

Duck-R T 002

Rope Access Back-Up Device CE 0120 - EN 12841 Type A

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 all risks and responsibilities for all damage, injury or death during all rope access 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, coltning or other items do not become entangled with the Duck-R. DO NOT allow anything to affect the proper function of the device. Do not use the device for any other purpose.

INDIVIDUALLY TESTED





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Duck-R STEC

FIELD OF APPLICATION

THELLO OF APPLICATION

The Duck-R has been tested in the UK by SGS to the requirements of EN 12841 2006 Type A. Rope Adjustment Device, using Teutleberger time and Edelrid 10.5mm
EN1891 Type A Low Stretch Ropes. Other ropes have provided excellent results – check all different ropes prior to use. To be used in conjunction with EN 12841 Type C or 8 device, each device attached to independent ropes. Each attached to independent anchors with minimum strength of ISKN. Terms: Sack-Up Rope is used to describe the "Safety Line" as termed in EN 12841 2006. 'User' refers to individuals or persons selecting this device for use. ce for use. PARTS & MARKING



Materials

Materials
Body - Stainless Steel
Cam - Aluminium
Spring - Spring Stanless
Steel
Cord - Nylon
Cor

Model Name Connection Point Manufacturer's Logo Read Instructions Logo Cam Friction Point

Bolt
Positioning Cord
Rope – not supplied
Warning logo

Operating Temperature Product weight 260gr

NO!

Max Load 100kg

(4)

INSPECTION

ok!

STEC Duck-R

INSPECTION

This Duck-R must be inspected prior to each use. This inspection should check for any corrosion, cracks, eviden of abrasion, deformation, loose bolt or missing componen together with fulf function test and markings are clear and readable. In addition to pre-use checks a regular detailed

readable. In addition to pre-use checks a regular detailed examination should be carried out by an authorized competent person at suitable periods and recorded, these should be at no more than six months intervals and these instructions must be adhered to. Following any emergency loading the Duck-R must be removed from service for examination. If any change is not 100% confident that the Duck-R is the removed from service for further investigations. Devices passing inspection should only be re-used once written records are completed.

IMPORTANT - Keep Cam Spring lubricated (sec 16.)

Normal Wear: The Cam will wear with use and this should be monitored.

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Maximum allowable Cam wear 1.5 mm

WARNII

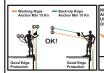
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25003 mmr

Action Duck UP

S.Tec **Duck-R** COMPATIBILITY an EN361 2002 o EN8132008 harness. Lanyard it is recommended that Duck-R is used with EN lanards up to 60cm long. Cows-tail connection may be made using dynamic climb nended that Duck-R is used with EN lanards up to 60m long. Cows-tail connection may be made using dynamic climbing rope with suitable terminations, attached to either ventral (waist) or sternal (chest) points. Recommended length: wisat <80cm, chest <80cm including any knots and connectors. Enther information provised overleafter. Connectors: EN 362 2004 Connector - Locking karabiner. Gloves: the user situation with given se recommended. IMPORTANT - Keep Cam Spring lubricated (sec 16.) The Duck is a non-aggressive device and during correct operational use it will not damage ropes. In emergency very minor glazing a properly used Duck-R will lock on to the Back-Up rope without causing serious damage to itself, its lanyard, karabiners or to the Back-Up 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 instructions. [3]

Always install the Duck-R from a position of safety or when two additional safety systems are in place.



Good Anchors Dangerous Anchor Away from Edge Low - do not use

NO!

NO!

Legend: ANCHOR = Duck-R = LEVO =

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STEC Duck-R

6 STAGES OF INSTALLATION

Push the cam through the device body to the opposed attach the lanyard karabiner; this helps to prevent



ich the device on to the rope with the 'Arrow' poir direction of the rope's anchor. nove the lanyard karabiner and allow the cam to

eturn through the device body. . Attach the lanyard karabiner to the connection point, heck that the karabiner gate is fully closed and locked



7 OPERATIONAL CHECK – FUNCTION TEST



Duck-R STEC

8 POSITIONING

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

lanyard/cows-tail attacriment point.

Ascent
To move the Duck-R up the rope, hold the lanyard or karabiner- do not hold the device.



Descent

To move the Duck-R down, pull the Positioning Cord To move the Duck-R down, pull the Positioning Cord. Holding of the Cord should only be done to move the Duck-R down the rope. Users must not hold the Positioning Cord at any other time. In normal use the Duck-R should not be moved down simultaneously whilst controlling a described evide or when performing any other activity. It users need to perate both the descent device and the Duck-R simultaneously, for example to lear an obstacle in descensimal properties of the described of the described of the described of the device, ensure that the descent is planned and of very should curation, and ensure that they are prepared to let go of the Duck-R Positioning Cord immediately.

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 check the lanyard is not caught on obstacles and the contract with sharp edges, healt, tools or any other source of damage.

STEC Duck-R

OPTIMUM POSTION 9 OK!





