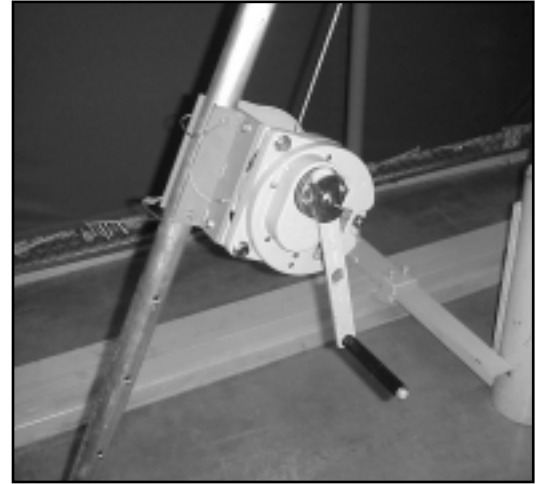


Sellstrom/RTC[®] Manload Winch

Installation, Operating & Maintenance Instructions

SM/RTC Manload Winch

The SM/RTC Manload Winch is a vertical confined space personnel access retrieval and material handling winch system. The system is designed for lifting and lowering loads up to 600 lb. or personnel (one individual) when used with a back-up lifeline system.



WARNINGS



**To the Receiver,
Contractor, Store
Manager, Safety
Director, Supervisor,
Buyer, or anyone
except the ultimate
equipment users:**

Under Penalty of Law

These instructions are not to be removed except by the user of this equipment. Current instructions must always be available to any potential user. Note: Because of continuous developments in the application and use of SM/RTC equipment and our desire to serve your best interests, these instructions are invalid 10 years after the effective date on these instructions. If these instructions are out of date, call SM/RTC Customer Service and request current instructions.

If you have difficulty or experience any problem with SM/RTC equipment or the instructions, call SM/RTC immediately and ask the Customer Service Department for assistance.

It is the responsibility of the user's management to review these instructions periodically, and to ensure compliance with every requirement to maintain the system's integrity. The equipment purchased is designed to be used as a part of a complete fall protection or emergency rescue system and is to be inspected and maintained regularly.

WARNINGS Continued...

Sellstrom/RTC[®] Manload Winch

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WARNINGS



*To the Equipment User:
You must read and fully understand or have the following instructions explained to you before using this equipment. Failure to do so could result in serious or fatal injury.*

Atencion: Si usted no puede leer el ingles o si usted no comprende estas instrucciones, favor de consultar su director de seguridad o su supervisor.

Attention: Si vous ne pouvez pas lire l'anglais ou si vous ne comprenez pas les instructions, consultez votre directeur de securite ou votre superviseur.

Achtung: Wenn Sie nicht Englisch lesen können und diese Anweisungen nicht verstehen, dann fragen Sie bitte Ihren Sicherheitsdirektor oder Ihren Aufselher.

Attenzione: Se non leggiere l'inglese o non capite queste istruzioni, per favore rivolgete Vi al Vostro Direttore, responsabile della "Sicurezza sul Lavoro" o al Vostro diretto superiore.

You assume complete liability if you fail to follow these instructions and are injured. Use this equipment only as instructed.

All potential users of this equipment and user's management must read and understand all instructions fully; failure to do so could result in serious or fatal injury.

Warning: All SM/RTC equipment should be as part of a complete SM/RTC fall protection or emergency rescue system. If the buyer or user chooses to disregard this warning, he is solely responsible for the safety of the entire system and all users.

No fall arrest system can guarantee that you will not sustain injuries if a fall occurs. The most you can expect is that injuries will be substantially reduced. What you can be sure of is that improper use of this equipment will vastly increase your chances of serious injury or death because misuse builds false security. To achieve the maximum level of safety that this equipment is capable of providing, all instructions must be followed diligently. This means careful planning of your application and work method.

Before replacing or adding components to a fall protection or emergency escape system, consult the original manufacturer. Federal OSHA states that any unauthorized substitution or change to a system by the buyer should be fully evaluated or tested by a qualified person before the new system is put into use (see OSHA 1926.500).

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1.0 Approved Application

The SM/RTC Manload is a vertical confined space personnel access retrieval and material handling winch system. The system is designed for lifting and lowering loads up to 600 lb. or personnel (one individual) when used with a back-up lifeline system. The device must be attached to the leg of an SM/RTC tripod, SM/RTC extension davit, or SM/RTC approved anchor point. The anchor system must be capable of supporting a minimum load of 3000 lb.

Application examples might include access and retrieval operations in vessels, tanks,

bins, sewers, vaults, sumps, boiler ducts, pits or ship holds.

Warning 

The Manload Winch is not designed to arrest the free fall of a load or a person.

No other applications or methods of use are allowed without prior written approval from SM/RTC.

2.0 Operating Characteristics

The SM/RTC Manload reduction gearing incorporates profile-shifted spur gears to provide a mechanical advantage of approximately 6:1. The mechanical brake is designed with a secondary back up to protect against a no-brake condition that might allow the winding arm to freewheel.

