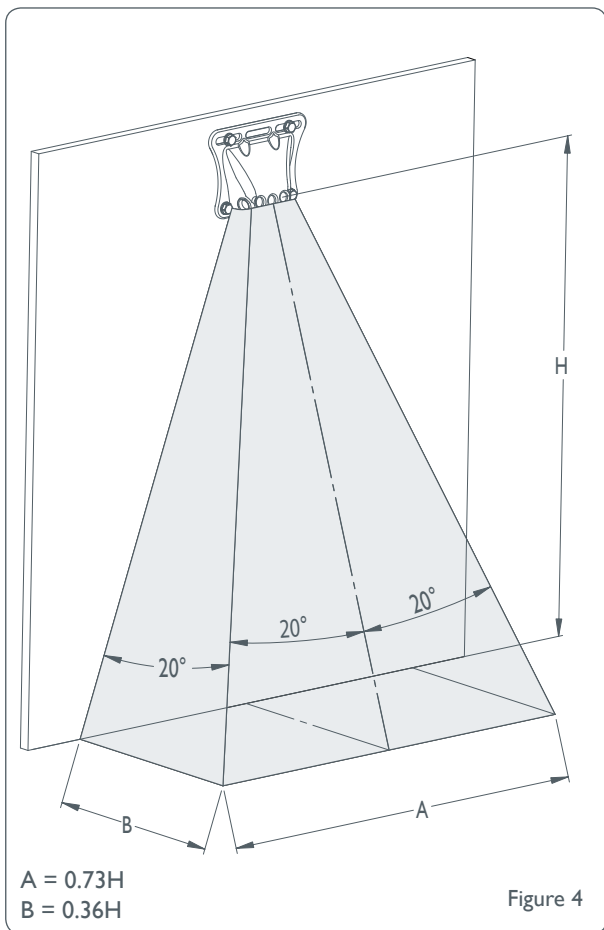
There are three fixing slots in the top of the ANCHORA and two fixing holes in the bottom of the ANCHORA.

The ANCHORA must always be installed with a minimum of four fixings.

Before installation, check that the proposed location of the ANCHORA allows the fixings to be installed into, or through, a base material capable of supporting the foreseeable loads on the ANCHORA.

The only exception to this is where the ANCHORA is fitted to an ACS and used within the loading angle range shown in Figure 4. The fixings in the lower fixing holes are permitted to be installed into plywood only. Large repair washers (penny washers) must be used between the nut and the plywood on the rear face.





$A = 0.73H$   
 $B = 0.36H$

Figure 4

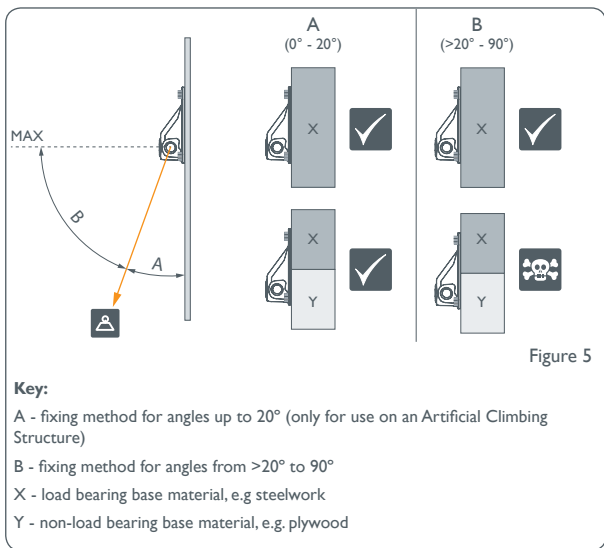


Figure 5

When using at angles up to 20°, the ANCHORA must be fitted with a minimum of four fixings, two of which must be fixed to load bearing base material, through two of the upper fixing slots, and two fixings, which can be fixed to non-load bearing base material, through the two lower fixing holes. See Figure 5.