DO NOT

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DO NOT allow any slack in the rope above the Duck-R Legend: ANCHOR = Du REMOVAL FROM ROP

WARNING
Never leave the Duck-R on a rope with the karabiner attached to the Cam when it is pushed through the body

Duck-R S.Tec

SLOPING SURFACES





STEC Duck-R 13 CLEARANCE DISTANCE - ROPE STRETCH



D





< 20cm slippage >1m Fall +>20cm serious fall + slippage serious fall + excessive slippage EXAMPLE BASED ON 10% ELONGATION

LE BASED ON 10% ELECTION

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:
1. Elongation Properties of the particular
rone used;

I. Elongation Proporties of the particular rope used; II. Length of rope between the Duck-R and the rope anchorage; III. Knot tightening; IV. Weight of usin cows-tails/lanyards; V. All other factors that must be determined by the user. D e

C - Clearance = D x 10% + 2m

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STEC Duck-R

DEPLOYMENT

The body of the Duck-R must NOT be squeezed or the Cord pulled to de-weight a loaded or partially loaded Duck-I

Accidental Deployment

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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 Duck-R is no longer under any loading. If loading occurs, first check the descent equipment, then use techniques to complete a short ascent of the Working and Puck-R 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.

Immes wo salery 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 usupended on the Back-up Rope, the user
and work colleagues with great of a life factors of the actual event.
These 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.

All bringensy works and 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 Duck-R will lock on to the Back-Up Rope without causing any damage to itself, lanyard, karabiners of the Back-Up Rope. Following any Emergency Deployment all equipment must be removed from service for inspection by a competent person.

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STEC Duck-R

GENERAL INFORMATION

[16] GENERAL INFORMATION

Rope Condition: wear, wetness and contaminants will affect
the performance of the Duck-R. Some rope conditions will make
positioning of the Duck-R 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 Duck-R should be
monitored and checked in all conditions. Where any
so as water it is essential that this Duck-R is cleaned as soon as
practicable after each exposure to sea water or saline
environment.

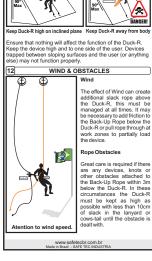
practicable after each exposure to see remonstration control of the control of th

Maintenance: the Duck-R is not user maintainable with the exception of disinfection; cleaning and lubrication as detailed belon the common of the common of the contamination as a detailed belon faction; following any contamination the source of the contamination should be determined and advice oblained as to suitable disinfecting procedure. After disinfection the device should be re-cleaned. Sterilisation may be required. Cleaning: if solled 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 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 of or tethon or silicone lubricant to ensue under the contamination of ropes and textile equip. Lifespar: 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 susual and tackle occumination. Maximum infespar: 10 years solved and the contamination of the same production of the contamination of the same production. The contamination of the many induced changes in applicable standards, regulations, legislation, development of wet horizones in compatibility with other equipment etc.

Transportation & Storage: after cleaning store unpacked in applicable standards, regulations, legislation, development of wet herchiques, incompatibility with other equipment etc.

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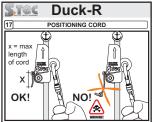
Transportation & Storage: after cleaning store unpacked in applicable standards, regulations of the surpression of the possible causes of damage. Do not store weth.





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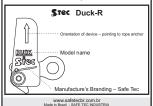
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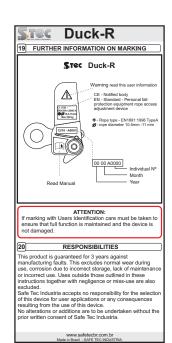


or worn it can be replaced using cord. If 4mm cord is used must be no longer than 40mm, 3mm cord must be no longer than 50mm. The only knot used must be to secure it tightly to the attachment point

18 FURTHER INFORMATION ON MARKING

The CE mark has been attached to this product following type examination and testing by an accredited notified body No. 0120: SGS UK Ltd, to the relevant European Standard. Each Duck-R is individually numbered and inspected. SAFE TEC INDUSTRIA do not recommend any user marking that affects the surface material or operational function.





21		RECORD OF USE
Device		Stec - Duck-R
Supplier Serial Number		
Seriai r 1st Use		
Acquisition date		
	aceability	
	Users	se and Periodic Examinations should record details of use. etween Periodic Examinations is 6 months
Date	User or Examiner	Details of Use-or Result of examination
_		
	uplicate th	is sheet for continued recording.

FURTHER INFORMATION

SafeTec acknowledge that the Duck-R has successfully passed the EN12481A - FF2 test with a 1m dynamic rope cows-tail, but do not advise or recommend its use in FF2

FF1 tests with a 1m cows-tail produce lower impact forces and less slippage - well below the maximum acceptable in EN12841A requirements. SafeTec would recommend that with 1m cows-tails the FF should be kept below FF1.

