Sellstrom/RTC® Concrete Beam SkyGirder™

Installation, Operating & Maintenance Instructions

SM/RTC Product: Concrete Beam SkyGirder™

The Sellstrom/RTC (SM/RTC) SkyGirder™ post system is a prefabricated anchorage for horizontal lifelines. It is designed to provide horizontal mobility and fall protection. This post system attaches to most AASHTO-PCI concrete girders.

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 If you purchase a product and these instructions are out of date, call SM/RTC Customer Service and request current instructions. Dial toll free (800) 323-7402 (U.S. and Canada) or (847) 358-2000.

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 designed integrity. The equipment purchased is designed to be used as a part of a complete fall protection 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 konnen und diese Anweisungen nicht verstehen, dann fragen Sie bitte Ihren Sicherheitsdirektor oder Ihren Aufselher.
Attenzione: Se non leggiere l'inglese o non capite queste instruzioni, 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. A "no" answer to any question on the Safety Checklist on the back page of these instructions, either before or during product use, is an unsafe use of this equipment. Use this equipment only as instructed.

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.

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).

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.

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.

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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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Table of Contents

1.0 Approved Application

The Sellstrom/RTC (SM/RTC) SkyGirder™ post system is a prefabricated anchorage for horizontal lifelines. This post system attaches to most AASHTO-PCI concrete girders.

The SM/RTC SkyGirder post system is approved for use only in combination with a SM/RTC Permacable® Horizontal Lifeline System, Beamwalker® Temporary Horizontal Lifeline System or a Steel Cable with Shock-Pak™ Horizontal Lifeline System.

Use of this equipment near physical or environmental hazards may require additional precautions. Contact SM/RTC if you have any questions or concerns.

Warning

Use only with SM/RTC horizontal lifelines.

2.0 Available Models

The SkyGirder post system is available with either 7 ft. or 4 ft. posts. For systems anchored to 4-ft. post systems, use a shock-absorbing lanyard not more than 4 ft. long. Free fall must not exceed 6 ft.

3.0 System Parameters

Information regarding anchorage strength, clearance and other horizontal lifeline parameters is included with each horizontal lifeline system. Verify that the anchorage beam meets these requirements before installing a SkyGirder system. Please contact SM/RTC if you have any questions about this information or your application. These parameters are critical to the safe use of the system.

For horizontal lifelines it is important to remember that the anchorages, including the supporting anchorage beam, must be designed and installed according to the instructions provided using a safety factor of at least two. Anchorage beams for horizontal lifelines may require anchorage strengths greater than 5,000 lb. Refer to the information provided by SM/RTC with each horizontal lifeline for anchorage requirements.

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4.0 Installation and Attachment

4.1 Inspect the system according to section 8.0.

4.2 Verify that the anchorage beams and the clearance below the walking-working surface meet the requirements set forth by the instructions for the horizontal lifeline system you will be using. Remember, horizontal lifelines shall be designed and installed as part of a complete personal fall arrest system that maintains a safety factor of at least two, under the supervision of a qualified person. If you have any questions or concerns, contact SM/RTC.

4.3 Slide the beam clamps (Item 2, Figure A) on the top and bottom channels. The tie back and socket channel requires one beam clamp. The bottom channel requires two. Snug the bolts on the clamps so they will not slide off the channel. Do not tighten.

4.4 Place the post socket channel (Item 1, Figure A) on top and perpendicular to the concrete beam approximately 8 ft. from the end of the beam.

4.5 Adjust the beam clamp to fit snugly against the concrete beam and tighten.

4.6 Place two tie rods through the holes in top of the channel making sure the tie rods are perpendicular and not hitting the bottom of the beam. Place the bottom Channel, on

