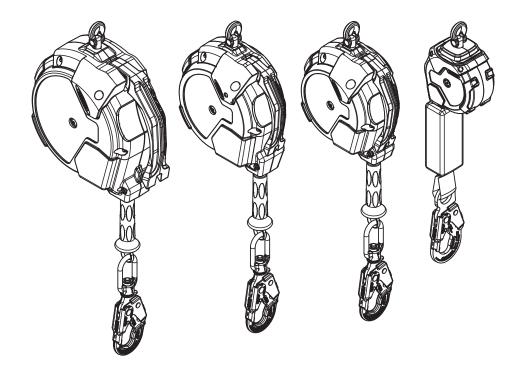


## **USER INSTRUCTIONS**

# MAX PATROL™ SELF RETRACTING LIFELINES MAX

Complies with the ANSI Z359.14 standard and OSHA 29 CFR 1910 and 1926 regulations.





## **⚠ WARNING!**

Compliant fall protection equipment must only be used as it was designed and adhere to the hierarchy of controls as discussed in ANSI Z359.2. Users MUST read and follow all user instructions provided with the product. Before using a fall arrest system, users must be trained in the safe use of the system, as required by OSHA 29 CFR 1910.30 and 1926.503, or local safety regulations. Misuse or failure to heed these warnings and instructions may result in injury or even death.

WORK SAFE! WORK SMART!

IF YOU HAVE ANY QUESTIONS ABOUT THE PROPER USE OF THE EQUIPMENT, SEE YOUR SUPERVISOR. USER INSTRUCTIONS. OR CONTACT WERNERCO FOR MORE INFORMATION.

#### GENERAL SAFETY INFORMATION

These User Instructions are not to be removed except by the user of this equipment. Current User Instructions must always be available to the user.

## **⚠ WARNING!**

- Failure to follow all instructions and limitations on the use of Self-Retracting Lifelines (SRL) may result in serious personal injury or death.
- Minors, pregnant women and anyone with a history of either back or neck problems should not use this equipment.
- 3. Do not use or install equipment without proper training from a "competent person" as defined by OSHA 29 CFR 1926.32(f).
- 4. SRL's are designed for a single user.
- Not all fall protection and rescue components are rated for the same user weight capacity. Only use components rated for the same weight capacity.
- Do not use combinations of components or subsystems, or both, that may affect or interfere with the safe function of each other.
- Caution must be taken when using SRL near moving machinery, electrical hazards, sharp edges, or abrasive surfaces. Contact with these elements may cause equipment failure, personal injury, or death.
- Personal fall arrest systems, including SRL's, must be inspected prior to each use for wear, damage and other deterioration. Defective components must be immediately removed from service in accordance with the requirements of OSHA 29 CFR 1910.140 and 1926.502.
- Do not expose SRL to chemicals, high heat, severe cold or other harsh environments which may produce a harmful effect. The SRL is designed to be used in temperatures ranging from -40°F to +130°F (-40°C to +54°C).
- 10. Avoid using SRLs in applications where engulfment hazards exist.
- 11. Do not use if inspection reveals any defect, wear, damage, deterioration, inadequate maintenance, or unsafe condition. Do not use any equipment that has been subjected to the forces of arresting a fall or if any part of the load indicator warning is showing.
- 12. Only anchor at or above the dorsal D-ring on the users full body harness.
- 13. Not suitable for leading edge applications.
- Dual-connections of twin leg SRLs shall only be made for the purposes of 100% tie-off transitions. If a dual connection is made for any other purpose, anchorages of different elevations must be utilized.
- 15. Never attach the unused leg of the lanyard back to the harness at any location other than the lanyard parking attachment.
- 16. Only lanyards designed for tie-back are approved for tie-back directly onto the webbing.
- 17. Never attach the tie-back snap hook to the tie-back SRL between the shock pack and the housing of the SRL.
- 18. Do not work on the far side of an opening, opposite the SRL anchor point.
- Only WernerCo, or persons or entities authorized in writing by WernerCo, shall make repairs or alterations to the equipment.
- 20. Alterations or misuse may result in serious personal injury or death.

## **⚠** CAUTION!

If an SRL is used in conjunction with a cross-arm strap anchorage connector, other anchorage extension, horizontal lifeline, or extended D-ring, the additional length of the anchorage connector, extended D-ring, or sag from the lifeline must be taken into consideration during the clearance calculation process.

