

Vertical fall arrest device to  
EN 353-1:2002 & CNB/P/11.073 and EN 353-1:2014 /prA1:2017.

Part number / identification of device type



## Important

Carefully read all of the safety and user instructions before using this product; paying particular attention to all sections of these user instructions that carry warning symbols and notices.



**Warning symbol.** This symbol is used throughout the instructions whenever there is a risk of personal injury or death to either the installer or end user of the product. Ensure that these warnings are read and understood and followed at all times.



**Caution symbol.** This symbol is used throughout the instructions whenever there is a risk of damaging the Latchways product. Ensure that these cautions are read and understood and followed at all times.

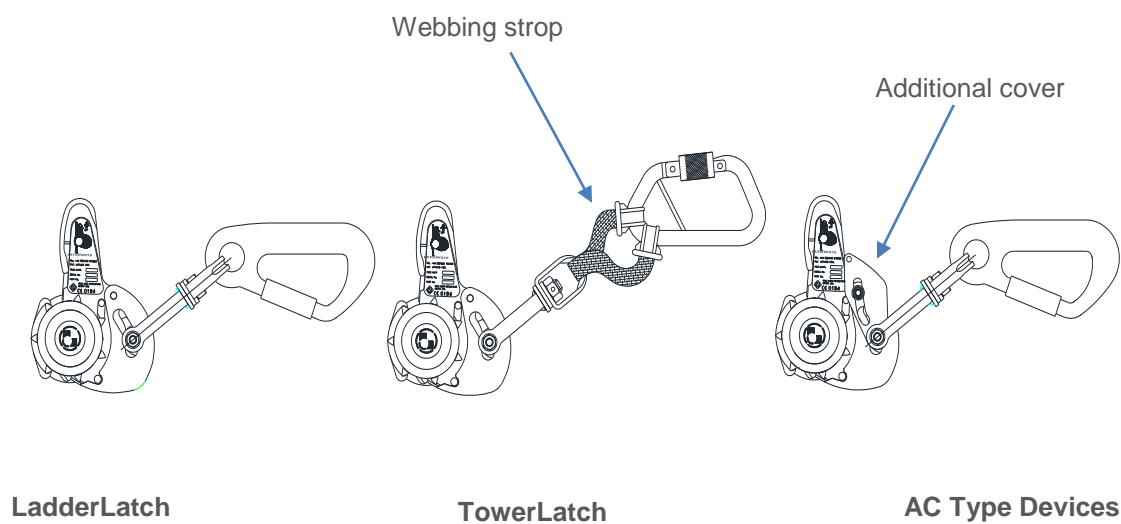


**Mandatory symbol.** This symbol is used throughout the instructions whenever there is a specific instruction for Latchways product. Ensure that these important instructions are read and understood and followed at all times.

Document number	Issue number	Change request	Date of issue
Verti_96	9	100123	13/1/2017
Verti_96	10	100223	07/07/2017

## IDENTIFICATION OF DEVICE TYPE (Part number is to be found on the device label)

Part number	Device type
35429-00	TowerLatch SP Device (see section 1.7)
3100L-00T	LadderLatch Device
3100L-00AC	LadderLatch AC Device
3102L-00	TowerLatch Device
3102L-00AC	TowerLatch AC Device
3103L-00	LadderLatch Device (Canada)
3104L-00	LadderLatch Device (USA)
3105L-00	TowerLatch Device (USA)



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Installer company details	
Company Name	
Company Address	
Contact Name	
Tel No	
Email	

