

STEIN®



RCW-3001 & RCWINCH

Please read this document carefully, it gives instructions for the correct use of this product

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WARNING

Activities using this type of equipment are inherently dangerous. It is not possible to cover every eventuality relating to the use of this equipment. Purchasers and users of RC devices should seek professional training from a fully qualified and competent instructor prior to engaging in any activity. If you are not able, or not in a position to assume this responsibility, do not use this product. The manufacturer its distributors and retailers do not accept any liability if users do not follow the instructions correctly. Only the techniques shown in the diagrams are authorised. Any other use deviating from those shown may result in serious injury or death.

Prior to each use a complete risk assessment must be carried out to ascertain that the device chosen configures with and is appropriate to the work being undertaken. The RC device chosen must also be compatible with all the other components within the system.

Users must always ensure that all components of the work system are suitable for the foreseeable loadings that may be applied during use. Poor technique and shock loading may cause catastrophic failure of this equipment and should be avoided. Where a failure of the product may occur a suitable backup system must be installed and used. All components of the system used with the device must be inspected before and after each lowering/lifting operation. Retire the RC device from use if there are any tactile or visual signs of wear or damage. The retention devices must also be inspected & checked for both tension and wear after each lowering or lifting operation to ensure they are securely attached to the RC device and the mounting point.

The RC Lowering Devices should only ever be used with the correct diameter of rope. You must never exceed the recommended maximum diameters. Each device has a Working Load Limit (WLL) – This is the maximum load allowed to be applied to the device either for lifting or lowering above which catastrophic failure will occur. These values are based on a vertical load being applied and used as specified within these instructions.

Although these devices have been issued with a Working Load Limit (WLL) it is your responsibility to ensure that all the components used in conjunction with the device are matched equally with their Working Load Limit (WLL) or Safety Factor (SF) or Safe Working Load (SWL). If you are unsure on a products individual specifications you should contact the manufacturer. You should never exceed the lowest rated section or component within a rigging system. When calculating any rigging system the strength of the anchor and attachment points must also be taken into account.

- RC devices must never be used for lifting or lowering people. They are not intended or rated for use as Personal Protective Equipment. (PPE)
- Always keep body parts, loose clothing, and debris away from the device when in use.
- Always use appropriate hand protection when operating the device.
- When holding the working line NEVER wrap the line around your hands or other body parts. Always ensure it can run freely in case you need to release the line in an emergency.
- Do not stand or allow others to stand directly under the load being lowered or under the work being performed above. Ensure users and other persons are working and operating the device from a safe distance.
- Any potential dynamic/shock loading must always be kept to an absolute minimum
- All connecting devices or components must be retired from use if they are subjected to impact loading.
- To avoid damage to the device you must minimise all if any free fall distance.
- Always maintain control of each and every suspended load until it has safely reached the ground and been untied.
- All pivot points and moving parts must be lubricated regularly using a suitable lubrication spray. Ensure no excess lubrication comes into contact with any area of the textile fixings or working line. Remove all excess lubrication immediately.
- Products covered under these instructions should never be resold or used by a third party after it has been used by the original purchaser.
- The manufacturer recommends this product should be inspected prior to use along with periodically independent inspection in line with UK LOLER 1998.
- Always use appropriate hand, head and eye protection when operating the device
- See additional warnings on Page 16

As part of any method statement we recommend that all users of this equipment must be given a copy of these instructions. They must read them, understand them and explicitly follow all instructions and cautions attached. Any person using this equipment should be fully trained and competent in its use before carrying out any rigging operations.

Product Identification and Markings

Each RC Device is fitted with a Product Identification label as shown below.

1	Fletcher Stewart (Stockport) Limited
2	STEIN
3	RCW-3001
4	Lowering Device
5	3000kg WLL
6	(1) 13.3kg
	(2) 20.3kg
	(3) 29.0kg
7	RC-3001-serial number
8	United States of America

- 1 Manufacturers Name
- 2 Trademark
- 3 Product Model Number
- 4 Type Of Use
- 5 Working Load Limit
- 6 RC Device Weight
 - (1) With Rubbers
 - (2) With Rubbers & Mounting Straps
 - (3) With Rubbers & Mounting Straps & Winch
- 7 Individual Serial Number
- 8 Country of Origin

The RC Lowering Devices should only ever be used with the correct diameter of rope, You must never exceed the recommended maximum diameters. Each device has a Working Load Limit (WLL) – This is the maximum load allowed to be applied to the device either for lifting or lowering. These values are based on a static vertical load being applied and used as specified in these instructions. However, a dynamic load can multiply the forces incurred on a rigging system; a dynamic load weighing considerably less than the WLL of the device can still exceed the limit due to the multiplied forces caused by its motion. Therefore, all potential dynamic loads should be carefully calculated and minimised where possible.

