



USER INSTRUCTIONS

Ground Anchor Stake

Code

LPP0006

lyon.co.uk/user-instructions



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

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Quality Assurance

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

WARNING

Practical training in the use of ground anchor systems is essential before use. Please contact Lyon Equipment if you require training.

This information must be read and kept in conjunction with the Lyon General User Instructions supplied with this product.

Use

Ground anchor systems are designed to provide a temporary anchor point where no other suitable anchor points are available.

Lyon Equipment supplies four types of ground anchor: the Ground Pin Kit, the 9 Stake Ground Anchor Set, the individual T-Stake Ground Anchor and the individual Ground Anchor Stake.

The Ground Pin Kit is intended to be used where lower anchor loads are expected, for example, restraint of personnel on cliff edges or to provide a secondary means of support (back-roping) during stretcher carries on steep and/or slippery ground. If higher anchor loads are expected, multiple T-Stake Ground Anchor, multiple Ground Anchor Stakes, or the 9 Stake Ground Anchor Set are recommended.

Where the term “ground anchor” is used in these user instructions, the

information applies to all the T-Stake Ground Anchor, the Ground Anchor Stake and the 9 Stake Ground Anchor Set. See the Ground Pin Kit instructions for that specific product.

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

Ground anchors are not personal protective equipment (PPE) and there is no relevant European standard to which they can be certified.

The effective performance of this ground anchor depends on its strength, the type of ground it is placed in and the skills of the user in placing it.

Placing a ground anchor

Take suitable precautions while installing a ground anchor where there is a potential of a fall from height. Always wear eye protection and gloves when driving in ground anchors, and ensure that other personnel maintain a safe distance from the installation site to avoid injury from flying debris or tools.

The holding power of a ground anchor system depends entirely on the structure of the ground it is placed in, which can vary from one area to another and can also vary over time according to conditions.

Ensure that the ground anchor system is placed at least 2 metres from any

surface disturbance, e.g. a cliff edge, significant change in soil structure, void.

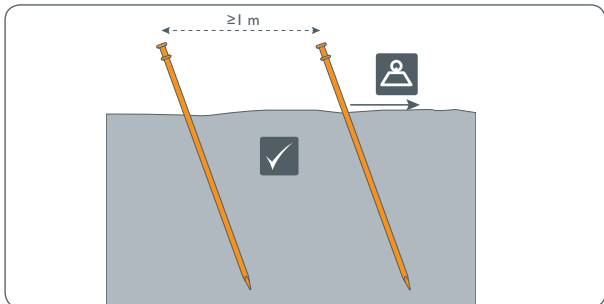
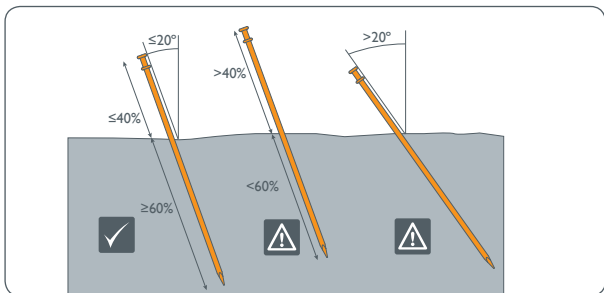
Ensure that there are no underground services, e.g. electricity, gas, water, telephone, which are buried in the immediate area where the ground anchor stakes are to be inserted – danger of death.

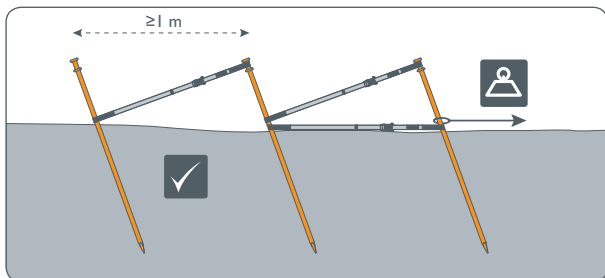
Each stake must be driven into solid ground to a depth of at least 60% of its total length. If this is not achievable, do not use the ground anchor; remove it

and reposition it to a location where the correct depth can be achieved. If the stake impacts against an immovable object, do not continue trying to drive it in – this can damage the stake. Remove it and reposition it instead.