## 1. Safety instructions



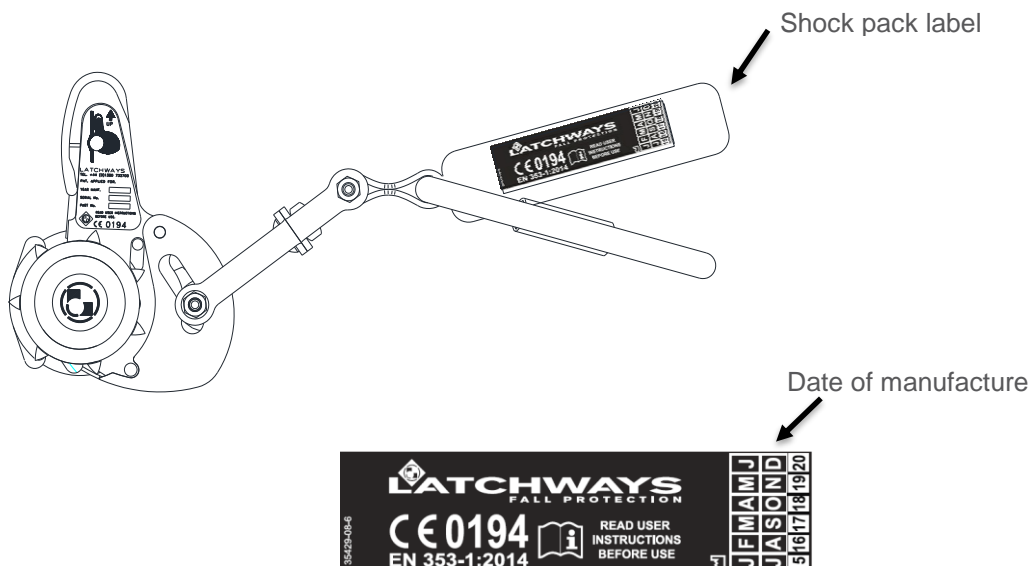
When using the Latchways vertical device, basic on site safety precautions, including the following, should be observed to ensure personal safety.

All Users of the Latchways vertical devices shall be trained and competent in its safe use and shall read and follow these instructions. Retain these instructions for future reference.

- Never allow more than one person to attach to the Latchways vertical device at any time.
- Before use always visually check and inspect the system for any faults, ensuring it is secure and has a valid test certificate.
- Always use a full body harness complying with national standards. Waist belts are not suitable for use with this device.
- Before use ensure the karabiner attaching the Latchways vertical device to the harness is in the closed and locked position.
- Do not use the Latchways vertical device for work positioning (i.e. primary means of support); to support either partial or full body weight.

**3100L, 3102L, 3103L, 3104L & 3105L type devices** Maximum Rated Load (for systems incorporating a single 6 kN coil energy absorber) – The system can be used by a maximum of 3 Users. The total maximum rated load for the system shall not exceed 400 kg (880 lbs) (total User weight including tools and equipment carried). The maximum rated load for a single device shall not exceed 150 kg (330 lbs) (single User weight including tools and equipment carried).

**35429-00 TowerLatch SP device** Maximum Rated Load – The maximum weight of any User (including tools and equipment carried) should not exceed 100kg (220 lbs) unless the following label is visible on the energy absorber indicating 150Kg (330 lbs) User weight is permissible.



### Warning!

Only TowerLatch sp devices with a label indicating the maximum User weight are suitable for users up to 150kg (330 lbs) all other devices that do not have a label indicating the maximum User weight are only suitable for users up to 100kg (220 lbs).

# MSA Latchways® Vertical Device



LadderLatch, TowerLatch, TowerLatch SP and Climblatch

The minimum mass of User on any device including tools and equipment must not be less than 50 kg

The required minimum distance below the User's feet and the ground is 2 m (6'6"). Below 2 m (6'6") the user may not be protected against hitting the ground or obstacles below. Therefore, extra care must be taken when ascending / descending the first 2 m (6'6").

Temporarily disabling or manually handling the lock/release mechanism of the device during ascent or descent may hinder the safe operation and diminish the effect of the braking mechanism.

Before and during operation of the vertical fall arrest system consideration should be given as to how any rescue could be safely and efficiently carried out.

The Latchways devices have been subjected to an additional series of tests devised by TUV/NEL (Notified Body no. 0320). These tests were conducted using 71 kg (156 lbs) and 100 kg (220 lbs) anthropomorphic test dummies with different body postures (reference NEL certificate no. MTHH).



The following medical conditions could affect the safety of the User:

heart disease / chest pain.  
high blood pressure.  
epilepsy, fits, blackouts.  
fear of heights / vertigo.  
giddiness / difficulty with balance.  
impaired limb function.  
alcohol or drug dependence.  
psychiatric illness.  
diabetes.



Do not modify or alter the Latchways device without prior consent in writing from Latchways plc.



The Latchways device is not to be used for any other use than providing attachment for one User to a Latchways cable system. During use do not allow any clothing, equipment, appendages or any other items to restrict the operation of the device.



If the Latchways is resold for use outside the original country of destination the reseller shall provide instructions for use, maintenance and periodic examinations in the language of the country of destination.