If the entire length of cable is wound out of the unit, continuing to crank the handle counter-clockwise will reverse the direction of the line and raise the load. Reversing the direction back to clockwise will lower the load. Although the unit will operate in this manner, it is not recommended. Operation should be clockwise to lift (click-clack sound) and counterclockwise to lower.

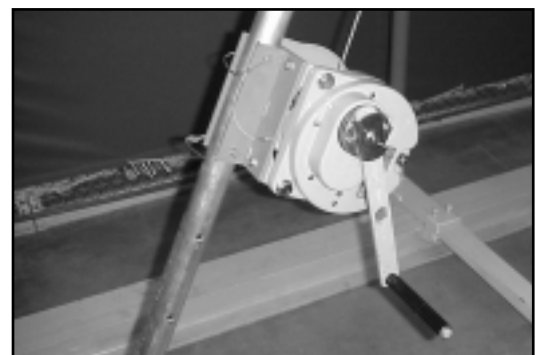


Figure 1 Side View

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 www.fallprotection.com



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3.0 Standard Models

3.1 Steel Frame, Stainless Steel Cable, Bracket Included

5580-S55	55' Manload Winch
5580-S110	110' Manload Winch
5580-S150	150' Manload Winch

3.2 Steel Frame, Kevlar Cable, Bracket Included

5580-K55	55' Manload Winch
5580-K110	110' Manload Winch

4.0 Performance Data

- Maximum working load is 600 lb. (one load or one person).
- Lifting and lowering rate is approximately 25 ft./min.
- Gear Ratio: 6:1
- Size: 14 in. x 8 in. x 8 in.

5.0 Installation

The SM/RTC Manload Winch is attached to a SM/RTC Tripod or other anchorage using the SM/RTC mounting bracket.

The SM/RTC Mounting Bracket is bolted to the winch back plate. The tripod leg or extension can then be inserted through the mounting bracket and pinned in place using the adjustment or positioning holes. Fasten keeper on pins. (See Figure 2). The winch should be positioned inside of the tripod leg or extension, close to the opening. The mounting bracket is universal to allow a "right-handed" or "left-handed" attachment.



Figure 2 Back View

The SM/RTC Guide Plate Pulley must be attached from its top installation hole to the tripod using the clevis pin provided. To insert the cable into the guide pulley, follow the steps listed below and refer to Figures 3 and 4.

Step 1: Make sure that the floor opening or fall hazard is covered.

Step 2: Remove the hitch pin and attachment pin from the pulley.

Step 3: Insert the cable between the plates and over the pulley wheel. Note the direction of the line in Figure 2. The line extends up from the winch, over the top of the pulley from the outside, and down along the inside of the guide pulley plate.

Step 4: Replace the pulley with the line in place, connecting to the tripod hanging plate.

Continued...

Sellstrom/RTC[®] Manload Winch

Installation, Operating & Maintenance Instructions

5.0 Installation

Continued

Step 5: Replace the clevis and hitch pins securely and make sure the line runs freely in both directions.

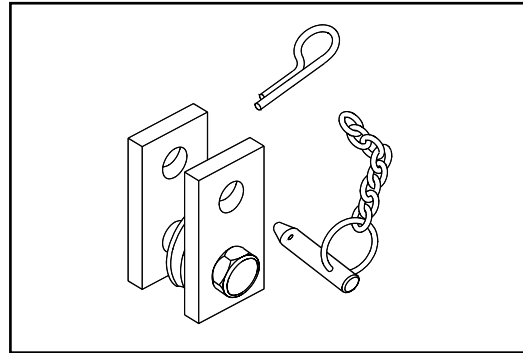


Figure 3

Position the tripod and winch so that it does not interfere with any nearby obstructions. The operator of the winch should have easy access to the winch handle. Fall protection equipment may also be necessary for the winch operator.

6.0 Operating Instructions

6.1 The SM/RTC Manload Winch is designed to raise and lower loads up to 600 lb. and personnel (one individual) when used with a back-up lifeline. The winch is not designed to arrest a free fall. The cable must be taut at all times. Confined entry operations require careful planning before the work begins. This planning must consider fall protection when entering, a procedure for emergency rescue, who will do the rescue, and the total rescue time required.

6.2 To operate the Manload Winch:

6.2.1 Raising or lifting: Rotate the winch handle clockwise to raise/lift. Retrieval rate is approximately 25 ft./min. You should be able to hear a positive, "click-clack" sound during this process.

6.2.2 Lowering: Rotate the winch handle counter-clockwise to lower. Lowering rate is approximately 25 ft./min. There should not be a "click-clack" noise, but a smooth, quiet operation.

Note: The winch is designed not to "freewheel"; when winch handle is released, the load or person should remain in place.

6.3 As an Emergency Retrieval Winch Only, With a Means of Access (Ladder)

The SM/RTC Manload Winch can serve as a backup emergency retrieval winch.

1. Connect the snaphook from the Manload Winch to the back D-ring of the full body harness, along with the retracting cable lifeline.

2. Crank out the cable as the worker descends the ladder.

3. In the event of an emergency, the worker is already hooked up and the standby person can immediately begin the retrieval process.

Continued...

