



## User Instructions

# FRIXION SRB

# Shear Reduction Block

Code

**LSRB**



Max 11.5 mm



EN 12278:2007 (Excluding 4.2.1)

[www.lyon.co.uk/downloads](http://www.lyon.co.uk/downloads)



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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UI\_LSRB\_25240

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

All users must have appropriate training, knowledge and experience of setting up top-roped climbing / fall arrest systems or be working under the direct supervision of such a person.

**Certification**

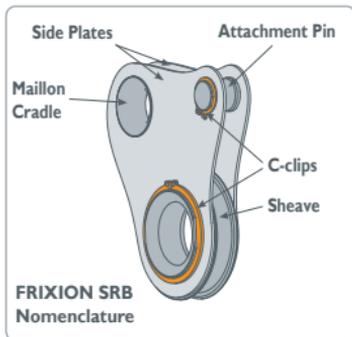
EN 12278:2007 Excluding 4.2.1- Due to no moving parts.

**Approved Body UK**

UK Personal Protective Equipment Regulation (EU) 2016/425 as brought into GB Law and amended. UK Type-examination by: Approved Body N° 0321 SATRA Technology Centre Limited Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD, United Kingdom

**Notified Body EU**

EU Type-examination for Regulation 2016/425 by: Notified Body N° 2777 SATRA Technology Europe Limited Bracetown Business Park, Clonee, Dublin, D15 YN2P, Ireland.



**Quality Assurance**

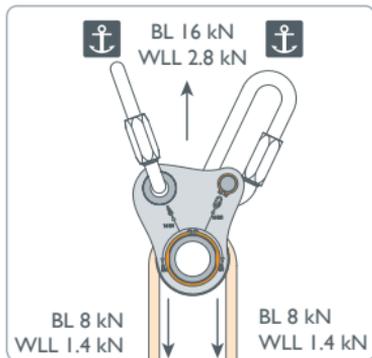
Quality management system assessed and certified as meeting the requirements of ISO 9001.

**Breaking Load**

16 kN

**Working Load Limit**

140 kg



**Limitations**

For use with textile ropes conforming to (BS) EN 1891 or (BS) EN 892, with a maximum diameter of 11.5 mm. Not for use with metallic cable.

This FRIXION SRB may only be used with one rope at a time.

**Use**

The FRIXION SRB is designed for use within a top-roped climbing or fall arrest system.

The FRIXION SRB increases the radius over which the rope runs at the anchor compared to using a connector. This helps to reduce twisting and kinking of the belay rope, and may extend the useable life of the rope and anchors.

The FRIXION SRB offers greater friction than a pulley, reducing the risk of uncontrolled descents.

The FRIXION SRB is not a belay device and must not be used as the sole means of rope control in a climbing system. The FRIXION SRB must be used in conjunction with a belay device.

All other uses are forbidden without the written approval of Lyon Equipment Limited.

Not to be used for fall arrest where the fall factor is more than 1.

The FRIXION SRB may be used 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.

### **Attaching the FRIXION SRB to an anchor point**

The anchor point must be unquestionably reliable and situated above the user. The anchor point must have a minimum strength of 16 kN.

If attached to a flexible anchorage (cableway), consider the additional loadings generated in the cableway and cableway anchors by "vectoring" of the forces.

Consider the trajectory of both a vertical fall and a pendulum fall – verify the space required around the user in order to avoid an impact. See the General user instructions for further information.

Attach the FRIXION SRB to the anchor point using a locking connector which

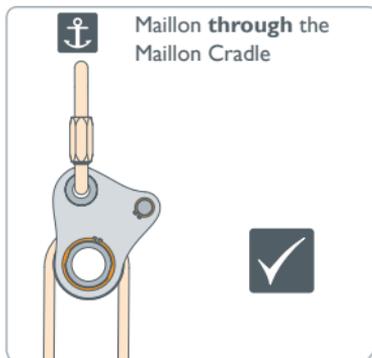
conforms to (BS) EN 362 or (BS) EN 12275 and has an appropriate profile and volume.

