

Sellstrom/RTC® Ropelok™

Installation, Operation & Maintenance Instructions

2300-OP3E Ropelok™ Device

The SM/RTC 2300-OP3E Ropelok™ is designed for climbing protection with SM/RTC vertical lifelines. It can be used above or below ground, on interior or exterior surfaces. The SM/RTC Ropelok is for fall arrest only. This should not be used for work positioning.



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 always must 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 If these instructions are out of date, call SM/RTC Customer Service and request current instructions.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...

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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 used as part of a complete SM/RTC fall protection or emergency rescue system. If the buyer or user chooses to disregard this warning, he alone is 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. 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 further 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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Complete System Components

A complete fall protection system consists of the following components that are arranged to fit the specific work task and control the elevated fall hazard(s):

- **Anchorage**

An anchorage, as defined by OSHA, "shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed and used as follows: as part of a complete personal fall arrest system which maintains a safety factor of at least two; and under the supervision of a qualified person".

For horizontal lifelines it is important to remember that the anchorages must be designed and installed according to the instructions provided, using a safety factor of at least two. Anchorages for horizontal lifelines may require anchorage strengths greater than 5,000 lb. Refer to the specific instructions for each horizontal lifeline for anchorage requirements.

- **Body Support**

A body support is the component of a personal fall protection system that is worn on or around the body. Full-body harnesses must be used for all fall arrest systems.

- **Connecting Means**

A connecting means is the link between the body support and anchorage. It can be a shock-absorbing lanyard, rope grab, self-retracting lanyard or retrieval system.

Connecting means will vary depending on the application.

The user must also have a rescue plan and the means at hand to implement it in the event of a fall.

Note: For continuous protection, more than one system may be needed.

Warning



No other applications or methods of use are allowed without prior written approval.

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1.0 Approved Application

Warning

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

The SM/RTC 2300-OP3E Ropelok is designed for climbing protection with SM/RTC vertical lifelines. It can be used above or below ground, on interior or

exterior surfaces. The SM/RTC Ropelok is for fall arrest only. This should not be used for work positioning.

The SM/RTC Ropelok is approved for use only in combination with an SM/RTC full body harness with back D-ring.

Only one user may be attached to a vertical lifeline.

2.0 Anchorage

All anchorage points must be capable of supporting a minimum of 3,600 lb. when certification exists, or 5,000 lb. in the absence of certification. (See ANSI Z359.1 for definition of certification.) When more than one personal fall arrest system is attached to an anchorage, the anchorage's strengths above shall be multiplied by the number of personal fall arrest systems attached to the anchorage. This requirement

is consistent with OSHA requirements as follows: Anchorages used for attachment of personal fall arrest systems shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 lbs. per user attached, or be designed, installed and used as part of a complete PFAS which maintains a safety factor of at least two and is supervised by a qualified person.

3.0 Operating Characteristics

The SM/RTC Ropelok is a detachable sliding device, which moves freely up or down a 5/8" vertical lifeline (polyester rope or SM/RTC Permacable[®].) When a fall occurs, the Ropelok automatically locks at any point on the lifeline.

The SM/RTC Ropelok has an attached shock-absorbing lanyard.



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4.0 Available Models

2300-OP3E: Ropelok with 2 ft. Expander Lanyard.

2300-OP3E3: Ropelok with 3 ft. Expander Lanyard.

5.0 Performance Data

5.1 The designed working load is 310 lb., including tools, for individual use. The Ropelok meets ANSI Z359.1, and OSHA 1910.66, and 1926.500. Each user must be connected to a separate lifeline.

Lifeline. Contact SM/RTC for clearance information when using Permacable®. The clearance values include deceleration distance, free fall distance, D-ring slide, and rope elongation.

5.2 Minimum Clearance Required Below the User

The chart below lists the minimum clearance required below the user to arrest a fall, when using SM/RTC 5/8" Polyester Rope Vertical

Warning



Use only SM/RTC 5/8" vertical lifelines.