Model	Maximum Rope Diameter	Working Load Limit (WLL)
RCW-3001	19mm	3000kg

- You must ascertain that the device chosen is appropriate to the work being undertaken.
- Working Load Limits will vary depending on the type of mounting used (see page 7)
- The Working Load Limit is based on using the supplied mounting Ratchet Handle & Strap and backed up with a sufficiently rated Anchor Sling.
- If you are using both the Top Attachment Point and the Device at the same time the Working Load Limits on both areas should be taken into account. Example: the devices WLL is 3000kg the top attachment point is 100kg so the devices WLL will be reduced down to 2900kg.

Product Life

If the product shows tactile or visual signs of wear, chemical contact, abrasion, or crushing it should be retired from use immediately. These times are for guidance purposes only taking account of all the individual components which are supplied with the RC Device.

Daily Use:	max 2-years
Weekly Use:	max 3-years
Occasional Use:	max 5-years

The total maximum life of this product (storage before use + lifetime in use) is limited to 10 years. In good storage conditions this product may be kept for as many as 5 years before the first use without affecting its future duration in use. The working life depends on the frequency and type of use.

WARNING:

By not installing and operating the product correctly as per the instructions and by misuse of the product it is possible to destroy this product and its components during its first use

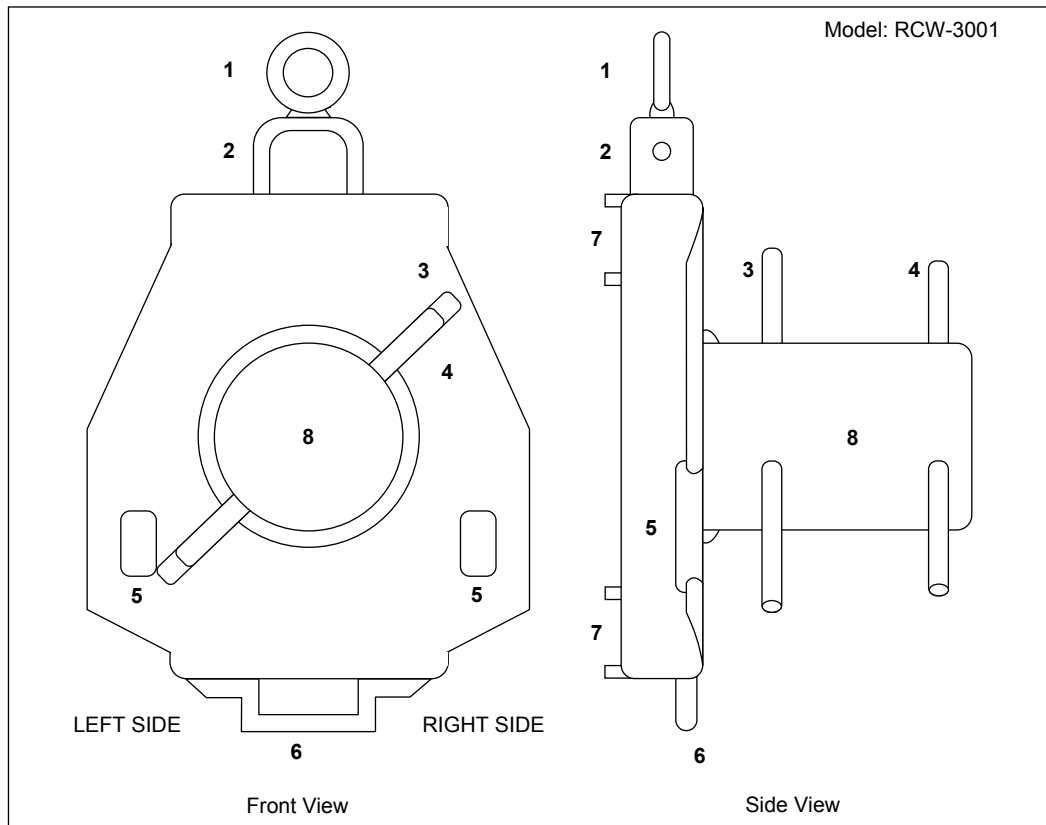
Box Contents



Your RC Device will consist of the the following items:

- | | | |
|---|--|------------|
| 1 | 1 x RCW-3001 Lowering Device | SS-RCW3001 |
| 2 | 1 x 5.8m Ratchet Strap Tail c/w Hook End | SS-RCP5001 |
| 3 | 1 x Ratchet Strap Handle | SS-RCP5000 |
| 4 | 1 x Pair of Rubber Protection Mounts | SS-RCP5006 |
| 5 | 1 x Instruction Manual | SS-RCP9009 |

Part Identification



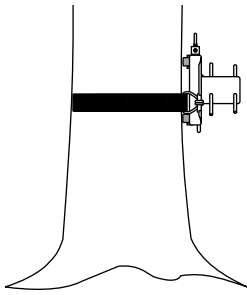
Identify the Parts of the RCW-3001

- 1 Attachment Point (100kg WLL)
- 2 RCWINCH Mounting Point
- 3 Rear Fairleads
- 4 Front Fairleads
- 5 Side Anchor Point
- 6 Base Anchor Point
- 7 Rubber Protection Mount Slots
- 8 Bollard