The connector must allow the FRIXION SRB to orientate without hindrance to the direction of loading. Alternatively, for operators who prefer screw-link connectors for attachments, a 14 mm diameter long opening Maillon Rapide (product code GO114) is recommended, which has a working load limit of 3100 kg and a breaking load of 15500 kg.

The FRIXION SRB has two means of attachment to the anchor point: either through the Maillon Cradle and/or around the Attachment Pin to facilitate correct orientation of the FRIXION SRB during use.

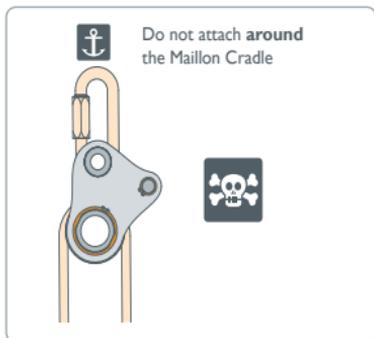
The FRIXION SRB must be free-hanging or positioned with the side plates flat against a vertical surface – the open sides of the FRIXION SRB must not rest against the surface.

To correctly orientate the FRIXION SRB, attach the locking connector(s) through the Maillon Cradle and/or around the Attachment Pin. Ensure the connector is properly orientated, closed and locked.



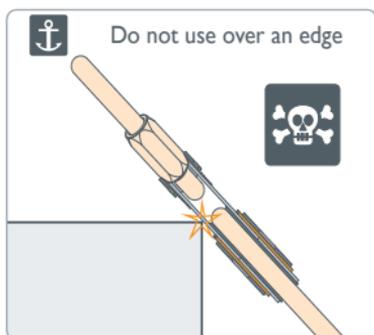


**DO NOT ATTACH AROUND THE MAILLON CRADLE.**



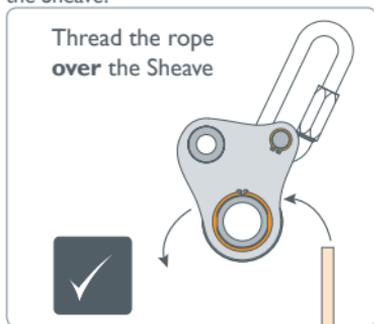
The FRIXION SRB must be correctly orientated with the Attachment Pin/ Maillon Cradle at the top and the Sheave at the bottom.

The FRIXION SRB must not be positioned over an edge. If necessary, extend the anchor point using an appropriate anchor sling (with a minimum strength of 16 kN) to achieve this. Attach the anchor sling to the FRIXION SRB with a suitable connector.



**DO NOT ATTACH THE ANCHOR SLING DIRECTLY TO THE FRIXION SRB.**

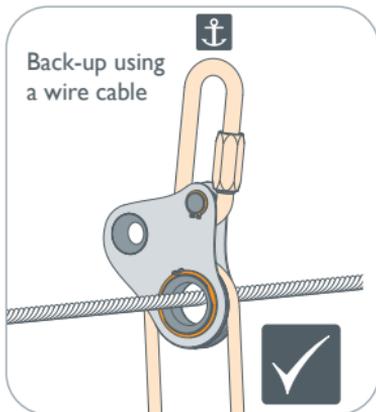
Install the rope over the Sheave by feeding the rope end through the FRIXION SRB. It must only run over the Sheave.



**DO NOT RUN THE ROPE AROUND THE ATTACHMENT PIN.**

**DO NOT RUN THE ROPE AROUND OR THROUGH THE MAILLON CRADLE.**

If an additional back-up is required, an anchor sling (minimum strength 16 kN) may be fed through the hole in the centre of the Sheave and attached to a suitable anchor point (minimum strength 16 kN).



### During Use

It is essential to regularly check all fastening elements during use.

Do not allow equipment, clothing or hair to become trapped between the rope and the Sheave.

If using the FRIXION SRB in wet or icy conditions, extra friction in the lowering system may be required to maintain control of the rope.

If the belayer is significantly lighter than the climber, the belayer may need to be attached to a ballast bag or other appropriate anchor system.

