



INSTRUCTION MANUAL

DUCK / EN Forcer

Rope Access Back-Up Device

CE 0598 EN 12841 Type A / EN 353-2 2002

WARNING

All users must read and understand this manual before use. This product must only be used by persons who are trained and competent in its use as part of a double rope access system. Users accept all risks and responsibilities for all damage, injury or death during all rope access activities involving the use of this product. If users are not able to accept full responsibility or all risks involved they should not use this product. All users must be competent in emergency procedures and rescue methods associated with the use of this device. These are detailed in the 'Deployment' section of these instructions. Users should take great care that hair, fingers, clothing or other items do not become entangled with the T04. DO NOT allow anything to affect the proper function of the device.

Do not use the device for any other purpose.

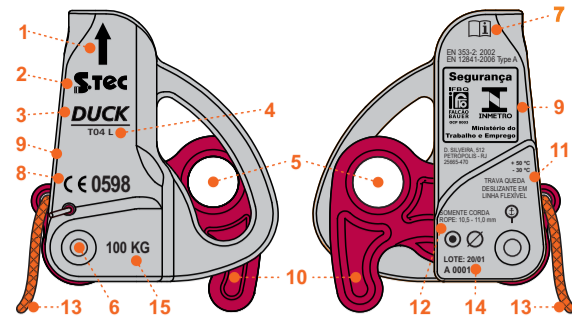
INDIVIDUALLY TESTED



Made in Brazil - SAFE TEC INDUSTRIA

www.safetecbr.com.br

1 - PARTS & MARKING



Requires a round section Locking Karabiner to connect to the harness. (Not supplied).
Oval shaped karabiners with a 10mm are recommended.
Users must check for the proper function of cam with selected Karabiner before use to verify suitability.
Do not use if karabiners affected cam function.

Rope Diameter
Ø 10.5 - 11 mm
Rope Type: EN1891:1998 Type A
Serial Number
E.g. 15 05-A 0000
15 - Year 2015
05 - Month - May
A 0000 - Unique Item Serial N°

L - 270g / 9,5 oz
H - 330g / 11,6 oz

1. Body with Orientation Arrow pointing to Rope anchor.
2. Manufacturer's Logo
3. Model Name
4. Model L - Aluminium Cam / H - Steel Cam
5. Connection Point
6. Bolt
7. Read User manual instructions
8. CE marking
9. Standards
10. Cam
11. Brazilian mandatory disclosure
12. Rope Type Ø 11 mm (Shell+Core)
13. Positioning Cord
14. Serial Number
15. Max Load

MATERIALS

The Safetec T04 devices are available with either Aluminium Cam or Stainless Steel Cam. The Cam colour identifies the model: Aluminium Cam Model has a Red anodised Cam, the Stainless Steel Cam Model has a Silver Cam.

Body - Stainless Steel Silver / Cam Red - Aluminium / Cam Silver - Stainless Steel / Spring - Stainless Steel / Cord - Nylon / Axis - Stainless Steel / Bolts - Stainless Steel.

LEGENDS

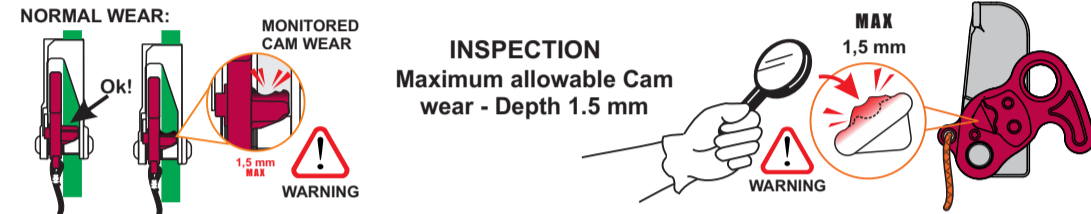


ATTENTION:

If marking with users identification care must be taken to ensure that full function is maintained and the device is not damaged.

2 - INSPECTION

This T04 must be inspected prior to each use. This inspection should check for any corrosion, cracks, evidence of abrasion, deformation, loose bolt or missing components together with full function test and markings are clear and readable. In addition to pre-use checks a regular detailed examination should be carried out by and recorded by an authorized competent person at suitable periods, these should be at no more than six months intervals. Following any emergency loading, incident or droppage T04 must be removed from service for examination. If users or inspectors are not 100% confident that the T04 is fit for use, it must be removed from service. Devices passing inspection shall only be re-used once written records are completed.



6 - STAGES OF INSTALLATION

1. Push the cam through the device body to the opposite side. Temporary attachment of the lanyard karabiner helps to prevent dropping the device.