Sellstrom/RTC[®] Manload Winch

Installation, Operating & Maintenance Instructions

6.0 Operating Instructions *Continued*

6.4 As a Personnel Access/Retrieval Winch, with No Means of Access (Ladder)

The SM/RTC Manload Winch can serve as a personnel access and retrieval winch when there is no available means of access such as a temporary or fixed ladder. When the Manload is used for personnel, it must be used with a self-retracting lanyard.

1. Connect the Manload Winch to the spreader bar yoke configuration.
2. Connect the self-retracting lanyard to the back D-ring of the full body harness.

3. Raise and lower the user, keeping the cable taut at all times.
4. In the event of an emergency, immediately begin the retrieval process.

6.5 As A Load Handling Winch

The SM/RTC Manload Winch can serve as a material handling winch for loads up to 600 lb. Loads must be balanced for lifting and worker(s) must remain completely clear of any potential fall path should the load drop.

7.0 Training

All training must be conducted under careful and competent supervision. Live hands-on training for all users is essential to help understand the capabilities and limitations of their personal protective equipment. Training also helps promote confidence and

should be conducted as an initial introduction, as well as periodically for review and additional practice. Also, this instruction booklet should be stored where users can easily review it whenever necessary. Training should be site specific.

8.0 Inspection

8.1 The user must inspect all equipment visually before each use. A competent person other than the user must inspect the equipment at least every six months. If damage is found or you have questions about the equipment's condition, remove the item from service immediately. Tag the item for non-use, and replace it. Failure to remove an item from service when defective or questionable conditions are found could lead to serious or fatal injury.

8.2 Winch

1. Check all parts of the winch for dents, corrosion, cracks, or distortion.

2. Crank handle through several rotations in both directions to check for smooth and complete operation. A "click-clack" sound should be present during the retrieval (raising, counterclockwise) mode.

3. All nuts and bolts should be snug.

4. Check the cable termination through the drum to be sure it is securely attached.

5. The swage and swaged eye of the cable should be tight and secure.

6. The snap hook should be secure within the eye termination and free to rotate 360°.

Continued...

Sellstrom/RTC[®] Manload Winch

Installation, Operating & Maintenance Instructions

8.0 Inspection

Continued

8.3 Wire Rope:

Wire rope should be checked for the items listed below. If any of these conditions are found or you have any doubts, contact SM/RTC Customer Service.

1. Wire ropes with one or more bulging strands indicate an imperfect lay of wire in the rope, which can result in an uneven distribution of stresses within the rope.

2. Wire rope that contains local reductions in diameter. This is caused, for example, by crushed, flattened, thinned or missing strands.

3. Four or more broken wires in one lay. (A lay is the distance in which a strand makes one complete turn around a wire rope.)

4. Four or more pulled and flattened wires in one strand in one lay.

5. A total of nine broken wires in all strands in one lay.

6. Bird cages or tight kinks that open the strands of the wire rope.

8.4 Labels on winch should be secure and legible. Contact SM/RTC for replacement advice.

9.0 Maintenance

Personal protective equipment should be maintained regularly to help ensure proper operation when the system is needed. Failure to maintain and store equipment carefully can result in inadequate operation that could lead to serious or fatal injury.

All equipment should be worked into periodic maintenance programs including keeping detailed records. (A minimum of every three months is suggested).

1. All nuts should be checked and tightened carefully if needed.

2. The housing and cable should be wiped down with a mild detergent, and then a dry, clean cloth.

Only specified routine maintenance and inspection should be performed at any job site. The Manload Winch unit should always be returned to SM/RTC for repair and recertification.

Sellstrom/RTC® Manload Winch

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10.0 Special Warnings

Failure to observe warnings below and to follow all instructions in this booklet can lead to serious or fatal injury.

Always visually inspect before use.

Never attempt to make any repairs or adjustments to the Manload system. All problems or concerns should be referred immediately to SM/RTC Customer Service.

No addition or substitution of any part of this system is permitted without the written approval of SM/RTC.

Do not use this device in violation of any applicable company, local, state or federal standards.

Anyone who has a history of back or neck problems that could be aggravated or complicated by using fall protection equipment should not do so. Pregnant women and minors should not use this equipment. If there is any reason why you may not be physically able to safely absorb the forces subjected in the event of a fall arrest, consult your doctor.

The Manload system must not be used for horizontal to vertical retrieval. The system is for vertical use only. If the confined space operation requires horizontal mobility after a vertical descent, additional rescue procedures must be developed to move the victim beneath the anchor point for vertical retrieval.

Never use or attach a snap hook to incompatible hardware.

Never use in applications that may cause electrical conduction through the cable to the user. A synthetic cable could be more suitable. Contact SM/RTC for advice.

This system is not for use on surfaces that can collapse, such as grain, cement, powders or other materials, because a worker could be buried and suffocated.

Never use the Manload Winch for the purpose of arresting a free fall. The winch system is designed for raising and lowering only.

Do not exceed the 600-lb. maximum load limit.

A back-up lifeline must be used if the Manload Winch is used for personnel access/retrieval.

Never stand under a load.

Never use the Manload line to lower/raise more than one person or one load.