The device is only to be used to provide an attachment for one User to a Latchways vertical cable system. All system components shall be manufactured and specified by Latchways plc. The cable shall be Ø8 MM (5/16") 1 X 19 construction grade 316 stainless steel to BS MA 29 or AISI 316



Do not use the device at temperatures below -30 °c.

## 2. Product specification

The device is designed to arrest the fall of one climber in conjunction with a Latchways vertical fall arrest system.

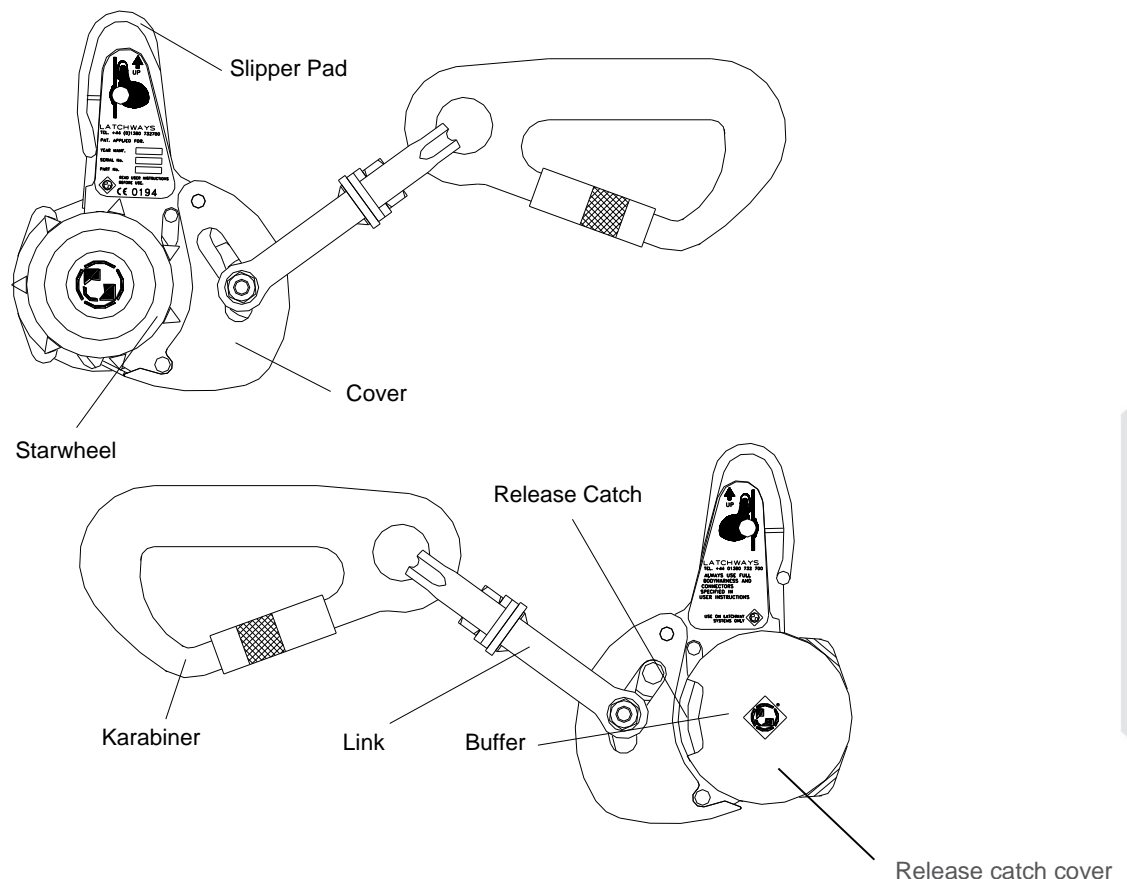
If a climber were to fall whilst connected to the Latchways system the energy absorber will deploy and reduce the load applied to the body to 6 kN (1,350 lbf) or less.

The device has an anti-inversion mechanism which prevents it being used on the cable system if there is an attempt to use it upside down.

When the device is attached to the cable the horizontal distance from the cable to the harness front attachment point is 0.3 m, (12") which allows the user to ascend / descend unhindered, this must not be extended, shortened or have any components added or removed

The full arrest distance of the device when tested to CSA Z259.2.5 is less than 150 mm (6").