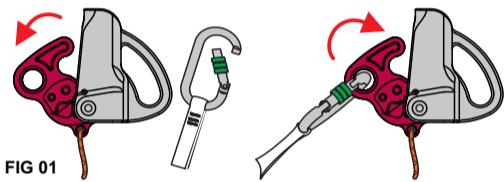


FIG 01

2. Attach the device on to the rope with the Orientation Arrow pointing in the direction of the rope's anchor.
3. Remove the lanyard karabiner and allow the cam to return through the device body.
4. Attach the lanyard karabiner to the connection point, check that the karabiner gate is fully closed and locked.

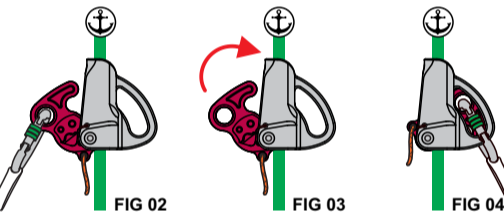
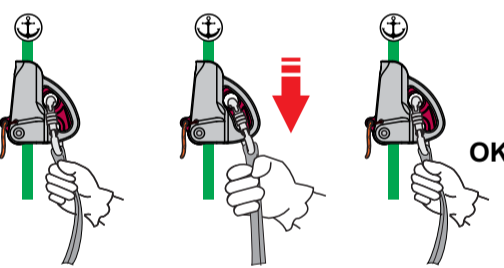


FIG 02

FIG 03

FIG 04

7 - OPERATIONAL CHECK - FUNCTION TEST



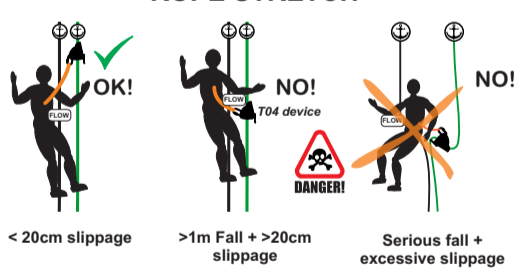
OK

Move the device along the rope and check that it stays in position, then pull down vigorously using the lanyard or cows-tail to verify that the device locks on to the rope.

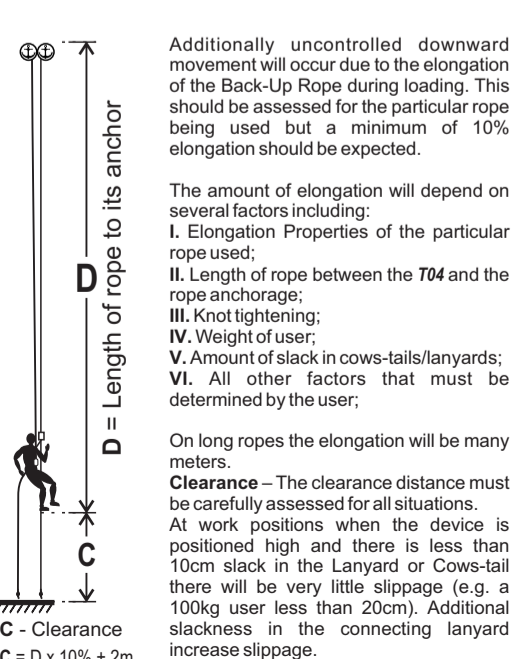
To maintain good spring action ensure that cam spring is lubricated regularly. See section 16.

13 - CLEARANCE DISTANCE

ROPE STRETCH



14 - EXAMPLE BASED ON 10% ELONGATION

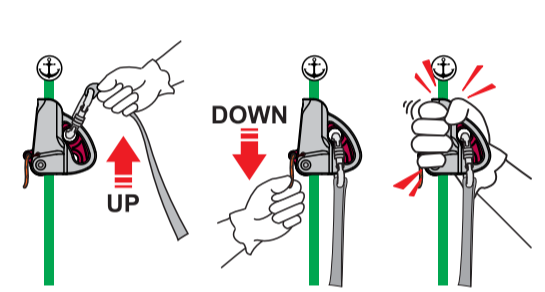


8 - POSITIONING

At all times that the user is stationary the T04 should be positioned as high as possible. The T04 must always be above the descender or chest ascender and never below its lanyard/cows-tail attachment point (FF1)

Ascent

To move the T04 up the rope by holding the lanyard or karabiner - do not hold the device.



Descent:

The T04 backup device is fitted with a Positioning cord. Users must always perform full function checks of both their descent device and T04 before each descent.

To move the T04 down, pull the Positioning cord down using the index finger and thumb. Users should only hold the positioning cord for as short a period as necessary and ensure that they are prepared to let go of the Positioning cord immediately at all times.