When used at angles over 20° and up to 90°, the ANCHORA must be installed with a minimum of four fixings, which must be fixed to load bearing base material, two through the upper fixing

slots, and two fixings through the two lower fixing holes. See Figure 5.

Nuts and bolts through steelwork should be torqued to 50 Nm. Nuts and bolts through plywood only should be torqued to 25 Nm.

The ANCHORA is designed to prevent large connectors from being removed after the ANCHORA is attached to the base material. When using a large connector in the anchor point, connect it to the ANCHORA in its correct orientation (and with the gate facing away from the surface on which the

ANCHORA is installed) before fixing the ANCHORA to the base material.

### **Artificial Climbing Structure Proof tests**

After installation, the manufacturer of the ACS or the installer of the ANCHORA should proof test the ANCHORA in accordance with Annex F of EN 12572-1:2017.

### **Artificial Climbing Structure During use**

The ANCHORA is not designed to absorb dynamic impacts.

When the ANCHORA is installed at the top of the ACS, the user must always remain below the ANCHORA.

When the ANCHORA is installed at a stance for a multi-pitch route on an ACS, the ANCHORA should be installed at an appropriate height to reduce the likelihood of a dynamic fall onto the ANCHORA. The lead climbing user must always attach to the first individual protection point immediately above the ANCHORA before leaving the stance. If the intended ANCHORA installation does not allow this, reposition the quickdraw or do not install the ANCHORA.

The belaying user should attach themselves to the ANCHORA using an appropriate lanyard and connector or by creating a suitable system from the climbing rope and connectors. The belayer should attach their belay device either to this rope system or their harness belay point. The belayer should

not attach their belay device directly to the ANCHORA where the orientation of the belay device, when loaded, places forces in directions inappropriate for the ANCHORA orientation and its fixings.

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### **Inspection**

Each ANCHORA should be subject to:

- Pre-use checks
- Thorough inspections
- Interim inspections (as appropriate)

The checks should be undertaken in good light. Any item showing any defect should be withdrawn from service immediately.

If in any doubt as to the condition of the product, it should be withdrawn from use immediately and not used again unless confirmed by a competent person that it is acceptable to do so.

It is recommended the ANCHORA is marked using a tag or other method, not having any effect on the strength or correct function of the ANCHORA or attached equipment, with the date of the next or last inspection.

Before each use, check the ANCHORA is undamaged, securely attached and that all fixings are secure. Small burrs may be removed with emery cloth.

A thorough inspection should be carried out at least every 6 months. The frequency of inspection will vary with the type of equipment used and other factors, e.g. heavy use, levels of vandalism, coastal location, air pollution, age of equipment.

The ANCHORA should be removed from the base material before inspection commences to ensure all areas of the ANCHORA and the fixings are inspected

Carefully inspect for any damage, deformation, signs of hairline cracks around the attachment holes, attachment slots and anchor points, wear, corrosion, abrasion – list not exhaustive.

If any surface of the ANCHORA is found to have more than 1 mm of material missing (through wear, abrasion etc.), then the product should be retired. Compare with a new item if necessary.

After passing an inspection, rinse in fresh water and thoroughly dry before re-installation. Re-attach the ANCHORA in accordance with these user instructions. Replace any used locking nuts with new locking nuts. Replace any fixings as necessary.

## **DO NOT MODIFY OR ATTEMPT REPAIRS TO THIS PRODUCT**

Remove from service and destroy any product which fails an inspection, has arrested a fall greater than fall factor 1, or which has more than 1 mm of material missing from any surface or cross section.

If the ANCHORA comes into contact with any chemicals, remove it from service, and clean it to prevent contamination of other equipment. If the ANCHORA cannot be adequately

cleaned, remove it from service and destroy it to prevent further use.

### **Materials**

The ANCHORA is made from 316 marine grade stainless steel.





### **Obsolescence**


The lifetime of the ANCHORA is potentially indefinite, subject to inspection.

### **Maintaining your equipment**

Refer to the General User Instructions.