Mounting The RCW-3001

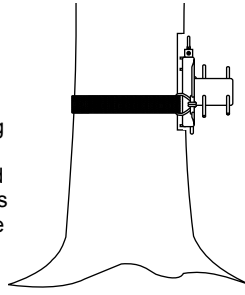
WARNING: Never attempt to mount the RCW-3001 with the RCWINCH fitted. The RCWINCH should only be mounted once the RCW-3001 is securely positioned and mounted correctly.

When mounting the device it is recommended to locate it at a height where the rope will be tailed out as close to horizontal as possible. This will ensure the maximum use of the fairleads.



Method 1
Protection Mounting
Working Load Limit 500kg

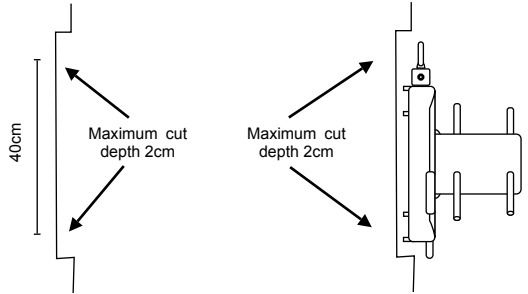
This method of mounting is used where selected limbs are being removed but the tree remains. This method helps protect the tree from damage.



Method 2
Sunken Mounting
Working Load Limit 3000kg

This method of mounting is used where the tree is being dismantled and the limbs lowered are of a heavy size and where impact loading may occur.

When using method 2 the sunken cut should not exceed 2cm. Any deeper than 2cm and this will interfere with the base anchor point and will make the top attachment point unusable.



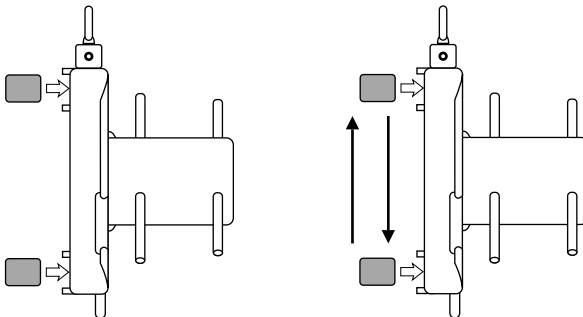
WARNING:

The Working Load Limit is based on using the specified mounting Ratchet Handle & Strap and backed up with a sufficiently rated Anchor Sling. The ratchet strap tensions should be checked after each load, and re-tightened if appropriate

Tree Protection Mounts

The device is supplied with a set of rubber protection mounts. To fit these insert one in the top channel of the device and one in the bottom, these are designed to be a tight fit.

The mounts should be inspected carefully prior to use and rotated each time the device is used.

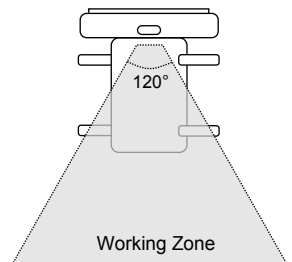


WARNING:

Never use the device with only one of the rubber protection mounts fitted

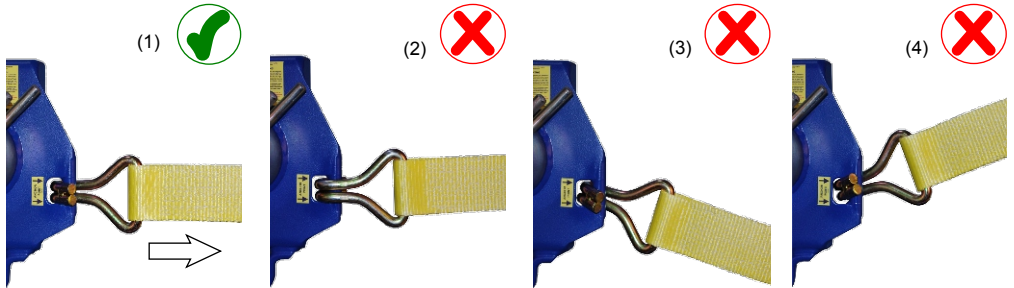
Bollard Working Zone

The user should position the device so there is a clear working zone of 120° from the front of the device. The lowering line must stay within this working zone to ensure correct rope alignment. This also prevents the rope from overlapping on the bollard and makes full use of the fairleads.