Label contents will vary to comply with applicable regional Standards



## 3. Required equipment

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A full body harness with a chest and dorsal attachment point which complies with the appropriate national standards. Waist belts are not suitable for use with this device. The full body harness must be properly fitted ensuring all buckles are correctly adjusted and connected together where appropriate, harnesses that include elastic webbing at the front connection point are not suitable for use with this device.

A helmet with chin strap which complies with the appropriate national standards.

## 4. Requirements for use

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Personnel using this device shall be trained and competent in safe methods for working at height. If any of these instructions are not understood, please contact your supplier. All Users of the system shall comply with the instructions and guidance contained in these instructions and those highlighted on the warning label attached to the Latchways vertical GTFA device. The Latchways vertical GTFA device shall only be used by persons deemed to be competent and their names recorded on the record card. All Users should confirm in writing that they have read and fully understood the user instructions and any other pertinent safety information.

Before undertaking work at height and at regular intervals during the period of work, a risk assessment shall be carried out.

The Latchways vertical GTFA device shall be directly attached to the front chest position of a full body harness when used on a vertical system

All users must ensure that a minimum distance of 3 m (9'10") is maintained between the head of each user and the feet of the user immediately above that user.

The Latchways vertical GTFA device must only be engaged or disengaged from the system whilst the User is in a safe position, a safe position is where there is no risk of a fall occurring.



## 5. Pre-use checks

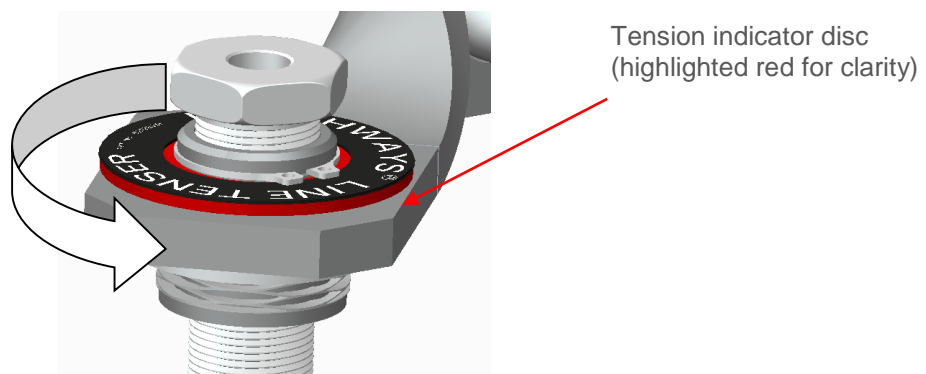


**Always fully inspect the following:**

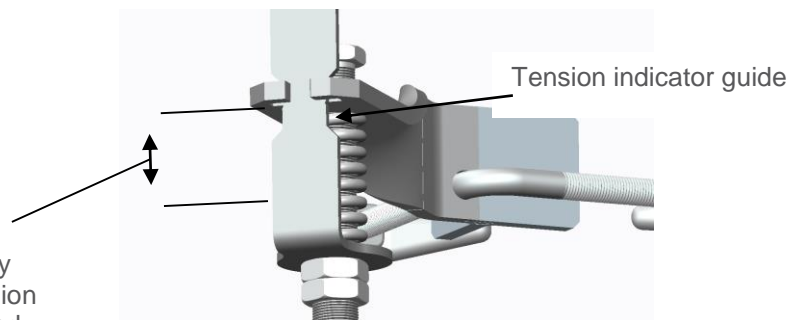
### System tension

Depending on the type of system tension indicator fitted this can be checked using 1 of 2 methods.

**Tenser disk** – This is generally located at the bottom of the system on the bottom anchor, when the system is correctly tensioned, the disc will spin freely with up to 2 mm of vertical movement. (On some installations the tenser disc may be located at the top of the system).



**Visual tension indicator** – This component allows the user to check the system tension in situations where it is impractical to reach a tension indicator disc from a position of safety.



The system is correctly tensioned when the tension indicator guide is aligned within the rebated area of the front plate

If a fault is identified with system tension the system shall not be used and the issue raised with site supervision.

## Device checks:

**Latchways vertical GTFA device** - The Latchways device shall be inspected before every use, the following checks shall be made:

- Check the condition of the linkage, ensure the linkage is not deformed.
- Check that the star wheels spin freely and true on the axle.
- Ensure that the release catch functions correctly, releasing the star wheel only when depressed and allowing it to return to its original position.
- Invert the device and press the release catch check to see if the star wheel is still locked and cannot be pulled away from the body.
- Check the cam moves freely.
- Signs of corrosion, wear, deformation or other defects to the device.
- Check the condition of the karabiner to ensure the gate locking mechanism works correctly.
- Check that all plastic components are present, (Star wheel buffer and Slipper pad) and are not damaged.
- Check the product label, all regulatory information (serial no, date of manufacture etc) shall be clearly legible.
- Ensure the device is within its service date.