The use of Lanyards/Cows-tails of lengths or material different to those recommende in the User Manual, should assess for the manner of intended use and all users competent to control the position of the device allowing for any increase (or decrease) in length with due regard to the function of the Duck-R.

All users must be are aware of and paying attention to all factors associated with risks associated with slack in the lanyard, rope elongation/stretch, clearance, entangle ment or other factors affecting the safety of users and performance of the device.

As recommended in the user manual; users should ensure optimally positioning

STEC Duck-R Additional Applications and Information

On-Rope Rescue: Rescues should be planned and generally designed to limit the exposure of rescue team members On-Rope Rescues should only be undertaken if the casualty is in urgent need of medical

attention that requires



attention that requires evacuation. Additional training and competence is required for all persons performing rescues

During all On-Rope Rescues the Duck-R must be kept above the shoulder height of both the rescuer and casualty. Where practicable SafeTec recommend that one Duck-R be used for each person, each on its own rope and each controlled independently of the descent device.

Rescue ropes must be suitably anchored and free from sources of damage. Users must consider all factors affecting Duck-R perfor-mance including obstacles, additional rope elongation and increase clearance requirements as well as all other sections in the user manual.



The Duck-R has successfully been tested by the manufacture to with loads of 200kg. This testing is designed to replicate rescue techniques and requirements with limited lanyard lengths and limited Fall Factors. The testing produced provided consistent performance.

Green

Safetec recommend that all users aim for FF0 and minimum slack in cows-tails/lanyards

Other Uses: The Duck-R has been used for applications that are outside the scope of EN 12841A and the CE mark attached to each device. The design of systems, planning and verification of system suitability for the specific intended application is the responsibility of the user, all anchorages must be suitable for any load. Competence is required for all applications, additional safety measures must be implemented during training exercises, thus unsuit include the close supervision by competent instructor. Users must consider all sections of the user manual with special attention to the Positioning Warning and the information detailing Clearance Distance and Rope Stretch considerations and limitations. All installed devices should be independently function checked with suitable back-up in place prior to any

Orange

Take extra care – up to 50cm fall distance – reposition Duck-R as soon as possible. Would only give protection where there is sufficient clearance to avoid contact with any obstacles or surfaces having allowed for both elongation and

RED is Dangerous

e or accept the use of SafeTec do not suggest the Duck-R in FF2

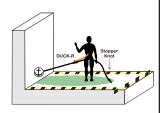
Indicative results above, using DMM 11mm Work-Safe EN 1891A Semi-Static Rope

Rope stretch (elongation) must always be allowed for – see Duck-R User Manual

WARNING

Use on a loaded or pre-tensioned rope:
The Duck-R is designed to be used on an unloaded untensioned rope as required in EN12841. 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 nrior to starting rescue access. Additional 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 attachements is best practice.

ADJUSTABLE RESTRAINT

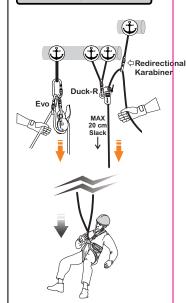


The Duck-R can be used as part of a planned restraint system of sufficient strength for any potential loading.

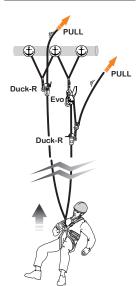
The length of available rope including Duck Lanyard must be shorter than the distance from its anchorage to any exposed edge or potential fall danger zone

Where users are required to partially or fully load the system in any danger zone (e.g. to provide support or partial support) a second system must be in place prior to any loading.

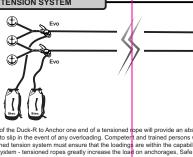
LOWERING EXAMPLE



HAULING EXAMPLE



TENSION SYSTEM





The use of the Duck-R to Anchor one end of a tensioned rope will provide an absorbing system, this will allow the rope to slip in the event of any overloading. Competent and trained persons who choose the Duck-R as part of a planned tension system must ensure that the loadings are within the capabilities of all components of the tension system - tensioned ropes greatly increase the load on anchorages. Safe Tee recommend a minimum of 30kN for the combined strength of all anchorages used for tensioned systems. Users must consider all other sections of this manual with special attention to the Positioning Warring and the information detailing Clearance Distance and Rope Stretch considerations and limitations Safe Tec recommend that two simultaneously loaded tensioned ropes are the preferred choice in all Tension Systems.

Rescue - Hauling & Lowering:

Nothing should affect the proper function of the Duck-R in the event of any emergency loading. During use as a Back-up for a Hauling or Lowering System the Back-up rope must be attended to constantly and no more than 20cm of slack be allowed in the back-up rope, before repositioning the Duck-R – Safetec recommend that the Duck-R is controlled by its own attendant so that optimum positioning can be maintained at all times.

Safe Tec recommend that two tensioned (equally loaded) ropes are the preferred choice in all Hauling and Lowering Systems - both ropes being hauled or lowered simultaneously and sharing the load. More than one person would normally be required to operate Hauling or Lowering Systems.