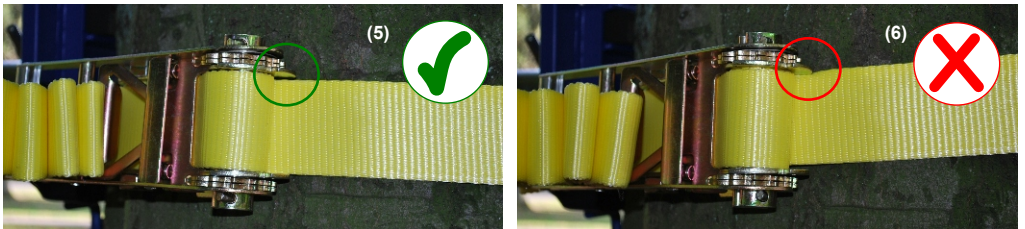


Ratchet Strap Mounting

When fixing either end of the Ratchet Strap ensure the hook faces outwards as in diagram (1) and is pulled horizontal. By fitting the Ratchet as pictured in diagram (2) the hook could slip out during use. Never pull the Webbing Straps at an angle as shown in diagrams (3) & (4).



When tightening the ratchet ensure the webbing enters the ratchet evenly (5) and is not in contact with the side guide plates (6). This will cause premature wear to the webbing and possible webbing failure. The retention devices must be inspected & checked for both tension and wear after each lowering or lifting operation to ensure they are securely attached to the RC device and the mounting point.



Base Anchor Point

The Working Load Limits (WLL) are based on using the specified mounting Ratchet Strap and backed up with a sufficiently rated Anchor Sling. This is to be connected directly to the base anchor point as shown in the diagram below using a choked hitch and terminated around the tree using a suitable self-tightening hitch such as a cow-hitch or timber-hitch.

This must be inspected & checked for both tension and wear after each lowering/lifting operation to ensure it is securely attached to the device and the mounting point.



Anchor Sling

WARNING:
The RC Device should never be operated or used without an Anchor Sling fitted and secured properly using an appropriate knot.

Top Attachment Point

The top attachment point has a Working Load Limit (WLL) of 100kg. This can also be used to support the weight of the device to help with the initial mounting by an individual person and with the removal of the device from the mounting point.

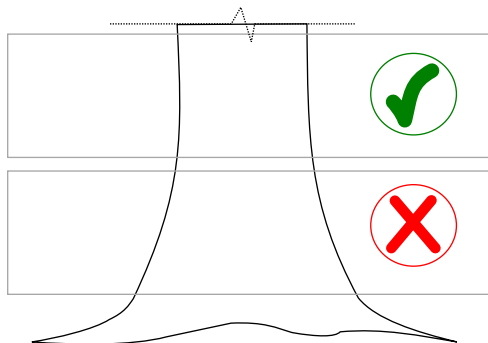
Top Attachment Point



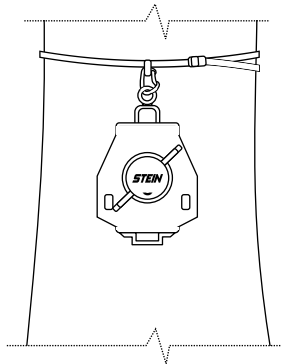
Device Mounting Instructions

ENSURE THE WORK AREA IS FREE & CLEAR OF ANY OBSTACLES AND A FULL RISK ASSESSMENT HAS BEEN UNDERTAKEN BEFORE USING THE RC DEVICE

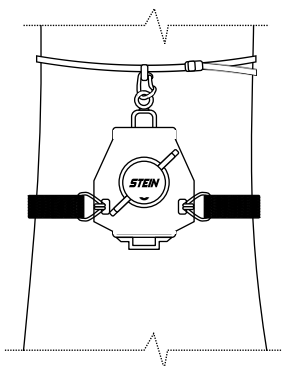
These mounting instructions are the same for using both methods of mounting as described on page 7



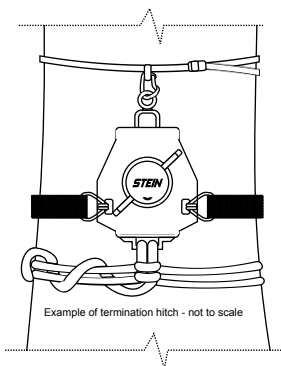
- (1) When selecting the best place to mount the device try to locate an area where there is little or no stem taper. If the tree is being removed this can be achieved by shaping the stem to be parallel.
- (2) You must then decide which type of mounting method is required for the job you are undertaking (see page 7)



- (4) For ease of mounting we recommend that you place a STEIN Mounting sling above where the device is to be mounted.
- (5) Using the Top Attachment Point attach the lowering device to the Karabiner.
- (6) Ensure the device is suspended at a height where it can be safely operated.



- (7) Using the supplied Ratchet Handle and Ratchet Strap attach the device to the tree.
- (8) Ensure the Strap Hooks are fitted correctly and the Webbing is fed through the Ratchet Handle as shown on page 8
- (9) Tighten the Ratchet System as tight as possible ensuring the device is securely mounted to the tree.

