

User Instructions

V-TEC®, V-TEC® Synthetic, and V-TEC® EDGE SRLs

Fall Protection



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Print Spec: 10000005389 (EO)
CR: 800000066486

⚠ WARNING!

These instructions must be provided to users before use of the product and retained for ready reference by the user. Read this manual carefully before using or maintaining the device. The device will perform as designed only if it is used and maintained in accordance with the manufacturer's instructions. Otherwise, it could fail to perform as designed, and persons who rely on this device could sustain serious injury or death.

The warranties made by MSA with respect to the product are voided if the product is not installed and used in accordance with the instructions in this manual. Please protect yourself and your employees by following the instructions.

Please read and observe the WARNINGS and CAUTIONS inside. For additional information relative to use or repair, call 1-800-MSA-2222 during regular working hours.

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The Safety Company

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For your local MSA contacts, please go to our website www.MSAsafety.com

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1 Safety Regulations

WARNING!

User Requirements

- Users of Self Retracting Lifelines (SRLs) shall be medically fit and suitably trained.
- SRLs shall not be used by pregnant women, minors or those under the influence of alcohol or drugs.
- For single user only, within manufacturer's specified weight range, including user, clothing, and tools.
- It is essential for user safety that equipment is withdrawn from use immediately if any doubt arise about its condition for safe use. If the equipment has been used to arrest a fall, do not use again until confirmed in writing by a competent person that it is acceptable to do so.

Anchor Requirements / Swing Fall / Fall Clearance

- The anchorage must be capable of supporting the required load. See Section [2.2 Product Specifications](#), and [3.2 Product Specifications](#) for details on anchorage strength.
- Ensure that the available fall clearance is equal to or greater than the fall clearance required in Section V-TEC, V-TEC Synthetic, and V-TEC EDGE SRLs Fall Clearance Charts.
- Remove any surface contamination such as, but not limited to concrete, stucco, roofing material, etc. that could accelerate cutting or abrading of components.
- For use in accordance with acceptable locations as shown in Section [2.3 Fall Clearance Charts](#), and [3.3 Fall Clearance Charts](#). The user shall consider any risks posed by swing falls.
- Swing falls can increase fall distance. In overhead applications, work directly under the anchorage. In horizontal (leading edge) applications, minimize the horizontal offset. Increasing the horizontal offset will increase the amount of swing fall. Always remove obstructions in or adjacent to the fall path. Keep work area free from debris, obstructions, trip hazards, spills, or other hazards which could impair the safe operation of the fall protection system. For horizontal applications DO NOT use the device unless a qualified person has inspected the workplace and determined that the identified swing fall hazards have been eliminated or exposures to them prevented.

Product Use

- SRLs are only to be used for their intended purpose and within their limitations. DO NOT intentionally misuse this product. DO NOT use fall protection equipment for purposes other than those for which it was designed. DO NOT use fall protection equipment for towing, hoisting, or material handling.
- SRLs shall not be altered or added to. No unauthorized repairs, modifications, alterations and/or additions are permitted. Only MSA or persons or entities with written authorization from the manufacturer may make repairs to the SRL.
- RESCUE AND EVACUATION: the user must have a rescue plan and the means at hand to implement it. The plan must take into account the equipment and specific training necessary to affect prompt rescue under all foreseeable conditions.
- DO NOT rely on feel or sound to verify proper connector engagement. Ensure the connector is closed before use.
- Additional lanyard connectors shall not be added, as this would serve to lengthen the lifeline and increase free fall.
- Anchors shall only be connected to the swivel at the top of the housing. DO NOT connect an anchor to the carrying handle on the housing.
- Unsuitable for use on unstable surfaces, fine grain materials or particulate surfaces such as sand or coal, as insufficient speed may prevent lock-on in the event of a fall (possible engulfment hazard).
- DO NOT use where line may be exposed to sharp, jagged or abrasive edges. For leading edge guidance, see Section [3.4 Leading Edge Installation and Use](#).
- SRLs shall not come into contact with hot surfaces (such as hot pipes), become entangled with moving machinery, or come into contact with electrical hazards (such as high voltage power lines).