#### USE INSTRUCTIONS AND LIMITATIONS

#### IMPORTANT

Before use, the user must read and understand these User Instructions. Keep these User Instructions for reference.

#### PURPOSE

Self-Retracting Lifelines are designed to be used as part of a complete personal fall arrest system.

#### USE INSTRUCTIONS

- Failure to follow all instructions and limitations on the use of the SRL may result in serious personal injury or death.
- Before using a personal fall arrest system, employees must be trained in accordance with the requirements of OSHA 29 CFR 1910.30 and 1926.503 in the safe use of the system and its components.
- Personal fall arrest and rescue systems, including the SRL, must be inspected prior to each use for wear, damage, and other deterioration. Defective components must be immediately removed from service in accordance with the requirements of OSHA 29 CFR 1910.140 and 1926.502.
- 4. The complete fall arrest system must be planned (including all components, calculating fall clearance, and swing fall) before using.
- 5. Users must have a rescue plan, and the means at hand to implement it, that provides for the prompt rescue of the user in the event of a fall, or assures that the user is able to rescue themselves. A fall over an edge may require special rescue measures.
- 6. Store the SRL in a cool, dry, clean environment, out of direct sunlight, when not in use.
- After a fall occurs on the system, immediately remove from service until a "competent person" can make the determination for reuse or disposal.

#### **USE LIMITATIONS**

 CAPACITY: SRL's are designed for users with a capacity (including clothing, tools, etc.) up to 400 lb (181 kg) total working weight.

## **⚠** WARNING!

Not all fall protection and rescue components are rated for the same user weight capacity. Only use components rated for the same weight capacity.

- CORROSION: Do not leave SRL's in environments where corrosion of metal parts could
  take place as a result of vapors from organic materials. Use near seawater or other corrosive
  environments may require more frequent inspections to ensure corrosion damage is not affecting
  the performance of the product.
- CHEMICAL HAZARDS: Solutions containing acids, alkali, or other caustic chemicals, especially
  at elevated temperatures, may cause damage to the SRL's. When working with such chemicals,
  frequent inspection of this equipment must be performed. Contact WernerCo with any questions
  concerning the use of the SRL around chemical hazards.
- 4. EXTREME TEMPERATURE: SRL's are designed to be used in temperatures ranging from -40°F to +130°F (-40°C to +54°C). Protection should be provided for SRL's when used near welding, metal cutting or similar activities. Contact WernerCo with any questions concerning high temperature environments.
- 5. ELECTRICAL HAZARDS: Use extreme caution when working near high voltage power lines due to the possibility of electric current flowing through the SRL or connecting components.
- 6. HEALTH: Minors, pregnant women and anyone with a history of either back or neck problems should not use this equipment.
- 7. RESCUE: In the event of a fall over the edge, special rescue measures may be required.
- 8. TRAINING: Do not use SRL's without proper training from a "competent person" as defined by OSHA 29 CFR 1910.140(b) and 1926.32(f).
- REPAIRS: Only WernerCo, or persons or entities authorized in writing by WernerCo, may make repairs or alterations to the equipment.

#### **ANCHORAGE REQUIREMENTS**

#### ANCHORAGES

All anchorages to which the SRL attaches must meet the requirements of ANSI Z359.2 and OSHA 29 CFR 1910 and 1926.

#### OSHA states:

Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used 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.

3

ANSI Z359.2 states that anchorages selected for fall arrest systems must have a strength capable of sustaining static loads, applied in all permitted directions by the system:

- A) no less than 5,000 pounds (22.2 kN) for non-certified anchorages; or
- B) at least two times the maximum arresting force for certified anchorages;
- C) according to ANSI Z359.6, Specifications and Design Requirements for Active Fall Protection Systems.

When more than one personal fall arrest system is attached to the anchorage, the strength in (A) or (B) must be multiplied by the number of personal fall arrest systems attached to the anchorage.

#### CONNECTION REQUIREMENTS

#### COMPATIBILITY LIMITATIONS

All connecting subsystems must only be coupled to compatible connectors. OSHA 29 CFR 1910.140 and 1926.502 prohibit snap hooks from being engaged to certain objects unless two requirements are met: snap hook must be a locking type and must be "designed for" making such a connection. Under OSHA "designed for" means that the manufacturer of the snap hook specifically designed the snap hook to be used to connect to the equipment in question.