Minimum Clearance Below User—For use with SM/RTC 5/8" Polyester Rope Lifeline

| Length of Vertical Lifeline | 2300-OP3E (2 ft. Lanyard) | 2300-OP3E3 (3 ft. Lanyard) |
|-----------------------------|------------------------------|-------------------------------|
| 25 ft. | 10.5 ft. | 12.5 ft. |
| 50 ft. | 12.5 ft. | 14.5 ft. |
| 75 ft. | 14.5 ft. | 16.5 ft. |
| 100 ft. | 16.5 ft. | 18.5 ft. |
| 125 ft. | 18.5 ft. | 20.5 ft. |
| 150 ft. | 20.5 ft. | 22.5 ft. |
| 175 ft. | 22.5 ft. | 24.5 ft. |
| 200 ft. | 24.5 ft. | 26.5 ft. |

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6.0 Installation and Attachment

6.1 Verify that the anchorage meets the requirements listed in section 2.0.

6.2 Connect the spliced eye on the rope lifeline to the anchorage using a double locking carabiner.

6.3 Attach an SM/RTC rope weight, or secure by other means, to keep the lifeline taut while climbing.

6.4 Device

6.4.1 Turn the locking device (painted red) in the direction of the arrow to unlock the safety latch. (See photo A.)

6.4.2 Push the lower portion of the safety latch (marked "push") as shown by the arrow. (See photo B.)

6.4.3 Pull the safety latch as indicated by "pull" and hook the slot in the safety latch to the projection on the Ropelok body, the letters "open" appearing as shown in photo C.

6.4.4 Push the lock lever in the direction of the curved mark "up," and swing open. Put lifeline into Ropelok body. (See photo D.)

6.4.5 Return the lock lever — ensure that the locking device (lever that is painted red) is released, and lightly push the lower portion of the safety latch marked "push" to lock the safety latch through the spring. (See photo E.)

6.4.6 Turn the locking device fully in the direction of the arrow (photo F) to lock the safety latch.

6.4.7 Once the device is installed on the lifeline, pull the device down sharply holding



Photo A



Photo B



Photo C



Photo D



Photo E



Photo F

onto the lanyard and ensuring the device locks.

6.4.8 Attach the shock-absorbing lanyard snaphook directly to the back D-ring of the full body harness.

6.4.9 To remove the Ropelok from the lifeline, reverse the procedure.

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7.0 Operating Instructions

Important! If you fall, remove the equipment from service and immediately report the fall to your supervisor or the safety department. The unit must be removed from use permanently.

Never use the Ropelok upside down. Serious injury or death may result if a fall occurs.

Do not use in icy conditions, such as freezing rain, or if there is any chance that the ability of the device to lock on the rope will be reduced.

7.1 Attach the Ropelok onto the SM/RTC 5/8" lifeline with the arrow pointing upwards. (See section 7.4.)

7.2 Test the Ropelok by sliding it up the cable holding the hook and then pulling down sharply. Do not use the device if it does not lock immediately.

7.3 Attach the Ropelok's shock-absorbing lanyard to the back D-ring of the full body

harness. The Ropelok will follow the user under a steady pull.

7.4 Some Ropelok models are equipped with a parking lever. This feature may be used to position the Ropelok above the user to reduce free fall distance. Simply raise the Ropelok to the desired height and engage the lever. Disengage the lever before climbing up or down in order to prevent slack in the vertical lifeline. The vertical lifeline must remain taut at all times.

7.5 To descend, climb down in a normal fashion. This will keep the attachment lever up, disengaging the clamping bar and allowing the Ropelok to lead the user freely.

7.6 If the lever is pulled back past center, the clamp bar will engage the cable and the Ropelok will lock. To unlock the mechanism, simply move upward a short distance. This will allow the Ropelok to operate freely.

8.0 Training Guidelines

All training must be conducted under careful and competent supervision. Hands-on training for all users is essential to teach the abilities and limitations of their personal protective equipment. Training also promotes confidence and should be

conducted both as an introduction, and then periodically for review and practice. Also, this instruction booklet should be stored where users can review it easily whenever necessary.

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9.0 Inspection

9.1 The user must inspect all equipment before each use. A qualified person, other than the user, must also inspect the equipment at least every six months. If damage is found or if you have questions about the equipment's condition, remove the item from service immediately. Tag the item for non-use, and replace it. If you find any defective conditions, remove the item from service immediately, replace it, and contact SM/RTC for advice. Failure to remove damaged or questionable equipment could lead to serious or fatal injury.

9.2 Snaphook: The snaphook must operate smoothly and close and lock completely. Check for rough or sharp edges, corrosion, burrs, cracks, dents or distortion. Rivets should be checked for broken, bent or cracked conditions. Gate and gate locks must be free from distortion and bending, and must seat properly and securely against the snaphook nose and body. The gate and lock spring should cause these two parts to close firmly.

9.3 Lifeline

9.3.1 All vertical lifelines that are subject to paint or solvent overspray must be replaced on a regular preventive maintenance schedule. Carefully inspect for visual signs of damage.