- SRLs shall be protected from fire, acids, caustic solutions, or temperatures outside the range -40°F to 130°F (-40°C to 54°C).
- DO NOT leave the SRL installed in environments which could cause damage or deterioration to the product. Refer to the care details in Section 6 [Cleaning and Storage](#) and inspection details in Section 5 [Pre-Use Checks and Periodic Examinations](#).
- Instructions shall be retained and provided to all users of SRLs in the language of the destination country, even when resold.
- DO NOT exceed the maximum fall arrest forces as specified by governing standards or subsystem components.
- Use of combinations of components or subsystems, or both, may affect or interfere with the safe function of the components or subsystems. Use only compatible components or subsystems; never add additional length to the system.

Leading Edge-Specific Product Use

- The V-TEC EDGE SRLs anchorage point shall be at the user's foot level or above.
- Use in edge situations should only be as a last resort. Leading edge configurations shall only be used after all other hierarchy of controls, including restraint systems and overhead anchorages, have been exhausted.
- Product label indicates whether or not a product is capable of being used in leading edge applications.
- Avoid working where the lifeline will continuously or repeatedly abrade against sharp, jagged, or abrasive edges.
- Do not work on the far side of an opening opposite the anchorage point or around corners.
- Leading edge configurations shall only be used in accordance with local regulations.
- In leading edge applications with 0 ft (0 m) setback, ensure that setup does not allow housing unit or top connector to contact leading edge in the event of a fall.

Inspection/Removing Product From Service

- SRLs that have arrested a fall or are unable to pass an inspection shall be tagged "UNUSABLE" until it has been destroyed and disposed of in accordance with local regulations.
- Due to the nature of some fall arrest events, it is possible for the load indicator to not deploy. In the event that a SRL is subjected to fall arrest forces and the load indicator does not deploy, the SRL still must be removed from service and marked as "UNUSABLE" until it has been destroyed and disposed of in accordance with local regulations.
- If the load indicator is deployed, immediately remove the SRL from service and mark it as "UNUSABLE" until it has been destroyed and disposed of in accordance with local regulations.

Failure to follow these warnings can result in serious personal injury or death.

2 V-TEC SRL / V-TEC Synthetic SRL

A declaration of conformity may be downloaded at MSAsafety.com/DoC

Full terms and conditions can be found on this product's page on MSAsafety.com by clicking on the Literature tab.