The following connections must be avoided because they can result in rollout\* when a non-locking snap hook is used:

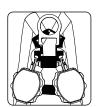
- Direct connection of a snap hook to horizontal lifeline.
- Two (or more) snap hooks connected to one D-ring.
- Two snap hooks connected to each other.
- A snap hook connected back on its integral lanyard.
- A snap hook connected to a webbing loop or webbing lanyard.
- Improper dimensions of the D-ring, rebar, or other connection point in relation to the snap hook dimensions that would allow the snap hook keeper to be depressed by a turning motion of the snap hook.

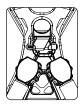
\*Rollout: A process by which a snap hook or carabiner unintentionally disengages from another connector or object to which it is coupled.

#### COMPATIBLE CONNECTIONS



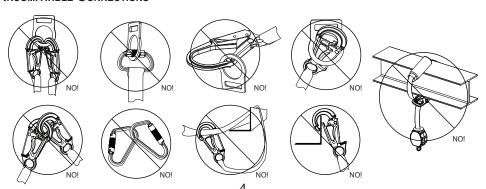






For R430 Models Only

#### INCOMPATIBLE CONNECTIONS

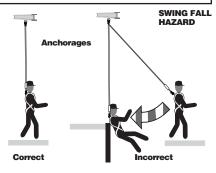


## **↑ WARNING!**

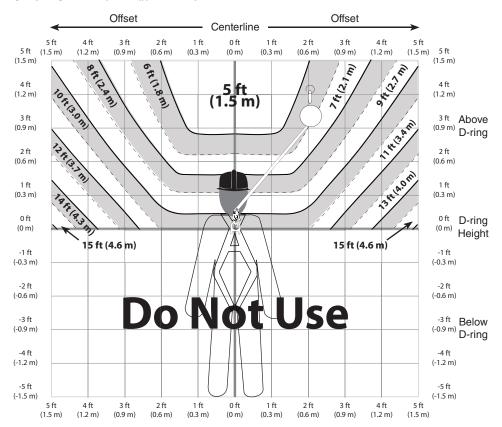
Striking objects horizontally due to the pendulum effect of a swing fall may cause serious injury or death.

#### SWING FALLS

To minimize the possibility of a swing fall, anchor as directly above the work area as possible. Striking objects horizontally, due to the pendulum effect, may cause serious injury. Swing falls also increase the vertical fall distance of a worker, compared to a fall directly below the anchorage connector. Swing falls may be reduced by using overhead anchorage connectors that move with the worker.



#### OFFSET CLEARANCE REQUIREMENTS

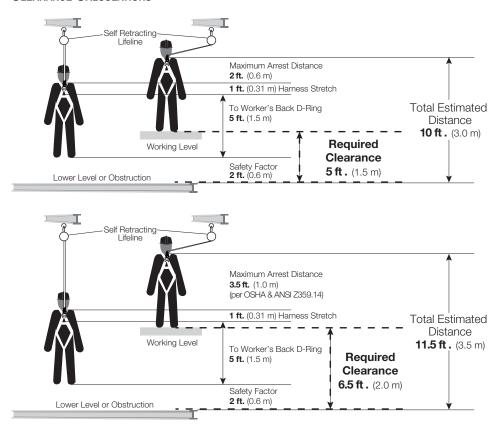


**Example:** With the SRL anchored 4 feet above the users D-ring and the user works 2 feet away (offset) from directly overhead (centerline), the required clearance is 6 feet (1.8 m) from the working level to the nearest obstruction below.

The required clearance includes; Free Fall and Swing Fall Distance, Harness Stretch, Deceleration Distance and Safety Factor.

Not approved for free falls greater than 2 feet.

#### CLEARANCE CALCULATIONS



#### MATERIALS

Model No.	Length	Housing	Housing Connector	Lifeline Constituent	Lifeline Connector
R430011	11 Feet	Thermoplastic	Steel Carabiner	1 inch wide 1/16 inch thick UHMWPE / polyester webbing	Steel Snap Hook
R430011-R	11 Feet	Thermoplastic	Steel Carabiner	1 inch wide 1/16 inch thick UHMWPE / polyester webbing	Aluminum Rebar Hook
R430011-SR	11 Feet	Thermoplastic	Steel Carabiner	1 inch wide 1/16 inch thick UHMWPE / polyester webbing	Steel Form Hook
R410020	20 Feet	Thermoplastic	Steel Carabiner	¾₁6 inch galvanized steel cable	Steel Swivel Snap Hook
R410030	30 Feet	Thermoplastic	Steel Carabiner	¾₁6 inch galvanized steel cable	Steel Swivel Snap Hook
R410050	50 Feet	Thermoplastic	Steel Carabiner	3√16 inch galvanized steel cable	Steel Swivel Snap Hook

#### HORIZONTAL SYSTEMS

Applications where the SRL is used horizontally or with a horizontal system, the SRL and horizontal system components must be compatible. Both the horizontal and vertical distances are required for clearance calculations. Horizontal systems must be designed and installed under the supervision of a qualified person.