In many applications the T04 should be controlled independently of the descent device, in others it may be necessary to control both T04 and descent device simultaneously. It is the responsibility of the user to carry out a risk assessment and determine which method is best for their operational activity and environment.

WARNING

If users keep hold of Positioning Cord the device will not function. Users must release their hold of the Cord immediately if anything unexpected occurs. At all times users must check that the lanyard is not caught on obstacles and that it will not come in to contact with sharp edges, heat, tools or any other source of damage.

15 - DEPLOYMENT

WARNING

The body of the T04 must NOT be squeezed or the Cord be pulled with more than the index finger and thumb to de-weight a loaded or partially loaded T04.

Accidental Deployment

It is essential that all users are competent in the techniques required to overcome accidental loading. If accidental loading occurs during ascent, first check the ascent equipment, then continue ascending until the T04 is no longer under any loading. If loading occurs during descent, first check the descent equipment, then use techniques to complete a short ascent of the Working Rope until the T04 is no longer under any loading. Any other accidental loading should be assessed and appropriate methods used to overcome the loading.

At all times two safety systems must be in place.

Emergency Deployment

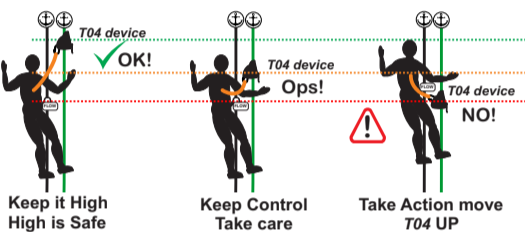
If failure of the Working system e.g. Working Rope failure or user detachment from the Working Rope, occurs and the user becomes suspended on the Back-up Rope, the user and work colleagues must consider the planned procedural options available with regard to all factors of the actual event.

These options may include amongst others:

- I. The deployment and use of a new Working Rope.
- II. The rescue by a colleague using new ropes.
- III. The use of the Back-up Rope to attach escape equipment (descender or ascenders) for the user to evacuate on the single Back-up Rope.
- IV. Other techniques undertaken by competent persons.

All emergency actions should only be carried out following a risk assessment of the situation. During emergency deployment of the Back-up system any downward movement of the user will be determined by several factors: back-up rope stretch, cows-tail stretch, knot tightening and device slippage. With the exception of very minor glazing a properly used T04 will lock on to the Back-Up Rope without causing any damage to itself, lanyard, karabiners or the Back-Up Rope. Following any Emergency Deployment all equipment must be removed from service for inspection by a competent person.

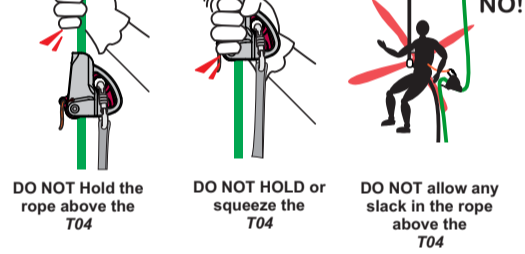
9 - OPTIMUM POSITION



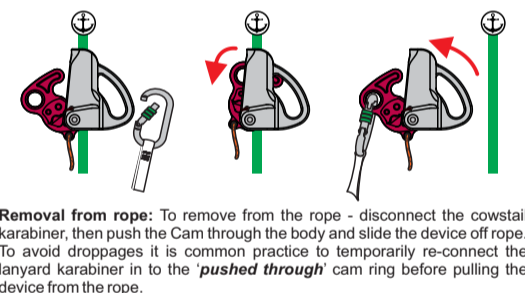
Keep it High High is Safe

Keep Control Take care

Take Action move T04 UP



10 - REMOVAL FROM ROPE



Removal from rope: To remove from the rope - disconnect the cowstail karabiner, then push the Cam through the body and slide the device off rope. To avoid droppages it is common practice to temporarily re-connect the lanyard karabiner in to the 'pushed through' cam ring before pulling the device from the rope.

WARNING

Never leave the T04 on a rope with the karabiner attached to the Cam when it is pushed through the body.

16 - GENERAL INFORMATION

Rope Condition: wear, wetness and contaminants will affect the performance of the T04. Some rope conditions will make positioning of the T04 more difficult. Others e.g. oil & grease will affect the device's ability to perform - Back-Up may not be provided. The effective operation of the T04 should be monitored and checked in all conditions. Where any performance doubt exists, the T04 should not be used.

Sea Water: it is essential that this T04 is cleaned as soon as practicable after each exposure to sea water or saline environment.

Chemical reagent: avoid contact with any substance or material that may cause corrosion or other damage to the device. If contact occurs consult expert advice as to damage and cleaning requirements. Inspect prior to any re-use.

Maintenance: the T04 is not user maintainable with the exception of disinfection, cleaning and lubrication as detailed below.