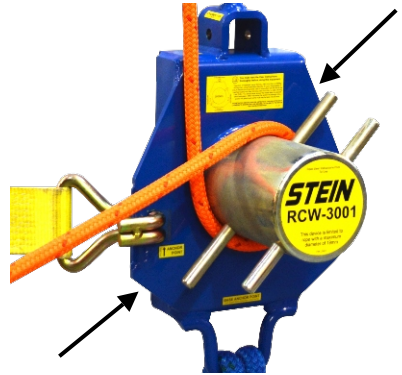


- (10) Once the Device is securely mounted a backup Anchor Sling must be attached to the base anchor point, and tied off using a suitable termination hitch. Ensure the sling is of a sufficient length to terminate the hitch properly.
- (11) Once the device is mounted correctly the top attachment sling can either be removed or detached from the device.

NEVER USE THIS DEVICE WITHOUT A BACKUP ANCHOR SLING ATTACHED

Routing The Rope

The following instructions demonstrate the correct routing of the working line for the RCW-3001 without the RCWINCH attachment fitted. Never use alternative routing as this may result in serious injury or death.



- (1) Ensure the working line enters the device from a vertical point directly above the device.
- (2) If the RCWINCH is not fitted the line can enter the device from either the left-hand or right-hand side of the bollard.
- (3) If the RCWINCH is fitted the line can only enter the device from the left-hand side of the bollard.
- (4) The rope must take a single wrap, passing behind both rear fairleads
- (5) Pull the rope tight and continue with further wraps in between the rear and front fairleads

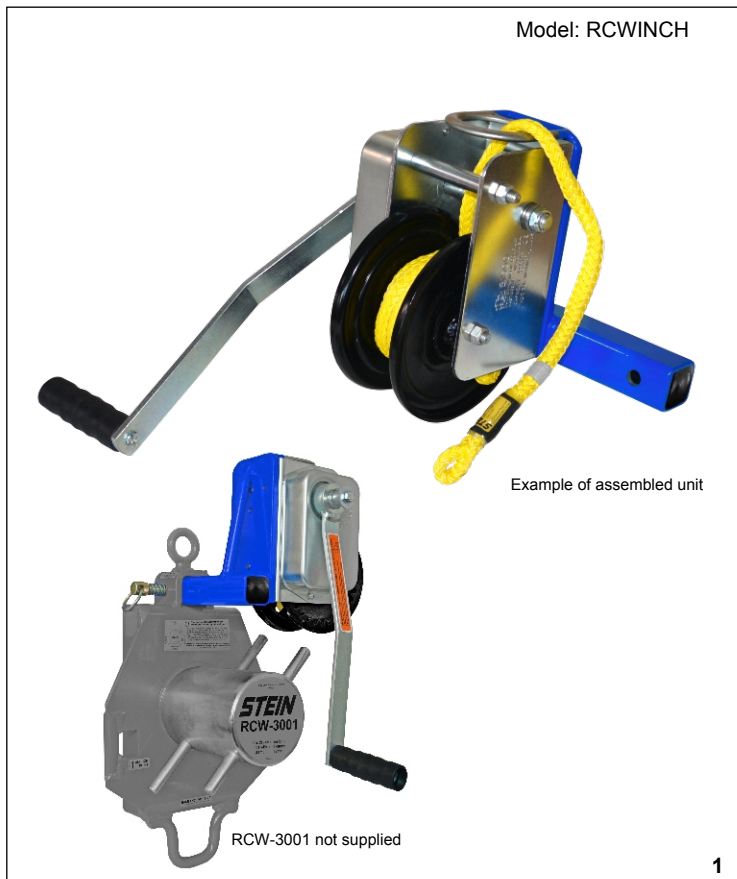


- (6) Apply a couple of wraps, more wraps maybe required subject to the size of timber being lowered. More wraps give more friction.
- (7) If at any time you need to suspend/lock a load, simply wrap the working line a minimum of 4 times around the bollard and finish by applying 2 half hitch's on opposing exit fairlead's. Subject to the size of load being suspended extra half hitch's maybe required.

Once you are in a position to commence lowering, stand well clear of the drop zone ensuring the working line will not be obstructed by the item being lowered. Where a load is being cut from above the rigging pivot point the operator should draw slack out of the system. This can be achieved by quickly pulling on the working line as the branch/log begins to fold and then release the working line as normal as the load passes the rigging point.

If it is necessary to pre-tension the working line tighter than what can be physically achieved by simply pulling down on it, a mechanical advantage of 3:1 can be achieved by incorporating the Stein RC-3100 Pre-Tension pulley or by adding the RCWINCH attachment.