## Markings

	Manufacturer's logo
	Refer to user instructions
EN 795:2012 Type A	PPE standard to which this item conforms when used with a single user
CEN/TS 16415:2013 Type A	Technical Specification to which this item conforms when used with two users simultaneously
	Number of simultaneous uses permitted when used in accordance with EN 795:2012
	Number of simultaneous uses permitted when used in accordance with CEN/TS 16415:2013
MBL 20 kN	Minimum Breaking Load (kN) of attachment point(s)

idN	Individual serial number will be in the format YYDDD I2345. The first two digits give the year of manufacture, the next three digits the day of the year from 001 to 365 and the four digits after is the number in the series
 mm-yyyy	Month and date of manufacture. The first two digits give the month of manufacture, the last four give the year.
LPP0002	Product code

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# General user instructions

Lyon Equipment Limited  
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information and to  
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these instructions and a  
Declaration of Conformity  
follow the link above or  
scan the QR code with  
your smart phone



### **Notified body controlling manufacture (where applicable)**

Where items of Personal Protective Equipment require an EU type examination in accordance with Personal Protective Equipment (EU) Regulation 2016/425, the body controlling the manufacture is: Notified body No. 0598 SGS Fimko Oy, P.O. Box 30 (Särkiniementie 3), 00211 HELSINKI, Finland.

### **WARNING**

Make sure that you have read and understood these instructions before using this equipment. These user instructions are to be read and kept along with any other user information provided.

Activities at height are hazardous and may lead to injury or death. It is the user's responsibility, at all times, to ensure that they understand the correct use of any equipment supplied by or through Lyon Equipment, use it only for the purposes for which it is designed, and practice proper safety procedures including having a rescue plan in case of emergency.

This product must not be used outside its limitations, or for any purpose other than those described in the user instructions. Misuses forbidden in these instructions are examples only; many other misuses may exist which could lead to injury or death.

Do not use combinations of items of equipment in which the safe function of any one item is affected or interferes with the safe function of another.

Please note, the information in these user instructions is not exhaustive, and is not a substitute for comprehensive instruction and training by a competent person.

Lyon Equipment is not responsible for any consequences, whether direct, indirect or accidental, resulting from the use of its products. If you are unsure about the correct use of this product, please contact us.

### **Who can use this equipment**

This equipment should only be used by trained, competent and responsible persons, or the user should be under the direct supervision of a trained, competent and responsible person.

Activities at height should not be undertaken by persons affected by alcohol or drug dependence, diabetes, epilepsy, fits, blackouts, fear of heights, vertigo / dizziness / difficulty with balance, heart disease / chest pain, high or low blood pressure, impaired limb function, obesity, psychiatric illness, musculoskeletal issues, e.g. a bad back.

### **General instructions for use**

Equipment must be checked before each use, to ensure it is serviceable and operates correctly. Checks should also be carried out during use. In addition, a thorough inspection by a competent inspector should be carried out in strict accordance with these user instructions, and a record kept of these inspections.

This product may be used with any compatible item of equipment, keeping in mind the limitations of each item in the safety chain. It should be noted that a full body harness is the only type of harness which may be used in a fall arrest system.

The anchor device or anchor point is of primary importance and should be unquestionably reliable. It should be strong enough to withstand the foreseeable maximum load that could be applied e.g. in the event of a fall.

When selecting an anchor, the anticipated directions of loading and potential loads should be taken into account.

Anchors should be selected and positioned to allow work to be carried out in such a way as to minimise the potential for a fall and potential fall distance, for example by keeping the anchor point / device above the user.

Anchors should not have sharp or rough edges which could damage equipment (use edge protection if necessary).

On each occasion of use, verify the free space required beneath the user in order to avoid an impact. Always try to place protection so that any fall will be stopped before the user hits the ground or any other obstruction. Remember to allow for rope stretch and slippage in the belay device or rope ascender / descender. In a fall arrest situation, the user must be protected from dynamic forces of greater than 6 kN in the event of a fall, e.g. by use of a fall arrest system incorporating an EN 355 energy absorber.