If the Latchways vertical GTFA device fails any of the above criteria it shall be withdrawn from service and returned to Latchways plc.



If the Latchways vertical GTFA device is damaged, there is any doubt about the safe condition of the device or the service date has expired it shall be withdrawn from service. This shall be recorded on the record card. Contact your authorised installer or agent for further advice.



Ensure there is a rescue plan in place to deal with any emergencies which may arise and you are fully aware of the procedure before attempting any work at height.

## 6. User Instructions



If the device has been used to arrest a fall, is damaged or there is any doubt about the safe condition of the device or the service date has expired it shall be withdrawn from service. This shall be recorded on the record card.



Ensure there is a rescue plan in place to deal with any emergencies which may arise and you are fully aware of the procedure before attempting any work at height.

Connect the device via the karabiner to the chest attachment point of the harness by releasing the locking safety gate on the karabiner. With the karabiner in the open position insert the open end of the karabiner into the chest attachment point on the harness. Release the safety gate ensuring it is fully closed and locked.

Hold the device in the right hand by the release catch cover below the level of the attachment point so that the linkage is in the vertical plane. This will force the cam into the unlocked position. Fig 6.2.

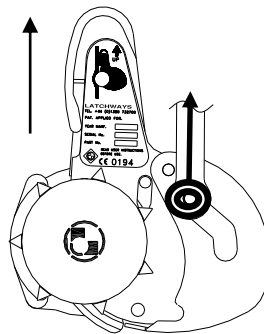


Fig 6.2. Cam in unlocked position.

Press the release catch with your right thumb. The release catch will not operate if the device is incorrectly oriented. Using your left hand pull the Star wheel away from the body of the device and offer the device up to the cable. Fig 6.3.

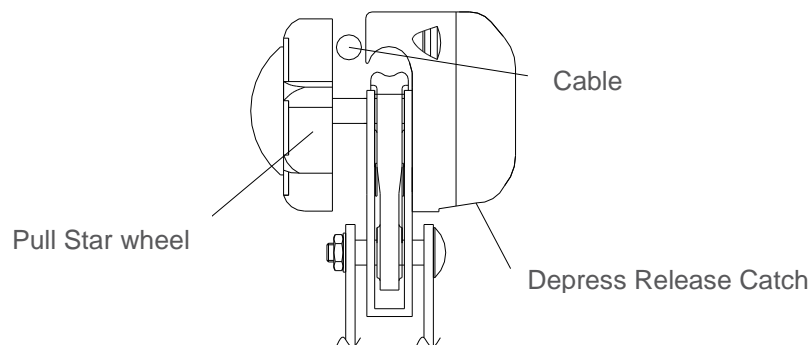


Fig 6.3.

Move the device around the cable until the cable is held within the cavity in the body of the device. Remove your thumb and allow the release catch to return. Finally allow the star wheel to move back into its original position, check that the release catch has disengaged and the star wheel cannot be pulled out. Fig 6.4.

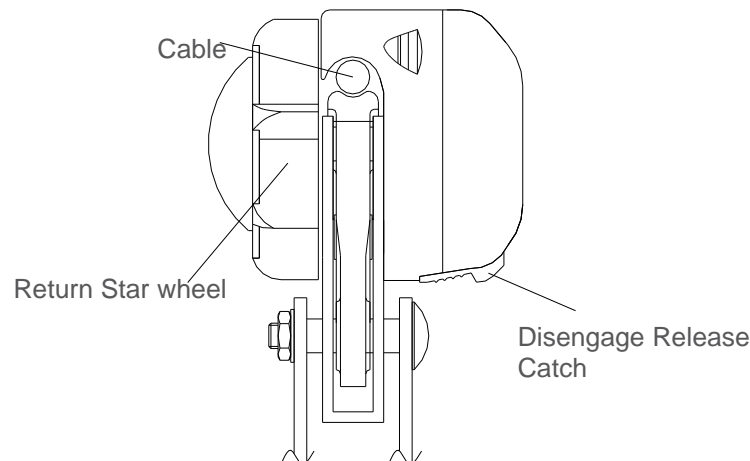


Fig 6.4.