Box Contents - RCWINCH (Available as an Optional Extra)



Your RCWINCH Device will consist of the the following items:

- | | | |
|---|---|------------|
| 1 | 1 x RCWINCH Assembly | SS-RCWINCH |
| 2 | 1 x 5.0m Winch Line (supplied loose) | SS-RCP6005 |
| 3 | 1 x Securing Pin | SS-RCP6006 |
| 4 | 1 x 70cm Accessory Cord | SS-1EM0070 |
| 5 | 1 x Steel Karabiner | SS-1H8321 |
| 6 | 1 x Instruction Manual | SS-RCP9009 |
| | 1 x Instruction Manual - (Original Winch Manufacture) | |



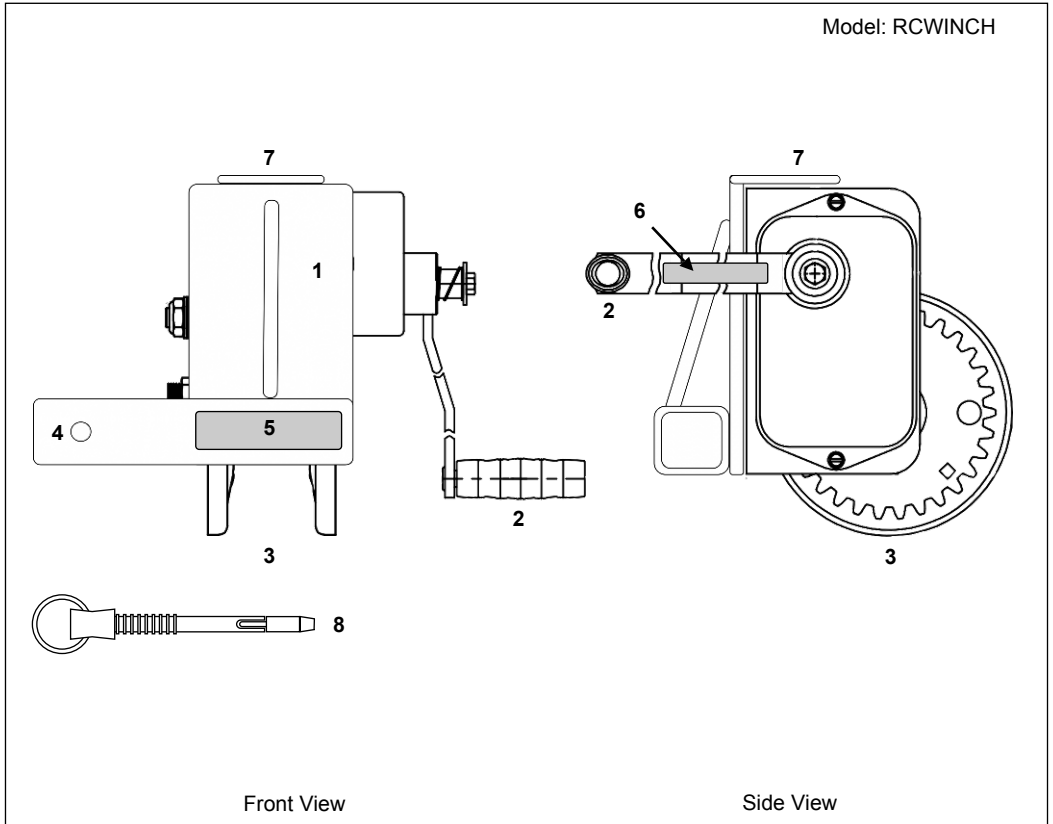
WARNING:

The RCWINCH is supplied un-assembled and must be assembled according to the Winch Manufacturers Instructions.

WARNING:

The RCWINCH **CANNOT** be fitted to the RC3001. No attempt should be made to try to retro-fit this unit to the RC3001

Part Identification



Model: RCWINCH


Front View

Side View

Identify the Parts of the RCW3001

- 1 RCWINCH Assembly
- 2 Winch Handle
- 3 Winch Drum
- 4 Pin Retaining Hole
- 5 Warning Label
- 6 Warning Label
- 7 Winch-line Guide Ring
- 8 Securing Pin

5

<p>RETAINING PIN NEVER USE WITHOUT THE PIN SECURELY LOCATED</p>	<p>Model: RCWINCH Serial Number:  You must read the User Instructions thoroughly before using this equipment</p>
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6

WARNING:
It is important that all Safety Labels are visible and present. It is recommended that you replace these immediately if they are removed or un-readable. New labels can be ordered

Attaching the RCWINCH

The following instructions demonstrate the correct method of attaching the RCWINCH to the RCW-3001. Never use alternative methods of mounting as this may result in serious injury or death.



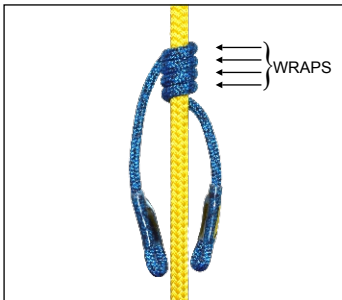
- (1) Ensure/check that the winch is correctly assembled as per separate winch instructions
- (2) Ensure your working line is securely tied off.
- (3) Align the RCWINCH with the RCW-3001
- (4) Once in place align the securing pin holes
- (5) Insert the Securing Pin fully pushing the pin to depress the spring
- (6) Flip the pivoting pin end and release the pressure on the securing pin
- (7) Double check the pin is securely locked in place by pulling on it.
- (8) To dismount the RCWINCH reverse the process ensuring the Working line has been securely tied off and the Winch-line has been detached from the working line.