2.1 Labels and Icons

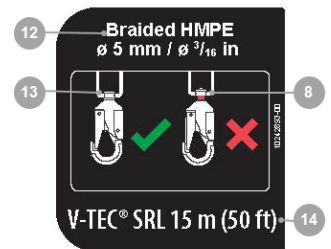
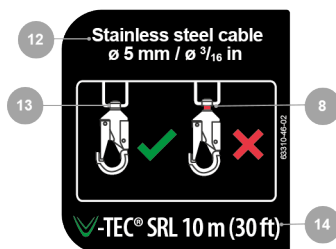
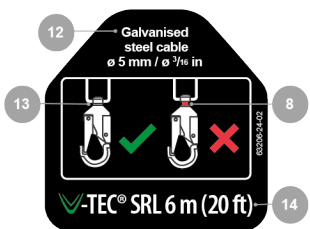
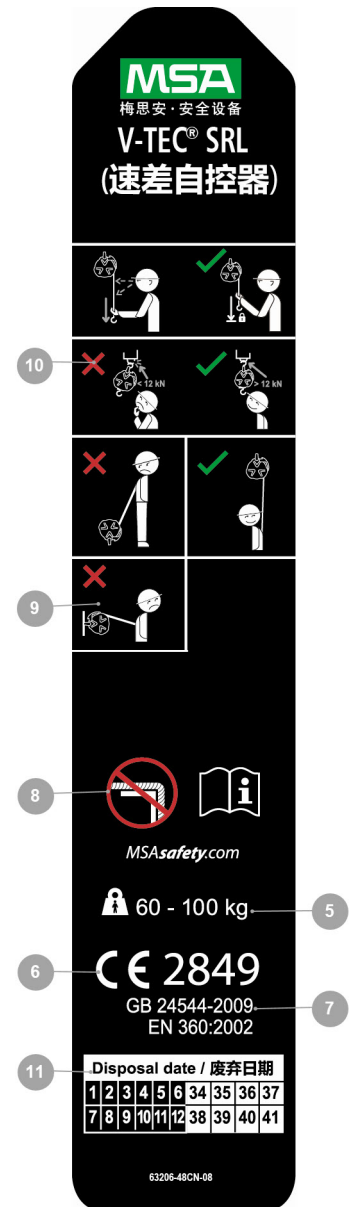
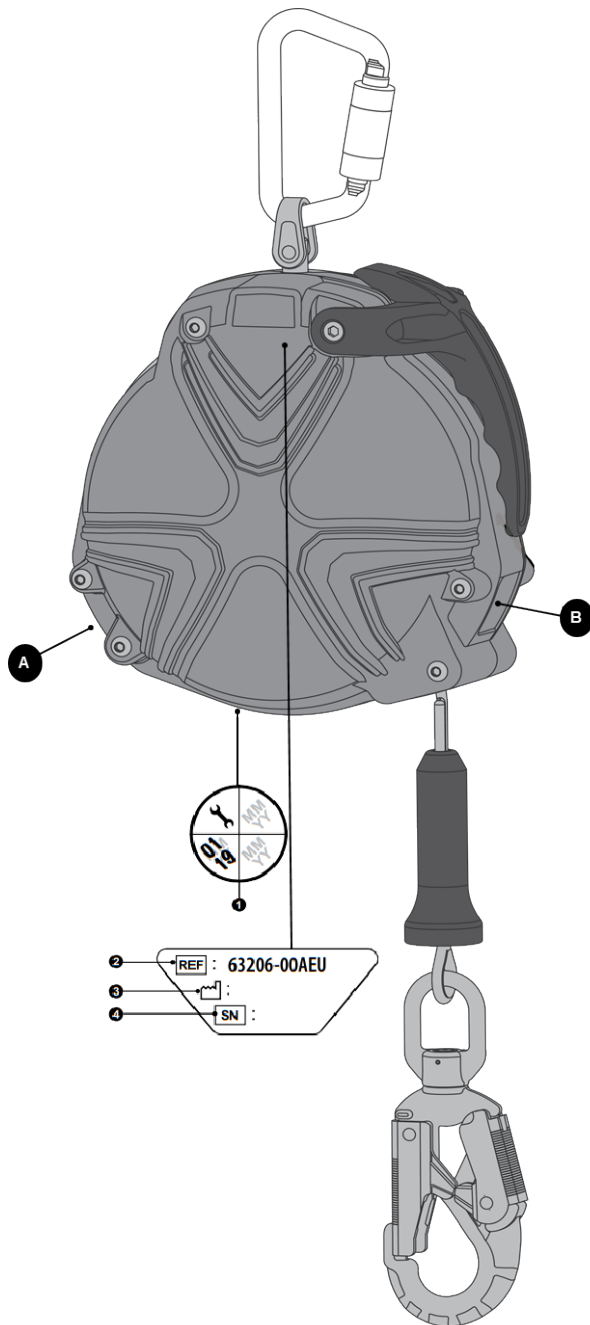


Table 1 V-TEC SRL Product Marking

A	Case Label Location (GB)
B	Lifeline Label Location (Galvanised / Stainless Steel / Braided HMPE)
1	Date of Next Examination
2	Model Number
3	Date of Manufacture MM/YY
4	Serial Number
5	Capacity
6	Notified Body Number
7	Standard
8	Do Not Use
9	Product Warning
10	Do Not Use
11	Disposal Date
12	Lifeline Construction
13	Load Indicator Location
14	Length

