



INSTRUCTION MANUAL DUCK/EN Forcer

Rope Access Back-Up Device

CE 0598 EN 12841:2006 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 device. 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

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.

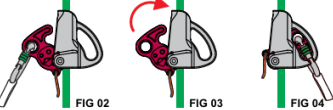


FIG 02

5. Attach the lanyard karabiner to the connection point, check that the karabiner gate is fully closed and locked.

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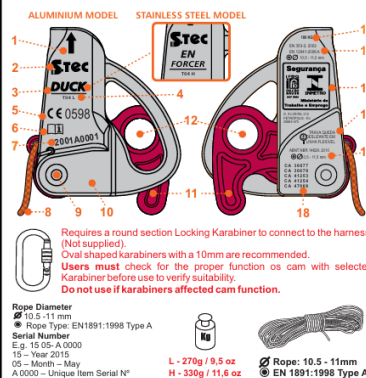
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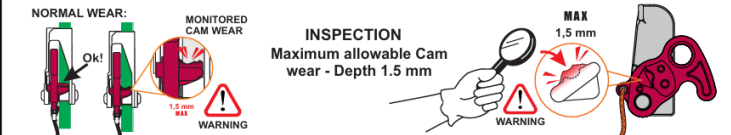
1 - PARTS & MARKING



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

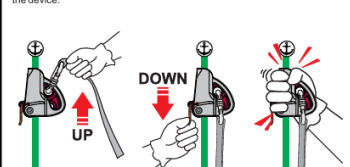
This **T04** must be inspected prior to each use. This inspection should check for any corrosion, cracks, evidence of abrasion, deformation, loose bolt or missing components together with full function test and markings are clear and readable. In addition to pre-use checks a regular detailed examination 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 dropage **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.



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:

- The deployment and use of a new Working Rope.
- The rescue by a colleague using new ropes.
- 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.
- 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.

- Body with Orientation Arrow pointing to Rope anchor
- Manufacturer's Logo
- Model Name
- Model: L - ALUMINIUM / H - STAINLESS STEEL
- CE marking
- Read User manual instructions
- Serial Number
- Positioning Cord
- Bolt
- Body
- Cam: Red - L (aluminium) / Silver - H (stainless steel)
- Connection Point
- Max tested load to meet EN and NBR standards
- International Standards and Applied Ropes
- Brazilian Standards
- Brazilian mandatory disclosure
- Rope Type Ø 11 mm (Shell+Core)
- CA marking

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 anodized Cam, the Stainless Steel Cam Model has a Silver Cam.
Body - Stainless Steel Silver / Red Cam - Aluminium / Silver Cam - Stainless Steel / Spring - Stainless Steel / Cord - Polyester / Axis - Stainless Steel / Bolts - Stainless Steel.

LEGENDS



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.

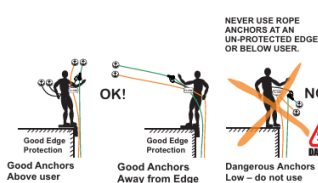
4 - COMPATIBILITY

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: EN362:2004 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 lightness, 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.

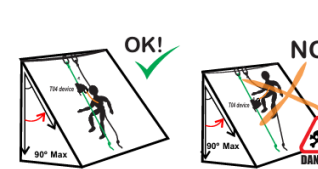
5 - INSTALLATION

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

- Working Rope
- Back-Up Rope
- Anchor Min 15 kN
- Anchor Min 15 kN



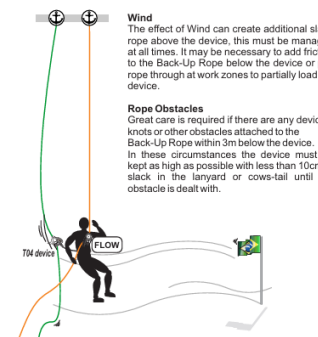
11 - SLOPING SURFACES



Keep Back Up Device high on inclined slopes. Keep Back Up Device away from body.

Ensure that nothing will affect the function of the **T04**. Keep the device high and to one side. Devices trapped between sloping surfaces and the user (or anything else) may not function properly.

12 - WIND & OBSTACLES



PAY ATTENTION TO WIND SPEED.

13 - CLEARANCE DISTANCE

ROPE STRETCH

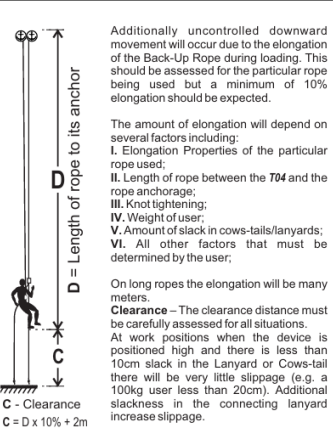


< 20cm slippage

> 1m Fall + > 20cm slippage

Serious fall + excessive slippage

14 - EXAMPLE BASED ON 10% ELONGATION



Additionally uncontrolled downward movement will occur due to the elongation of the Back-Up Rope during loading. This should be assessed for the particular rope being used but a minimum of 10% elongation should be expected.

The amount of elongation will depend on several factors including:

- Elongation Properties of the particular rope used;
- Length of rope between the **T04** and the rope anchorage;
- Knot tightening;
- Weight of user;
- Amount of slack in cows-tails/lanyards;
- All other factors that must be determined by the user;

On long ropes the elongation will be many metres.

Clearance - The clearance distance must be carefully assessed for all situations. At work positions when the device is positioned high and there is less than 10cm slack in the Lanyard or Cows-tail there will be very little slippage (e.g. a 100kg user less than 20cm). Additional slackness in the connecting lanyard increase slippage.

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 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 lemon 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 assessed on www.safetecbr.com.br

Do not store wet.



17 - POSITIONING CORD

EN12041:2006A) the performance on a rope that has been deliberately tensioned must be verified prior to use. If during a rescue (or rescue training) a casualties ropes are to be used for access to the casualty, the performance of both the rescuers and the casualties back-up and main working systems must be assessed and performance verified prior to starting rescue access. Additional safety measures will normally be required, including additional training and equipment. For rescue training additional ropes and/or safety attachments is best practice.