Rapid and/or repeated lowering will increase the temperature of the FRIXION SRB and the user should take

this into account to prevent damage to the rope.

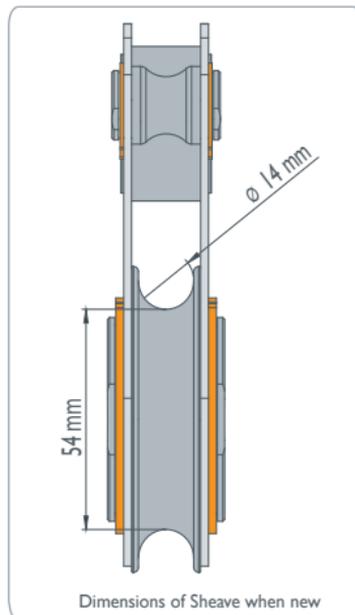
### Inspection

The FRIXION SRB should be subject to:

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

Before each use, check the FRIXION SRB is undamaged and securely attached.

Pay particular attention to the attachment points and to the profile of the Sheave. Check for wear grooves or burrs and correct placement and condition of all C-clips. Compare with a new item if necessary. When new, the dimensions of the Sheave are as shown.



**DO NOT DIS-ASSEMBLE,  
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 where the diameter of the Sheave is less than 50 mm.

**Chemicals**

Avoid all contact with chemical reagents that could affect the performance of the FRIXION SRB, e.g. acids, caustic substances and oxidising agents.

Discard this product immediately if contamination is even suspected to have occurred

**Materials**

All components are 316 marine grade stainless steel.

**Obsolescence**

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

**Maintaining your Equipment**

Refer to the general user instructions.

**Note Regarding Conformity**

EN12278 clause 4.2.1 states "When tested in accordance with 5.3.2 the sheave(s) shall be capable to rotate ten times in either direction under a force of 2kN, applied to each sheave individually" The Lyon Frixion SRB does not have rotating sheaves therefore conformity to this cannot be claimed

## Marking

	Manufacturer's logo
www.lyon.co.uk	Manufacturer's web address
	Refer to user instructions
CE 0598	European Conformity and Notified Body Number
UK CA 0120	United Kingdom Conformity Assessed and Approved Body Number
idN	Individual serial number will be in the format YYDDD 12345. 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
	16 kN = Minimum Breaking Load of attachment points
	8 kN = Minimum Breaking Load on each side of Sheave
MAX ROPE DIA 11.5 MM	Maximum Rope Diameter of 11.5 mm
 NO CLIP	Do not clip around the Maillon Cradle
	(Hidden by C-clips) Warning of missing C-clip
LSRB	Product code





# General User Instructions

Lyon Equipment Limited,  
Units 3-7, Tebay Business Park,  
Cumbria,  
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United Kingdom

Tel: +44 (0) 15396 24040  
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[www.lyon.co.uk/downloads](http://www.lyon.co.uk/downloads) 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



**Approved Body controlling manufacture (where applicable)**

Where items of Personal Protective Equipment require a UKCA type examination in accordance with Personal Protective Equipment (EU) Regulation 2016/425 on personal protective equipment as brought into GB Law and amended. The body controlling the manufacture is:

Approved Body N° 0120  
SGS United Kingdom Limited  
Rossmore Business Park,  
Inward Way,  
Ellesmere Port, Cheshire  
CH65 3EN, United Kingdom

**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 N° 0598  
SGS Fimko OY  
Takomotie 8  
FI-00380 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 Limited, 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 Limited 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 (BS) EN 355 energy absorber.

### **Note to resellers**

If the product is resold 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 [www.lyon.co.uk](http://www.lyon.co.uk)

### **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 Limited 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 Limited.

### **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.

### **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 [www.lyon.co.uk](http://www.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
	Anchor point
	Rope diameter
	Cable
	Load
	Manufacturer details
	Month and year of manufacture. The first two digits give the month of manufacture, the last four give the year.

Additional symbols may be used.

See specific product instruction for explanations