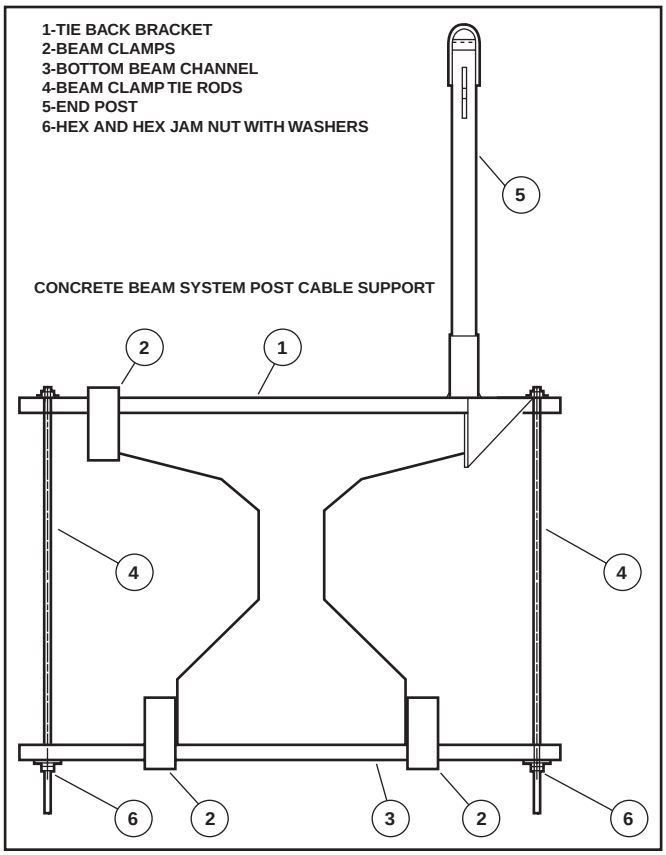

Figure A

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4.0 Installation and Attachment
Continued

the bottom of the concrete beam; be sure to line up the holes on the tie rods. Note: The channel should be placed so that edges are against the concrete and flat surfaces are down. Tighten the washer and one hex nut on each tie rod. Adjust the sliding beam clamps and tighten. Place a second hex nut to provide locking feature to each tie rod.

Warning

Failure to tighten two hex nuts on each rod may result in the system becoming loose and not providing proper protection.

4.7 Place the tie back approximately 7 ft. from the post bracket being sure to leave 4 in. at end of concrete beam. If the post height is not 7 ft., place the tie back so that the tie back cable is at a 45-degree angle. Repeat steps 4.3–4.6 on the tie back bracket, See Figure B.

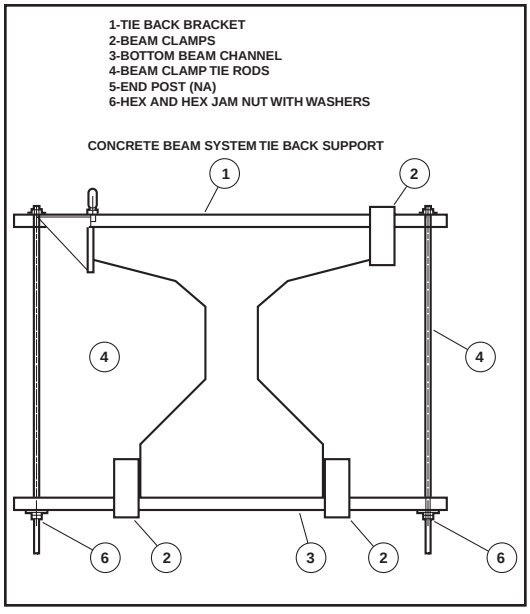

Figure B

4.8 Insert the end posts into the Socket and insert the bolt and tighten the nut.

4.9 Install the tie back cable by inserting a Turnbuckle onto the bracket on the post and attaching the other end of the tie back cable to the eye in the tie back bracket using a U-shackle. (Figure C). Be sure to also tighten the tie back cable using the turnbuckle after tensioning the Permacable.