2.2 Product Specifications

Component	Approval
Anchorage Connector Standard	ANSI Z359.18 / OSHA 1926.502, 1910.140 / CSA Z259.15 / CSA Z259.13 / EN 795 and / or TS 16415 / NBR 15837
Harness Standard	ANSI Z359.11 / OSHA 1926.502, 1910.140 / CSA Z259.10 / EN 361 / NBR 15835 / NBR 15836
Connectors Standard	ANSI Z359.12 / OSHA 1926.502, 1910.140 / CSA Z259.12 / EN 362 / NBR 15837
Structure Strength	3600 lbf (16 kN) certified 5000 lbf (22.2 kN) non-certified / 5000 lbf (22.2 kN) / 12 kN

2.2.1 V-TEC SRL / V-TEC Synthetic SRL Materials

Component	Material
Case	Polycarbonate
Drum	PC-ABS / Aluminium / Stainless steel (7 m, 10 m, 15 m)
Chassis, pawls, locking mechanism, swivel, main spring	Stainless Steel
Lifeline	5 mm galvanized steel, stainless steel, or HMPE
Connectors	Steel

2.3 Fall Clearance Charts

V-TEC SRL / V-TEC Synthetic SRL

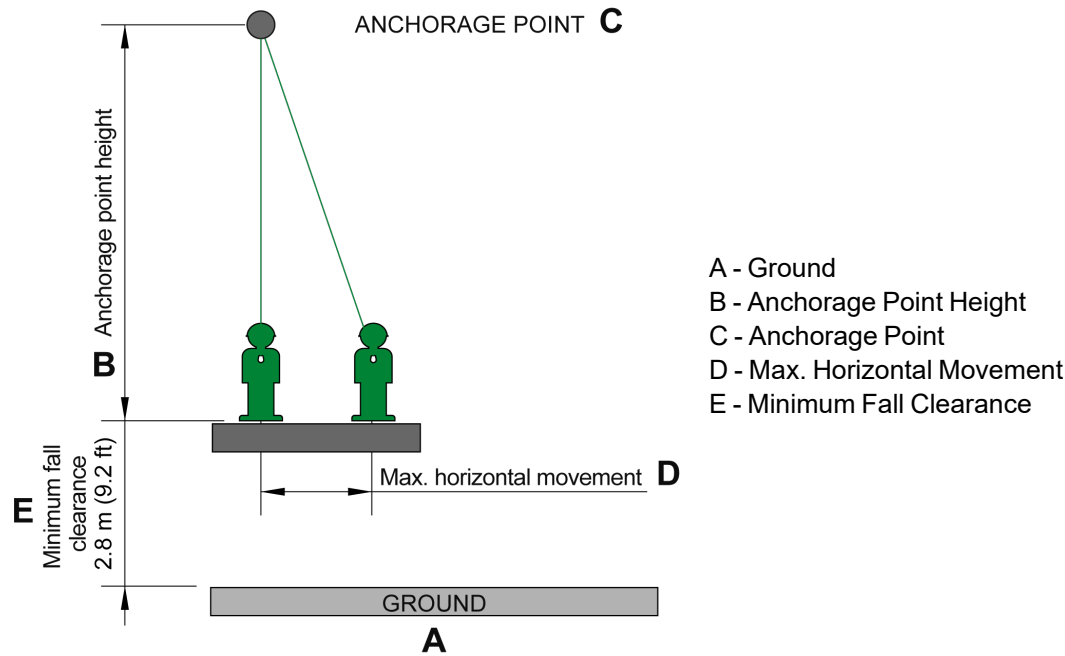
Ensure sufficient clearance exists to prevent striking an obstacle or leading edge (e.g. crossbeams and girders) during a fall. Insufficient clearance, obstructions and leading edges can prevent the function of the V-TEC SRL and V-TEC Synthetic SRL. To reduce the risk of a swing fall, it is preferable to anchor directly overhead.

The minimum fall clearance is 2.8 m. Fall clearance is calculated as the vertical distance between the working platform and the first obstacle below (such as the next platform or ground).