### **Maintaining your equipment**

Wash in clean water not exceeding 30°C with pure soap and rinse in clean cold water. Do not use chemical products, solvents or detergents – these should be regarded as harmful.

Due to the difficulties in effectively disinfecting equipment, we recommend that any contaminated equipment should be withdrawn from use and disposed of in a suitable manner.

Equipment must be clean and dry before storing. Always allow to dry naturally, away from direct heat. Equipment should be stored in a cool, dry, well-ventilated area, away from excessive heat, high humidity, sharp edges, corrosives, sunlight or other sources of ultraviolet light (UV) and other possible causes of damage.

During transport, this product should be protected from abrasion, mechanical damage, chemical contamination, UV and heat.

## Textiles

Always keep textile items at temperatures between -30°C and +50°C.

## Metal items

Always keep metal items at temperatures between -20°C and +60°C.

No alterations, additions or repairs may be made to this product without the manufacturer's prior written consent; if done, the repair must be carried out by a competent person for repair authorised by Lyon Equipment to make the repair; and in accordance with specified procedures.

These instructions must be strictly adhered to.

## Inspection

A thorough inspection should be carried out at least every 6 months by a competent inspector in accordance with these user instructions. A record of these checks should be kept with the product along with these user instructions. In addition, interim inspections should be carried out where products are used intensively, or in particularly harsh environments where damage is more likely to occur, or where legislation or the type of equipment make it necessary.

Pre-use and thorough inspections are essential because the user's level of protection depends on the continuing correct performance of this product.

PPE (Personal Protective Equipment) inspection training is available from Lyon Equipment.

## Lifetime, and when to withdraw your equipment from use

Withdraw your equipment from use if any one of the following applies:

- It shows sign of wear and tear / damage that may affect performance
- Markings on the product are no longer legible
- You suspect it may have been exposed to chemical contamination or extreme temperatures
- It fails a periodic examination
- It has been used to arrest a fall or has been excessively loaded
- It is more than 10 years after the date of manufacture (textile items or items with textile components). Metal items have a potentially indefinite lifespan if stored correctly.
- If you have any reason to doubt that it is safe to use.

It is the responsibility of the competent inspector to decide whether the equipment should be put back into use, or permanently withdrawn from use. Equipment permanently withdrawn from use must be destroyed, and should be recycled where facilities exist.

Certain environmental elements will considerably accelerate wear: salt, sand, dust, snow, ice, moisture, chemicals, sunlight (UV radiation) – list not exhaustive.

Warning: the safe working life of this product may be as short as its first use in extreme circumstances.

If in doubt, do not hesitate to scrap this product.

### **Guarantee**

In the event of any defect in materials or workmanship please return the product to the dealer, distributor or manufacturer within 3 years of purchase for inspection. We will replace or repair as required. This guarantee does not cover normal wear and tear or accidental damage.

### **Note to resellers**

If the product is re-sold outside the UK and Eire, but within the EU, the reseller is responsible for providing instructions for use, maintenance, periodic examination and for repair in the language of the country in which the product is to be used.

If you require the Intrastat commodity code / customs tariff code or NATO stock number (where applicable) for this product, please contact us via [lyon.co.uk](http://lyon.co.uk)

### **Inspection records**










A record must be kept for each component, subsystem and system, including name and contact details of the manufacturer or supplier, product description, serial number, year of manufacture, date of purchase, date of first use, any other relevant information, and history of periodic examinations and repairs, the name and signature of

the competent inspector and the next due date for inspection. An example of a suitable equipment record is shown on this user instruction and can also be downloaded at [lyon.co.uk](http://lyon.co.uk)

Local jurisdiction may dictate that extra information be recorded in the inspection record – check your country's legal requirements. Some products may have features which need special monitoring during periodic inspections, e.g. wear indicators, in which case this information should also be recorded on the inspection record.

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## Explanation of symbols

	Refer to user instructions
	Permitted use
	Caution
	Danger of death
	Telephone number
	Anchor point
	Rope diameter
	Cable
	SWL (Safe Working Load)