9.3.2 Product age, exposure to the sun and chemicals, and normal use will reduce strength and performance.

9.3.3 Bend the rope in a U-shape between your hands. Untwist the rope slightly and check the inside fibers. This will help to reveal frayed, worn, cut, broken, burnt, or damaged fibers. Check all sides of each strand along the entire length. Table 1 summarizes detailed visible signs of exposure.

9.3.4 The entire length of the rope should be a uniform diameter. Areas where there is a noticeable change from the original diameter may have been weakened from a fall.

9.3.5 Check points of wear on the rope, over end posts, or next to obstructions. Never wrap the line around angle irons, columns, or other shapes with cutting or abrasive edges.

9.3.6 Check all splices for unraveling. Each splice must be tight, with a minimum of 5 tucks.

9.3.7 Knots in a lanyard or lifeline can reduce tensile strength by 50 percent or more. Remove knotted ropes from service and destroy.

9.3.8 Thimbles: Thimbles should not move within the eye of the rope. Check for sharp edges, burrs, and distortions.

9.4 Inspect the Ropelok for wear and damage. Check for rough or sharp edges, corrosion, burrs, cracks, dents and distortion. The Ropelok must operate smoothly and close and lock completely.

Continued...

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9.0 Inspection

Continued

9.5 Shock-Absorbing Lanyard

9.5.1 Webbing: Inspect the entire length of webbing for tears, cuts, fraying or other signs of wear and damage. Sewn terminations should be secure, complete and not visibly damaged. Carefully inspect all points where two or more pieces of webbing are sewn together. Inspect webbing by beginning at one end and bending a portion (6–8 inches) into a U-shape between your hands. Check the entire length of both sides. Detailed examples of visual signs of harmful exposure are summarized in Table 1.

9.5.2 Shock Absorber: Inspect shock absorber to determine if lanyard has been stressed. There should be no evidence of

elongation. Inspect Expander Lanyard for broken stitching under the clear protective cover. Important: When the “Danger — Do Not Use — Remove From Service” warning label is showing from inside the shock absorber cover, remove the lanyard from service immediately and replace.

9.6 Labels: Check to see that labels are intact and legible. If the system passes inspection mark the inspection date on the inspection grid.

9.7 Additional Equipment: Inspect all fall protection equipment used with the system as directed in the instructions for each piece of equipment.

Table 1

| Type of Exposure Chart | | | | | |
|------------------------|---|--|--|--|--|
| Type of Webbing | Heat | Chemicals | Flame or Molten Metal | Paint or Solvents | Dirt or Grit |
| Polyester & Nylon | Fibers become brittle, will shrivel, turn brown in color and break when flexed. Should not be used above 180°F. | Fibers will change color and texture, similar to a brownish smudge or smear; will become less elastic with transverse cracks resulting from bending. | Fiber strands will fuse together and become hard, brittle and shiny in appearance. | Particles work into the weave and can cut and fray fibers. | Particles work into the weave and can cut and fray fibers. |

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10.0 Maintenance

10.1 Personal protection equipment should be maintained regularly to ensure that the equipment will operate properly when needed. Failure to maintain and store equipment carefully can result in poor operation that could lead to serious or fatal injury.

10.2 All equipment should be a part of a periodic maintenance program that includes detailed records of inspection and maintenance.

10.3 Never make any adjustments, repairs, or substitute any parts of the SM/RTC system. Call SM/RTC Customer Service for advice. You must return the unit for factory inspection and maintenance within two years

of the manufacture date and every two years thereafter.

10.4 Ropelok: Remove the device from the lifeline. It can be rinsed in soapy water to remove grit and dirt. After drying, reattach the Ropelok to the lifeline as indicated in the installation instructions. Do not subject the lifeline to any chemicals or industrial solvents. The lever arm may be lubricated with low temperature silicone or mineral oil. The device must lock immediately when it is dropped on the lifeline.

10.5 Lifeline: Wash lifelines with water only, do not use any type of commercial solvents.

11.0 Special Warnings

11.1 Do not exceed maximum weight capacity of 310 lb., including tools.

11.2 Never attempt to use SM/RTC 2300-9111 Ropelok device upside down, because in this mode no locking is provided and the user may be seriously injured or killed.

11.3 Never substitute parts of the SM/RTC Ropelok system.

11.4 Do not use this equipment in violation of any applicable company, state, or federal standard or requirement.

11.5 Remove from service immediately after a fall.

11.6 Never rely on the sound of a snaphook closing on a D-ring; check it visually for proper attachment.

11.7 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 absorb the forces safely you will be subjected to in the event of a fall arrest, consult your doctor.

11.8 To achieve the maximum level of safety possible with this system, all instructions must be followed carefully and fully. You must plan the use of safety equipment before the job begins. Regularly inspect and maintain the system.