These units are suitable for use with horizontal lifelines, and deforming or flexible anchorages.

## PERFORMANCE R410020, R410030 AND R410050

Standards and Regulations	Maximum Arrest Distance	Free Fall Limit	Maximum Arrest Force	Average Arrest Force	Capacity
ANSI Z359.14	24 in	2 ft	1800 lbs	1,350 lbs	130 - 310 lbs
SRD Class 1	(610 mm)	(0.6 m)	(8 kN)	(6 kN)	(59 - 141 kg)
OSHA 29 CFR	42 in	2 ft	1800 lbs	N/A	400 lbs
1910.140/1926.502	(1067 mm)	(0.6 m)	(8 kN)		(181 kg)

#### R430011, R430011-R AND R430011-SR

Standards and Regulations	Maximum Arrest Distance	Free Fall Limit	Maximum Arrest Force	Average Arrest Force	Capacity
ANSI Z359.14	24 in	2 ft	1800 lbs	900 lbs	130 - 310 lbs
SRD Class 1	(610 mm)	(0.6 m)	(8 kN)	(4 kN)	(59 - 141 kg)
OSHA 29 CFR	42 in	2 ft	1800 lbs	N/A	400 lbs
1910.140/1926.502	(1067 mm)	(0.6 m)	(8 kN)		(181 kg)

#### **OPERATION**

BEFORE EACH USE

## 

Before using a personal fall arrest system, employees must be trained in accordance with the requirements of OSHA 29 CFR 1910.30 and 1926.503 and/or applicable local, state, governmental and jurisdictional agencies, in the safe use of the system and its components.

Personal fall arrest systems, including SRL's, must be inspected prior to each use for wear, damage, and other deterioration. Defective components must be immediately removed from service in accordance with the requirements of OSHA 29 CFR 1910.140 and 1926.502 and/or applicable local governmental and jurisdictional standards.

The user must read and understand these user instructions, as well as the user instructions for every component and subsystem of the personal fall arrest system.

Users must have a rescue plan, and the means to implement it, that provides for the prompt rescue of employees in the event of a fall or assures that employees are able to rescue themselves.

Check the operation by pulling smoothly on the lifeline, then pulling sharply on the lifeline to engage the locking mechanism.

SRL's must be inspected prior to each use. See INSPECTION.

#### CONNECTION

## **↑** WARNING!

Never attach an additional energy absorbing lanyard, self retracting lifeline, or similar component to lengthen the lifeline.

## riangle Warning!

Only anchor at or above the dorsal D-ring on the users full body harness.

On R410 SRLs, attach the housing connector of the SRL to the anchorage or anchorage connector. The opposing end is connected to the dorsal D-ring of the full body harness.

On R430 SRLs, attach the same as R410 SRL or attach the housing connector of the SRL to the dorsal D-ring of the full body harness. The opposing end is connected to the anchorage or anchorage connector.

For twin leg connections, see applicable twin leg connector user instructions.

Type Of Use	Application Examples	Conditions Of Use	Inspection Frequency Competent Person
Infrequent to Light	Rescue and confined space, factory maintenance	Good storage conditions, indoor or infrequent outdoor use, room temperature, clean environments	Annually
Moderate to Heavy	Transportation, residential construction, utilities, warehouse	Fair storage conditions, indoor and extended outdoor use, all temperatures, clean or dusty environments	Semi-annually to annually
Severe to Continuous	Commercial construction, oil and gas, mining	Harsh storage conditions, prolonged or continuous outdoor use, all temperatures, dirty environments	Quarterly to semi- annually

## **↑ WARNING!**

Do not use if inspection reveals any defect, wear, damage, deterioration, inadequate maintenance, or unsafe condition. Do not use any equipment that has been subjected to the forces of arresting a fall, or if any part of the load indicator warning is showing.

#### INSPECTION

#### FREQUENCY

All components of SRL's must be inspected prior to each use, and annually by an OSHA defined "competent person" other than the user. Local, state, governmental and jurisdictional agencies governing occupational safety may require the user to conduct more frequent or mandatory inspections.