Do not use ground anchor systems solely in loose material such as snow, dry sand, or icy soil.

See diagrams below for correct installation and permitted angles of loading of ground anchor systems.





The stakes may be linked by 8 mm cord to EN 564 or by Lyon Ground Stake Linking Straps, which are tensioned between the stakes.

Ground Anchor Stakes must only be loaded in line with their placement position. If variations to the direction of loading are expected, use a V-shape layout.

Never connect unprotected load bearing textile items directly onto the ground anchor stake.

Use an EN 362 or EN 12275 type Q connector to connect the rope to the ground anchor. Ensure the connector is correctly loaded in accordance with the connector user instructions and it is flush with the ground surface.

Where no suitable volume EN 362 or EN 12275 type Q connector is available, place an EN 795 wire anchor stop around the front anchor stake (ensure the anchor stop is flush with the ground surface) and connect the EN 362 or EN 12275 type Q connector to this.

Where direct connection of a textile item is required, provide additional protection between the textile item and the stake, e.g. use a sling with a protective sleeve, rope protector.

NEVER use a single ground anchor stake as the sole anchor point of any work system.

The exact number of Ground Anchor Stakes required to create a ground anchor system will depend on a number of factors, e.g. ground conditions, depth of placement, layout, static and/or dynamic loadings intended.

NEVER connect the main and safety ropes of a work positioning system to a single ground anchor system. An independent ground anchor system must be used for each rope.

Do not allow moving ropes to come into contact with ground anchors.

Do not allow the ground anchor to interfere with the operation of any device attached to the ground anchor.

Ensure the load applied to the ground anchor is as close to, and parallel with, the ground as possible.

During use it is essential to regularly check that the ground anchor is holding the loads applied and is still correctly positioned.

Inspection

Ground anchors should be subject to:

- Pre-use checks
- Thorough inspections – every 6 months recommended
- Interim inspections (as appropriate)

Check all metal items for any signs of wear, corrosion, deformity or defect.

Check the stakes for significant deformity, sharp edges and/or cracks, especially around the head of the stakes where “mushrooming” of the metal may occur with heavy use. Sharp edges and burrs should be removed with a file.

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

It is recommended that the ground anchor is marked with the date of the next or last inspection.

Chemicals

Avoid all contact with chemical reagents that could affect the performance of the ground anchor, e.g. acids, caustic substances and oxidising agents. If the ground anchor comes into contact with any chemicals, remove it from service and contact Lyon Equipment for advice.

Materials

The Ground Anchor Stake is steel.

Obsolescence

Metal items have a potentially indefinite lifespan if stored correctly.

Marking

Marking, if required, can be made by attaching a tag to the ground anchor.

Ensure that any tags do not interfere with the function or performance of the ground anchor.

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Lyon Product Inspection Record						
Product code Length if applicable	Product description Individual serial number	Year of manufacture Date of first use	Purchase date Certificate of conformity number	Other relevant information		
Manufacturer Lyon Equipment Ltd.	Address Unit 3-7 Tebov Business Park Old Tebov Penrith CA10 3SS UK	Tel: +44 (0)15396 24040 Fax: +44 (0)15396 26330 info@lyon.co.uk lyon.co.uk				
Record of inspection and repair						
Date	Comments	Name and signature of competent inspector		Next due date		
All user instructions supplied with this product must be kept as part of the product inspection record						



General user instructions

Lyon Equipment Limited
Units 3-7, Tebay Business Park,
Old Tebay,
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CA10 3SS

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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



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

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

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)

Lyon Product Inspection Record

Product code		Product description	Year of manufacture	Purchase date
Length if applicable		Individual serial number	Date of first use	Certificate of conformity number
Manufacturer Lyon Equipment Ltd.	Address Unit 3-7 Tebay Business Park Old Tebay Penrith CA10 3SS UK		Tel +44 (0)15396 24040 Fax +44 (0)15396 26330 info@lyon.co.uk lyon.co.uk	Other relevant information

Record of inspection and repair

Date	Comments	Name and signature of competent inspector	Next due date

All user instructions supplied with this product must be kept as part of the product inspection record