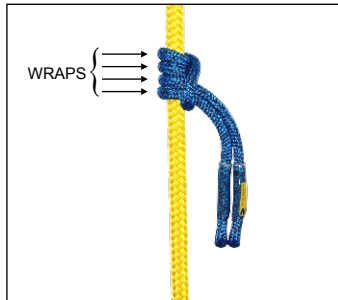
Friction Hitch / Knots

The following instructions demonstrate the correct method of attaching the Winch-line to the main working line. Never use alternative methods of attaching as this may result in serious injury or death.

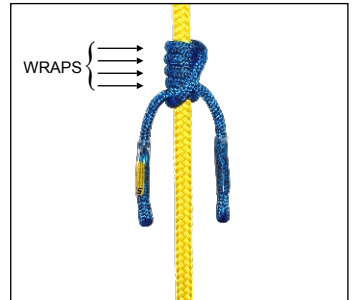
The RCWINCH is supplied with a STEIN "COPIOUS" sewn eye friction cord. Attach the friction cord to the working line using one of the approved friction knots as shown below. As the friction hitch / working line wears extra wraps will be required to maintain grip. Extra wraps may also be necessary on narrow gauge working lines. **Always test the friction hitch operates correctly before each use.**



"VT"
Using a minimum of 4 wraps



"Schwabisch"
Using a minimum of 4 wraps

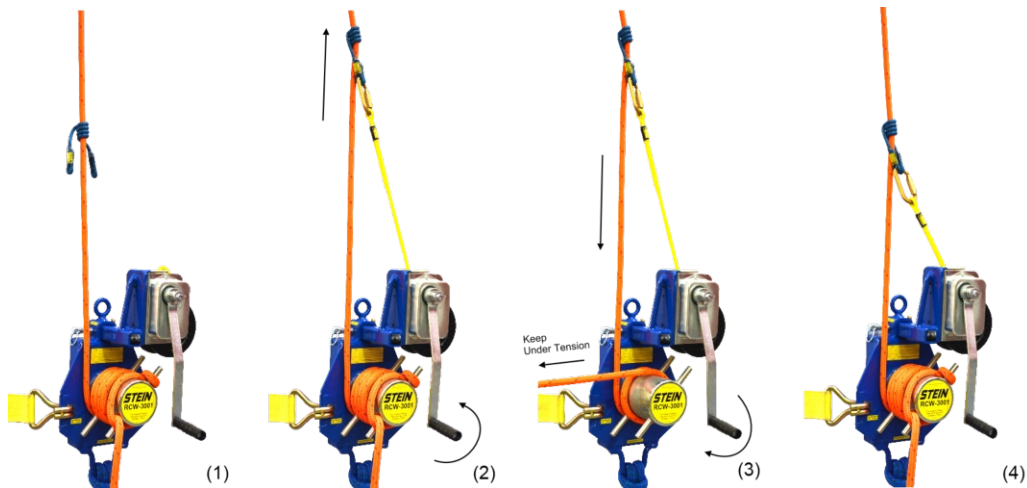


"Distel"
Using a minimum of 4 wraps

WARNING: Always ensure the Fiction Hitch is operating correctly before use. Extra wraps maybe required to increase the grip. Destroy and replace damaged or excessively worn friction hitches. If you are unable to tie any of these friction knots you should seek professional training from a fully qualified and competent instructor.

Operating the RCWINCH

The following instructions demonstrate the correct method of using the RCWINCH to advance the working line to the RCW-3001. Never use alternative methods as this may result in serious injury or death.



Tensioning and Lifting operations

- (1) Ensure the working line is securely tied off on the bollard (1).
- (2) Draw out an appropriate length of winch line by simultaneously pulling on the line and back-winding (anti-clockwise) the lever. The operator should use at least an arms reach of winch line to get the most benefit from the winch system. Only release as much winch line as is required
- (3) Attached the friction hitch to the working line and test accordingly; attach the Winch-line to the friction hitch using the supplied Steel Karabiner (2).
- (4) Slide the fiction hitch up the working line as far as you can physically reach (2).
- (5) Once the friction hitch has been positioned and dressed to ensure it is gripping the working line correctly, slowly turn the winch handle clockwise to take up the slack and apply tension to the system.

WARNING: As the winch line pulls down on the working line, the slack induced into the working line (between the bollard and the friction hitch) must be simultaneously removed by pulling the line outside of the exit fairlead, either by the operators free hand or by a second person. A minimum of 2 wraps of working line must be kept on the bollard whilst removing slack or more depending on the diameter of line and weight of the load.