Disinfection: following any contamination the source of the contamination should be determined and advice obtained as to suitable disinfecting procedure. After disinfection the device should be re-cleaned. Sterilisation may be required.

Cleaning: If soiled rinse in clean warm water of domestic supply quality (maximum temperature 40°C) with mild detergent at appropriate dilution (pH range 5.5 - 8.5). Dry naturally away from direct heat sources. To remove grease use a detergent that has properties that do not affect the metal spring, body, cam or nylon cord.

Lubrication: It is essential to maintain lubrication of the Cam spring. Lubricate regularly and after cleaning with light machine oil or teflon or silicone lubricant to ensure free movement of the cam. Wipe off the excess to avoid contamination of ropes and textile equip.

Lifespan: it is very difficult to define the safe lifespan due to varying use and storage conditions and may be as little as one use, or even earlier if damaged (e.g. in transit or storage) prior to first use. For the product to remain in service it must pass a visual and tactile examination. Maximum lifespan: 10 years from 1st use. Maximum Cam wear 1.5mm.

Obsolescence: this device may become obsolete before the end of its lifespan. Reasons for this may include changes in applicable standards, regulations, legislation, development of new techniques, incompatibility with other equipment etc.

Transportation & Storage: after cleaning store unpacked in a cool, dry, dark place in a chemically neutral environment away from excessive heat or heat sources, high humidity, sharp edges, corrosives or other possible causes of damage.

Declaration of Conformity: Can be accessed on www.safetecbr.com.br

Do not store wet.

3 - TERMS

'Back-Up Rope' is used to describe the 'Safety Line' as termed in EN 12841 2006. 'Device' is used in place of the product name. 'User' refers to individuals or persons selecting this device for use.

4 - COMPATIBILITY

Lanyard: It is recommended that an EN354 lanyards up to 60cm long.

Cows-tail: Connection may be made using a dynamic climbing rope with suitable terminations, attached to either ventral (waist) or sternal (chest) points. **Recommended length:** waist <80cm, chest <50cm. Further information provided in section 22.

Harness: Front attachment point of an EN361 2002 or EN813 2008 harness. **Connectors:** EN 362 2004 Connector - Locking karabiner.

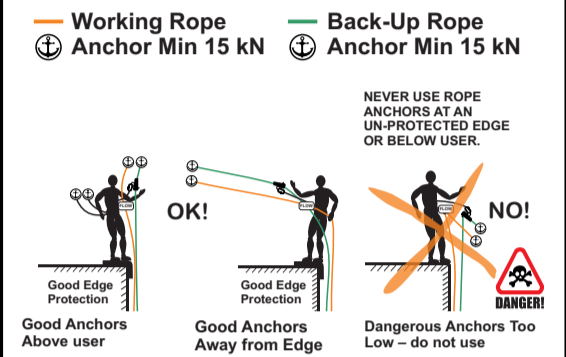
Ropes: the type of rope and its condition will greatly affect the dynamic designed slippage of the device. Factors include: manufacturer's coatings, weave pattern and tightness, wear from use, contaminants* Safetec recommend that 11mm ropes are used for most applications and that users assess performance prior to use. Rock Engineering (Geo) and other 'dirty' operation will often choose 10.5mm due to working conditions increasing friction on devices. *Abrasive contaminants - grit and dirt will provide more rapid breaking whilst grease may increase slippage beyond acceptable.

The T04 is a non-aggressive device and during correct operational use it will not damage ropes. In emergency deployment (see 'Deployment' section) with the exception of very minor glazing a properly used T04 will lock on to the Back-Up rope without causing serious damage to itself, its lanyard, karabiners or to the rope. The user is responsible for ensuring the combination of all components in the rope access system do not adversely affect the performance of any item with due regard to all user instruction.

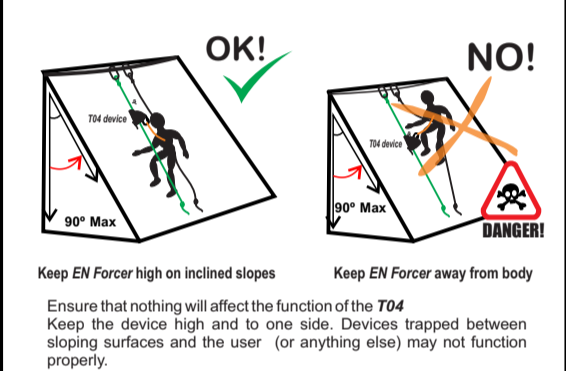
Gloves: the use of suitable work gloves is recommended.

5 - INSTALLATION

Always install the T04 from a position safety or when two additional safety systems are in place.



11 - SLOPING SURFACES



12 - WIND & OBSTACLES