4.10 Repeat steps 4.3–4.9 for the other end.

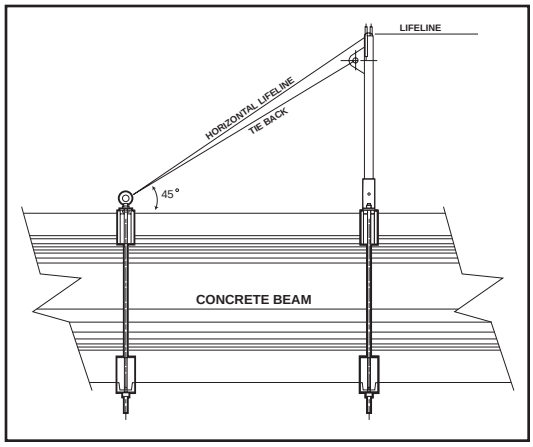

Figure C

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4.0 Installation and Attachment
Continued

4.11 If an intermediate post is required, install by repeating steps 4.1–4.4. See Figure D and Figure E. Place the open ended intermediate post in the socket and insert the bolt and tighten it to the socket. The intermediate post should be placed to divide the span in half. Intermediate post brackets must be placed between the end brackets and divide the span according to information provided from SM/RTC with the horizontal lifeline system.

4.12 Installing the Horizontal Lifeline: Install the horizontal lifeline according to the instructions provided with the horizontal lifeline system, attaching the ends of the horizontal lifeline to the shackle on the tie back bracket and the lifeline over the end post.

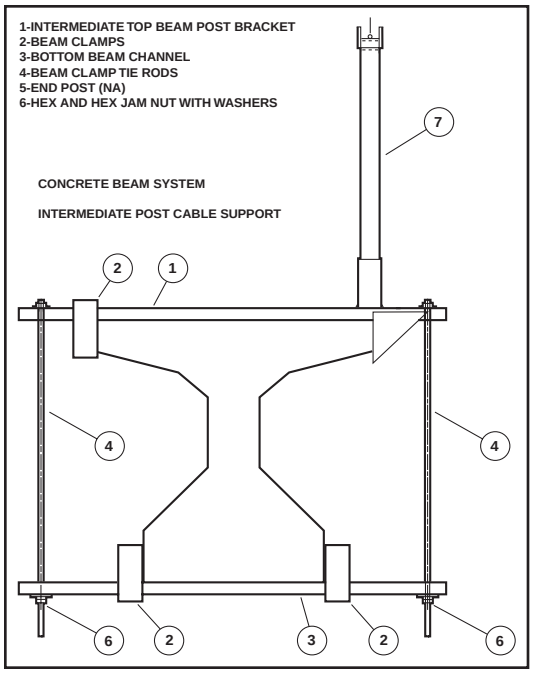

Figure D

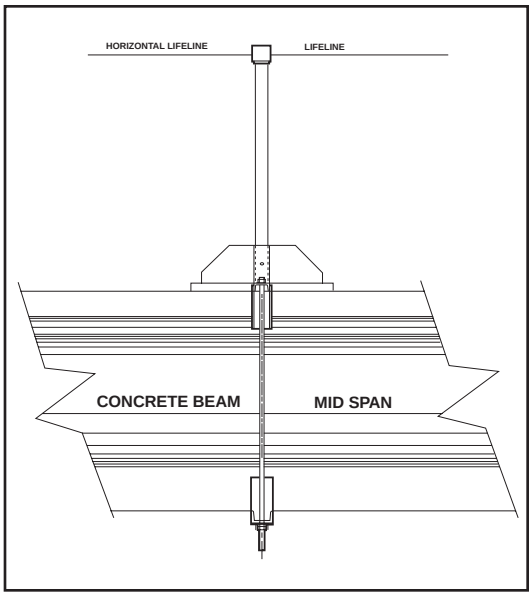

Figure E

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5.0 Operating Instructions

You must follow these instructions carefully to allow this equipment to provide you with needed fall protection during this job. If you have any concerns about the condition of the equipment or experience any problems, or do not understand provided instruction sheet, notify your supervisor or the safety department immediately. Never take any chances.

Use only as directed in the corresponding instructions provided with each horizontal lifeline system.

6.0 Inspection

6.1 The SkyGirder is a component of the horizontal lifeline system. The user must inspect the SkyGirder post system before every use along with the horizontal lifeline and other fall arrest equipment. Additionally, a competent person other than the user must inspect the SkyGirder at intervals of no more than six months. The competent person inspection is referred to as formal inspection and should be carried out as part of the horizontal lifeline inspection. A detailed record of inspection dates must be maintained. A sample inspection and maintenance log is provided at the end of these instructions for your convenience. A convenient inspection date grid is also provided on the horizontal lifeline.