Advancing the System

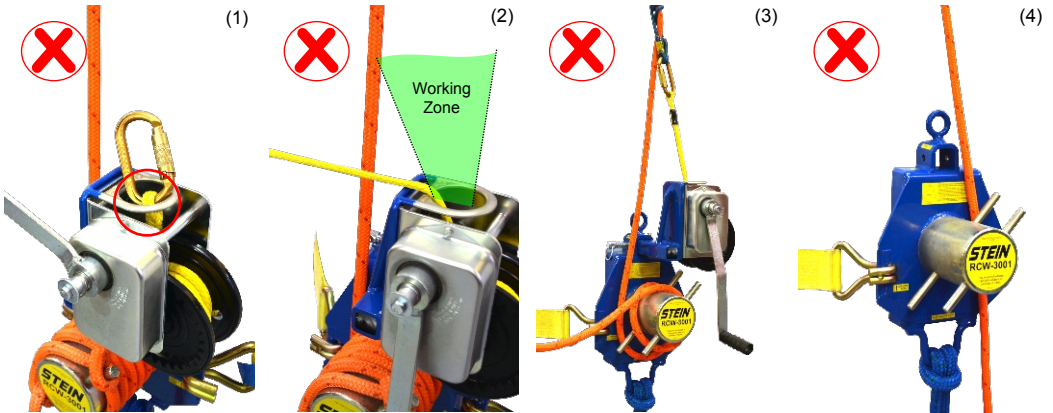
- (1) With the working line under tension slowly release the working line on the bollard ensuring any load is supported on the bollard with the appropriate number of wraps.(Refer to page 10)
- (2) Whilst one person is winding the winch a second person is required to ensure the working line is kept under tension on the bollard drawing slack out of the system. Wind the winch as far as required (3).
- (3) If further winching is required securely tie off the working line and release the winch slowly. The load will be supported on the bollard allowing the process to be repeated. Repeat the above process as many times as is required (4).

WARNING: Never use the RCWINCH for lowering a load. The Winch should always be disconnected from the working line before any lowering operations commence.

Lowering operation

- (1) Once the load is in the correct position ensure the working line is securely tied off on the bollard.
- (2) To commence lowering the load release any tension from the winch system and remove the friction hitch from the working line.
- (3) Subject to the position of the load the RCWINCH can remain in position whilst the lowering operation is undertaken however we would strongly advise the RCWINCH is removed from the RCW-3001 prior to any lowering operation to avoid possible damage to the winch should the load swing and collide with the winch.
- (4) If the RCWINCH is staying in position ensure the winch line has been retracted appropriately to avoid any contact or possible snagging of the working line.
- (5) Once you are in a position to commence lowering, stand well clear of the drop zone ensuring the working line will not be obstructed by the item being lowered. Where a load is being cut from above the rigging pivot point the operator should draw slack out of the system. This can be achieved by quickly pulling on the working line as the branch/log begins to fold and then release the working line as normal as the load passes the rigging point.

ADDITIONAL WARNINGS



These warnings are in addition to those listed on page 2 and those in the Winch Manufacturers Operators Manual

- (1) Never use the RCWINCH for lowering a load
- (2) Never use the RCWINCH for lifting/lowering humans
- (3) The RCWINCH should always be disconnected from the working line before any lowering operations commence.
- (4) The RCWINCH and components should never be subjected to Dynamic Shock Loading. If any part of the RC System is subjected to any Dynamic Shock Loading it should be inspected by a competent person and replace accordingly.
- (5) Never release the winch without securing the working line on the Bollard.
- (6) Never allow slack in the system as this could allow the working line to snag and apply dangerous dynamic forces to the System and working line (3)(6).
- (7) Never retract the winch-line past the Winch Guide Ring. We recommend leaving at least 10cm of winch line beyond the Guide Ring (1).
- (8) Never retract the winch line past the Red Warning Marker (5)
- (9) The winch line must stay within the working zone to ensure correct rope alignment (2). (GREEN ZONE)
- (10) Never allow the working line to enter the bollard from the right-hand side when used in conjunction with the RCWINCH (4)
- (11) **Never use the RCWINCH for operations other than its intended purpose.**



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Activities using this type of equipment is inherently dangerous. You should seek professional training from a fully qualified and competent person prior to engaging in any activity using this type of equipment. You are solely responsible for your own actions and of the safety of the people around you. Stein Products Limited or its agents cannot be held responsible for the misuse of any product. Product is supplied on the understanding that the purchaser has the full knowledge of the equipment they are purchasing.

- All specification are current but may be modified without prior notification.
- Pictures are for example purposes only and may not be 100% representative of the supplied product.
- Full product specifications are available on request
- All pictures are examples only
- Users should seek professional training before using any of these products
- We reserves the right to withdraw any products without notification.