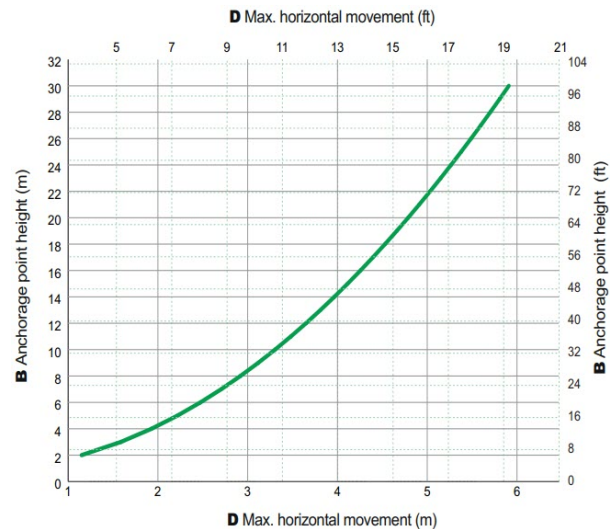
The V-TEC SRL and V-TEC Synthetic SRL are suitable for use on approved horizontal lifelines or rigid anchors. If the V-TEC SRL or V-TEC Synthetic SRL is attached to an anchor that may deflect or deploy in a fall, such as a deadweight anchor or anchor line, the additional deployment of that device shall be included as a safety margin to the minimum clearances. For further clarification on determining suitable fall clearances, contact MSA.

To reduce the potential for injury in a fall, the fall distance should be minimized.

Acceptable Anchor Locations



- A - Ground
- B - Anchorage Point Height
- C - Anchorage Point
- D - Max. Horizontal Movement
- E - Minimum Fall Clearance