Warning ⚠

If damage is found or you have questions or any doubts about the equipment's condition, do not use the equipment. Tag the system "DO NOT USE" and contact SM/RTC Customer Service for advice.

6.2 Inspect the post and tie back brackets to make sure that they are securely fastened to the top flange of the I-beam. Bolts must also be securely fastened so that the brackets cannot move along the I-beam.

6.3 Inspect all hardware, posts, brackets, welded joints and cable for cuts, burns, corrosion, burrs, cracks, dents, distortion, abrasion and any other signs of wear or damage. Any cuts, wearing or abrasions to the cable or hardware is a signal to immediately remove the cable from service and replace with new cable and/or hardware. Also remove the cause of the damage from the system.

6.4 Inspect the following:

- Posts must be straight
- Bolts are not bent
- I-beam is straight
- Cables are not cut or frayed

6.5 Inspect the horizontal lifeline system according to the instructions provided with each horizontal lifeline system.

6.6 Inspect all other equipment including full body harnesses and fall arrestors according to the instructions provided with the equipment.

6.7 Labels on all SM/RTC equipment must be secure and easy to read.

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6.0 Inspection
Continued

6.8 When the horizontal lifeline system has been subjected to an accidental fall, it must be removed from service immediately. A competent person must inspect the entire SkyGirder system, including anchorage beam, according to these instructions before putting back into use. Check especially to ensure that the posts are straight, bolts are not bent, I-beam is straight, cables are not cut or frayed, and there is no deformation to any component of the system. If any parts are damaged and need replacement, contact SM/RTC.

7.0 Maintenance

If the SkyGirder becomes heavily soiled, it may be wiped clean with a cloth. A light lubricant may be applied to the threaded connections. (Refer to section 8.0 for regular inspection information.)

Store in a cool dry place.

8.0 Special Warnings

Never substitute parts of the SM/RTC SkyGirder or horizontal lifeline system.

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

8.2 Never use a lanyard or other means to provide extra space between snatch block and self-retracting lanyard.

8.3 Remove horizontal lifeline, self-retracting lanyards, and harnesses from service immediately after a fall.

8.4 Remove SkyGirder posts, brackets and tie back lines from service immediately after a fall. A qualified person must inspect the entire SkyGirder system, including anchorage beam, according to these instructions before putting back into use. If any parts are damaged and need replacement, contact SM/RTC.

8.5 Never permit usage where a swing fall hazard may occur.

8.6 Anyone who has a history of back or neck problems that could be aggravated or complicated by using SM/RTC 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.

If you have any questions or need additional explanation or clarification about the use of any SM/RTC equipment, call SM/RTC Customer Service at 800-323-7402 (U.S. and Canada) or 847-358-2000 in Illinois or outside the Continental United States.

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9.0 Safety Checklist

All operators and users of SM/RTC equipment MUST be able to answer "yes" to all of the following questions before installing or using any SM/RTC equipment:

✔ Has all equipment been assembled and installed according to SM/RTC instructions?

✔ Has all equipment been inspected and maintained in accordance with SM/RTC instructions?

✔ Has all equipment been visually inspected immediately before use and found to be in good condition and proper working order?

✔ Does the anchorage point meet SM/RTC requirements?

✔ Is the equipment being used in accordance with the maximum load capacities?

✔ Is the equipment suited for the intended work task, including travel to and from, and is it capable of providing continuous protection?

✔ Has each user been recently (within 6 months) trained in the proper and safe operation and use of the equipment?

✔ Do all users fully understand the instructions and agree to use the equipment in a safe manner?

✔ Is each person using this equipment in good health, and not under the influence of drugs or alcohol?

✔ Has SM/RTC been called (toll free) if you or any user does not know how to comply with these or any of the requirements of this instruction booklet?

Warning 

Do not use SM/RTC equipment if you answer "NO" to any of the questions above!

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10.0 Inspection and Maintenance Log

Part Number:									
Inspector									
Date									
Inspection Items									
Posts									
Brackets									
Welded Joints									
Bolts									
Threaded Rod									
Concrete Beam									
Horizontal Lifeline									
Harnesses									
Fall Arrestors									
Labels									
Other									

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