To check the device is fully engaged move the device up the cable then quickly pull down on the karabiner the device should lock onto the cable. If this does not happen, remove the device from service and do not use until the device has been recertified by a Latchways authorised agent.

When ascending and descending, the device shall always be below the harness chest attachment point. The red slipper shall always be pointing upwards in contact with the cable.

To disconnect from the system, when you are in a safe position to do so, depress the release catch, pull the star wheel out, hold the device below the harness attachment point so that the cam is open and then move the device until it is free from the cable.

## 7. Materials

The device is manufactured from the following materials:  
316 grade stainless steel, 17/4 PH stainless steel, steel, nylon 6 and ABS.

All metallic parts should be unaffected by sharp edges, chemical reagents, cutting, abrasion, UV degradation or normal climatic conditions ranging from -30°C to 50°C. All metallic parts need to be kept a safe distance from electrical current. 316 and 17/4 PH stainless steels shall not be exposed to environments containing chlorine.

Nylon 6 (buffer) and ABS (release catch cover) should be kept clear of the following, sharp edges, chemical reagents, cutting, abrasion, UV degradation. Avoid contact with electrical current.

## 8. Disposal

All stainless steel and plastic components are recyclable.

## 9. Inspection, maintenance and storage

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**Periodic examination** –The Latchways vertical GTFA device shall be examined at least every 12 months. Local requirements, frequency of use or environmental conditions may dictate more frequent examinations. Examinations shall only be conducted by a Latchways trained Technician in accordance with *Vertical Devices - Instructions for periodic examination, repair and recertification*. The safety of the User depends upon the continued efficiency and durability of the device.

The date of first use must be administratively provable. Where the date of first use is NOT known, the next previous provable date must be used, e.g, date of purchase/date of manufacture of the device. There are no user serviceable parts within the device.

**Lifespan-** The webbing elements of Latchways vertical GTFAs (webbing strop and energy absorber on TowerLatch and TowerLatch SP devices) have a maximum lifespan of 10 years from the date of manufacture.

ISC branded karabiners have an unlimited lifespan, all other karabiners have a maximum lifespan of 10 years from the date of manufacture. (5 years if manufactured before April 2015) This is subject to passing periodic examinations.

This is subject to passing periodic examinations.

**Cleaning** – As part of general maintenance the Latchways vertical GTFA device may require cleaning from time to time this may be done using warm water and a domestic detergent. The device should be thoroughly rinsed and dried naturally away from direct heat.

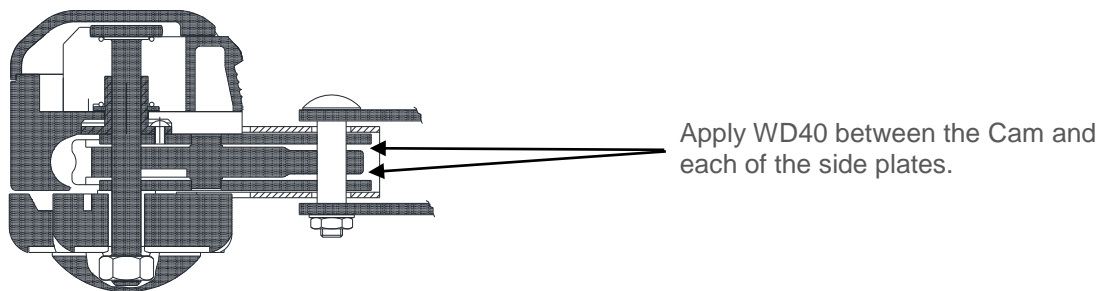
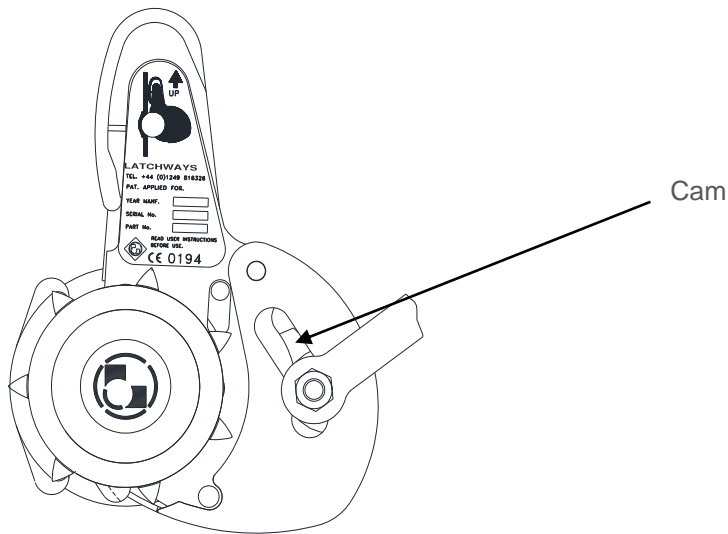