## **↑ WARNING!**

If inspection reveals any defect, inadequate maintenance, or unsafe condition, remove from service until a "competent person", as defined by OSHA 29 CFR 1910.140(b) and 1926.32(f), can determine the need for authorized repair or disposal.

## **↑ WARNING!**

Any equipment that has been subjected to the forces of arresting a fall, or that has a deployed load indicator, must be removed from service until a "competent person" can determine the need for authorized repair or disposal.

#### CRITERIA

All components of the SRL must be inspected.

All markings must be legible and attached to the product.

On R410 SRLs, exposed red on the snap hook is the load indicator that the SRL has been subjected to the forces of arresting a fall.

On R430 SRLs, white web visible outside the shock pack is the fall indicator and that the SRL has been subjected to the forces of arresting a fall.

Check the operation of the unit by pulling smoothly on the lifeline, then pulling sharply on the lifeline to engage the locking mechanism. Unit must not slip when locked.

Housing must be free from cracks, distortion or any other damage.

Cable must be inspected for kinks, broken strands, corrosion, abrasion, or other signs of wear and/or damage. Swaged terminations must be secure with the thimble tight and no visible damage.

To inspect webbing, bend a 6 - 8 inch portion of the webbing into an upside down 'U' shape. Continue along all webbing and rope inspecting for tears, cuts, fraying, abrasion, discoloration, burns, holes, mold, pulled or broken stitches, or other signs of wear and damage.

All equipment must be free of corrosion, chemical attack, alteration, excessive heating or wear.

All snap hooks and carabiners on product must be able to self-close and lock. All hardware must be free of cracks, sharp edges, deformation, corrosion, or any evidence of defect.

All components of the fall arrest system must be inspected. See User Instructions supplied with each product.

### **CLEANING, MAINTENANCE AND STORAGE**

#### CLEANING

Cleaning and maintenance may be performed by the user. The SRL may be wiped down with a mild detergent and clean water solution, and rinsed with a dampened clean cloth to remove detergent. The hardware can also be wiped down to remove grease or dirt with a clean dry cloth.



## **WARNING!**

Only WernerCo, or persons or entities authorized in writing by WernerCo, shall make repairs or alterations to the equipment.

#### MAINTENANCE

SRL's requiring maintenance must be tagged "unusable" and removed from service. Do not use any SRL that requires maintenance. Cleaning and maintenance may be performed by the user.

Snap hooks may require periodic lubrication. Do not apply oil, grease, or other contaminants on the webbing or cable. Use a dry lubricant that has proper resistance to temperature extremes, moisture, and corrosion. Do not over-lubricate.

#### STORAGE

SRL's should be stored in a cool, dry place out of direct sunlight when not in use. Do not store where damage from environmental factors such as heat, light, excessive moisture, oil, chemicals and their vapors, or other degrading elements may be present.

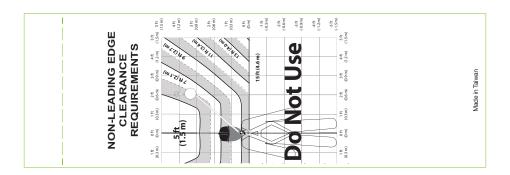
Do not store damaged equipment or equipment in need of maintenance in the same area as product approved for use.

Equipment that has been stored for an extended period must be inspected as defined in these User Instructions prior to use.

## **!** WARNING:

Compliant fall protection equipment must only be used as it was designed and adhere to the hierarchy of controls as discussed in Z359.2. Users MUST read and follow all user instructions provided with the product. Before using a fall arrest system, users must be trained in the safe use of the system, required by OSHA 29 CFR 1910.30 and 1926.503, or local safety regulations. Product must be inspected prior to each use according to the user instructions. See user instructions for inspection frequency. Before each use check the device for locking by pulling sharply to engage the locking mechanism. Only make compatible connections. Connect only using swivel eye. Dual-connections shall only be made for the purposes of 100% tie-off transitions. Suitable for horizontal use and with horizontal lifelines. User repairs and alterations are NOT permitted. Avoid physical and environmental hazards such as thermal, machinery, and electrical and chemical sources. Exposure to a sharp or serrated structural edge could damage the device and that anchorage should be elevated to the extent possible to limit the risk of damage or failure. For proper use see supervisor, user instructions, or contact Werner Co.

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