**Do not use any solvents, thinners or any chemical cleaning agent.**

If it is anticipated that the device is to be used in wet, very cold conditions between -4 and -30°C apply a small amount of WD 40 water dispersant to the area between the cam and the side plates. Following application of the WD 40 allow any excess dispersant to drain away and wipe any surplus from the device using a clean lint free cloth. **Never use cleaning agents containing chlorine or Chlorides.**

# MSA Latchways® Vertical Device

LadderLatch, TowerLatch, TowerLatch SP and Climblatch

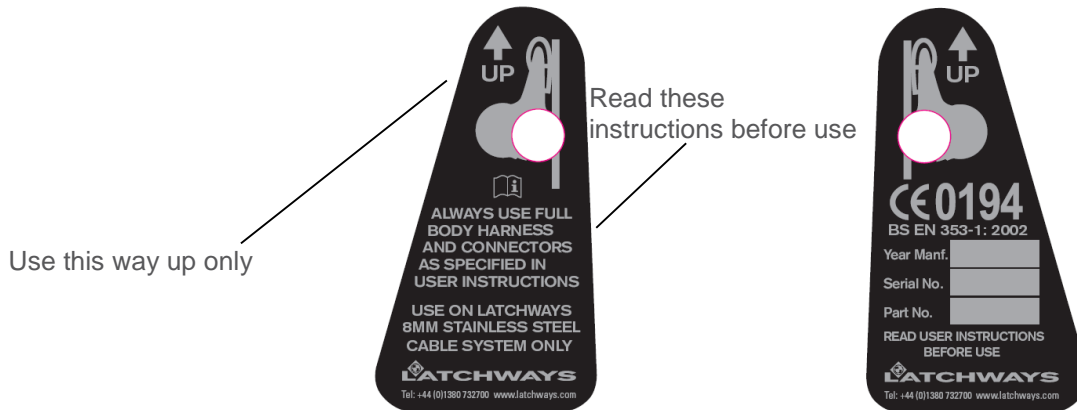


**Storage** - The Latchways vertical GTFA device should be stored away from excessive heat, high humidity, sharp edges, corrosives or other foreseeable causes of damage. The equipment should be protected from unnecessary stress, pressure or rough handling. Wet equipment should be dried naturally away from direct heat.

**Transport** - during periods of transportation the device should be stored carefully in a kit bag.

## 10. Markings

The following markings are shown on the Latchways LadderLatch device



For illustrative purposes only:

Example shown is model 3100L-00 for BS EN 353-1:2002 jurisdictional regions.  
3103L-00 will be labelled appropriately for CSA.Z259.2.1 jurisdictional regions.  
3104L-00 will be labelled appropriately for ANSI Z359.1-2007 jurisdictional regions.

## 11. Product record card

This card should be filled in on receipt of the device and on receipt after every service.

Equipment Record				
Product : LadderLatch Device conforms to BS EN 353-1 2002 / CSA Z259.2.1 / ANSI Z359.1-2007 & AS/NZS 1981.3-1997				
Model & Type/Identification :	Trade name : <b>Latchways LadderLatch device</b>		Serial Number :	
Manufacturer: <b>Latchways PLC</b>	Address : <b>Hopton Park, Devizes Wiltshire SN10 2JP</b>		Tel: <b>+44 (0)1380 732700</b> Fax: <b>+44 (0)1380 732701</b>	
Year of Manufacture / Life expiry date :	Purchase Date :		Date First Put into Service :	
Periodic Examination and Repair History				
Date	Reason for entry (periodic examination or repair)	Defects noted, repairs carried out and other relevant information	Name & Signature of Competent Person	Periodic Examination Next Due Date



## 12. EC Declaration of Conformity

### EC DECLARATION OF CONFORMITY

The manufacturer or his authorised representative

established in the community:

*Latchways plc*

*Hopton Park, Devizes*

*Wiltshire SN10 2JP*

*England*

Declares that the new PPE described hereafter

#### **VERTICAL FALL ARREST SYSTEMS**

is in conformity with the provisions of Council Directive 89/686/EEC and, where such is the case, with the national standard transposing harmonised standard No EN353-1 and VG11 recommendations for use CNB/P/11.073 (for the PPE referred to in article 8(4)) is identical to the PPE which is the subject of EC certificate of conformity No ZB049/95 issued by:-

DEKRA EXAM GmbH (Notified Body No: 0158 – formerly DMT)

Dinnendahlstrasse 9

44809 Bochum

Germany

and is subject to the procedure set out in Article 11 point B of Directive 89/686/EEC under the supervision of the notified body:-

INSPEC International Limited (Notified Body No: 0194)

56 Leslie Hough Way,

Salford, Greater Manchester,

M6 6AJ,

England



June 2012

T. Bissett

Technical Manager

## 13. Appendix 1.

Additional information relating to the use of Latchways Climblatch devices on guided type vertical fall arrest systems in conformance with EN353-1:2014/prA1:2017.



When using the Latchways Climblatch device on an inclined or vertical system the arrow on the device label and the red slipper pad must always be pointing towards the highest point of the system. Under no circumstances must the device be used the other way around.

Up



### User Instructions

On a vertical system - connect the Latchways Climblatch device via the karabiner to the chest attachment point of the harness.

Entry to the system is identical whether for a vertical, inclined or horizontal system. Hold the cam link in the position shown in Fig1. This will ensure the cable grip cam is held in the open position. Unscrew the thimble on the entry gate and slide the thimble away.

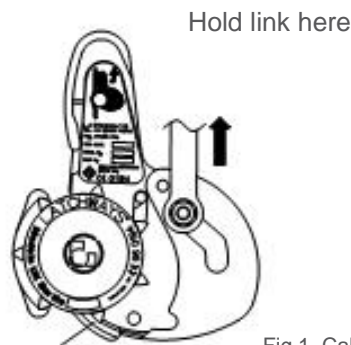


Fig 1. Cable grip cam

Offer the Climblatch device to the gap in the entry gate. Ensure the slipper is positioned underneath the tube, push the slipper along the tube see fig 2.

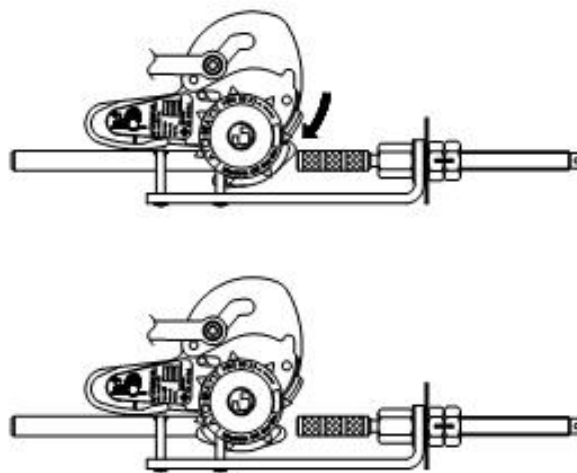


Fig 2

Once the Climblatch device is fully engaged with the tube pull the device along until the gap has been cleared. Next tighten up the thimble on the entry gate to secure the system. Fig 3.

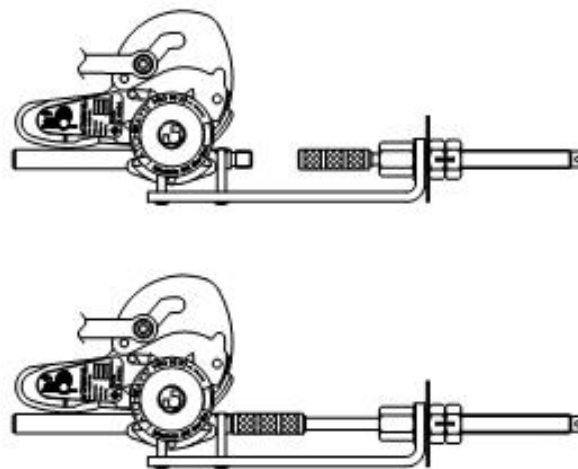


Fig 3

System set up is now complete.