3 V-TEC EDGE SRL

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3.1 Labels and Icons

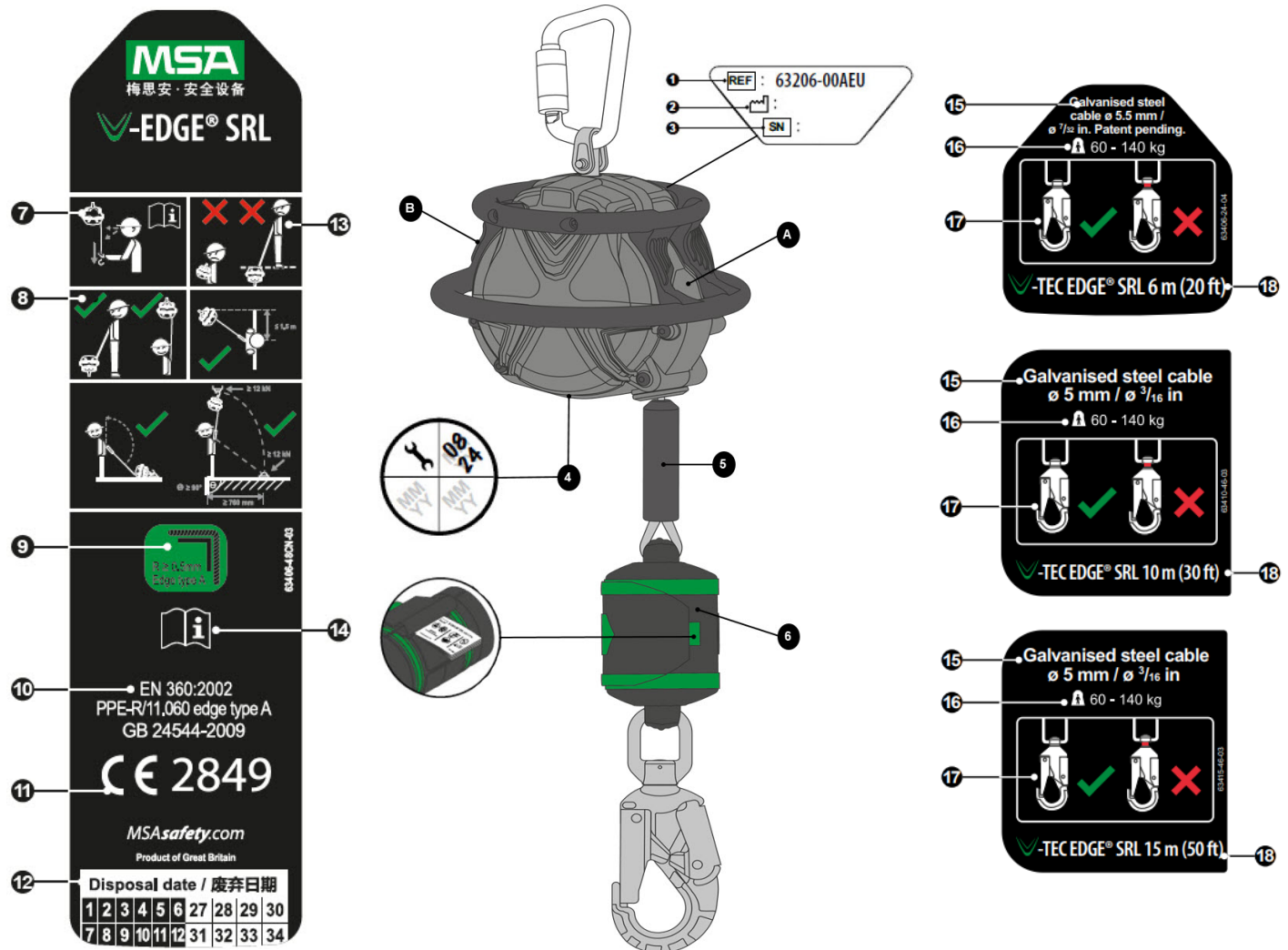


Table 2 V-TEC EDGE Product Marking

A	Case Label Location (GB)	12	Disposal Date
B	Lifeline Label Location (Galvanised Steel)	13	Do Not Use
1	Model Number	14	Read User Instructions
2	Date of Manufacture MM/YY	15	Lifeline Construction
3	Serial Number	16	Capacity
4	Date of Next Examination	17	Load Indicator
5	Shock Tube	18	Length
6	Tear Webbing Case		
7	Pre-Use Checks		
8	Product Warning		

9	Acceptable Edge Type		
10	Standard		
11	Notified Body Number		

3.2 Product Specifications

Component	GB
Anchorage Connector Standard	GB 30862
Harness Standard	GB 6095
Connectors Standard	GB/T 23469
Structure Strength	12 kN

3.2.1 V-TEC EDGE SRL Materials

Component	Material
Case	Polycarbonate
Drum	PC-ABS / Aluminium / Stainless steel (10 m, 15 m)
Chassis, pawls, locking mechanism, swivel, main spring	Stainless Steel
Lifeline	Ø 5 mm galvanised steel (3/16")
Energy absorber case	Poly Propylene (PP)
Energy absorber	HMPE
Connectors eyelets and shafts	Stainless Steel

3.3 Fall Clearance Charts

Ensure sufficient clearance exists to prevent striking an obstacle or structure during a fall. Insufficient clearance or obstructions can prevent the function of the V-TEC EDGE SRL.

V-TEC EDGE SRL and absorber deployment is typically equal to a maximum of 1.4 m (55") for a 140 kg (310 lbs) User. Consult (Vertical use) or (Horizontal use) for acceptable anchor locations in relation to the User and for minimum clearance requirements. Fall clearance is the vertical distance between the working platform and the first obstacle below (such as the next platform or ground). To accurately calculate sufficient fall clearance, the following is used: Fall clearance = Maximum Deployment + Lock-on (arrest) distance + Swing fall distance + Safety margin.

The clearance requirements in (Vertical Use) are based on free fall conditions. The presence of obstructions (such as structure edges) may reduce clearance requirements, but may introduce additional hazards, such as potential for laceration or impact injuries.

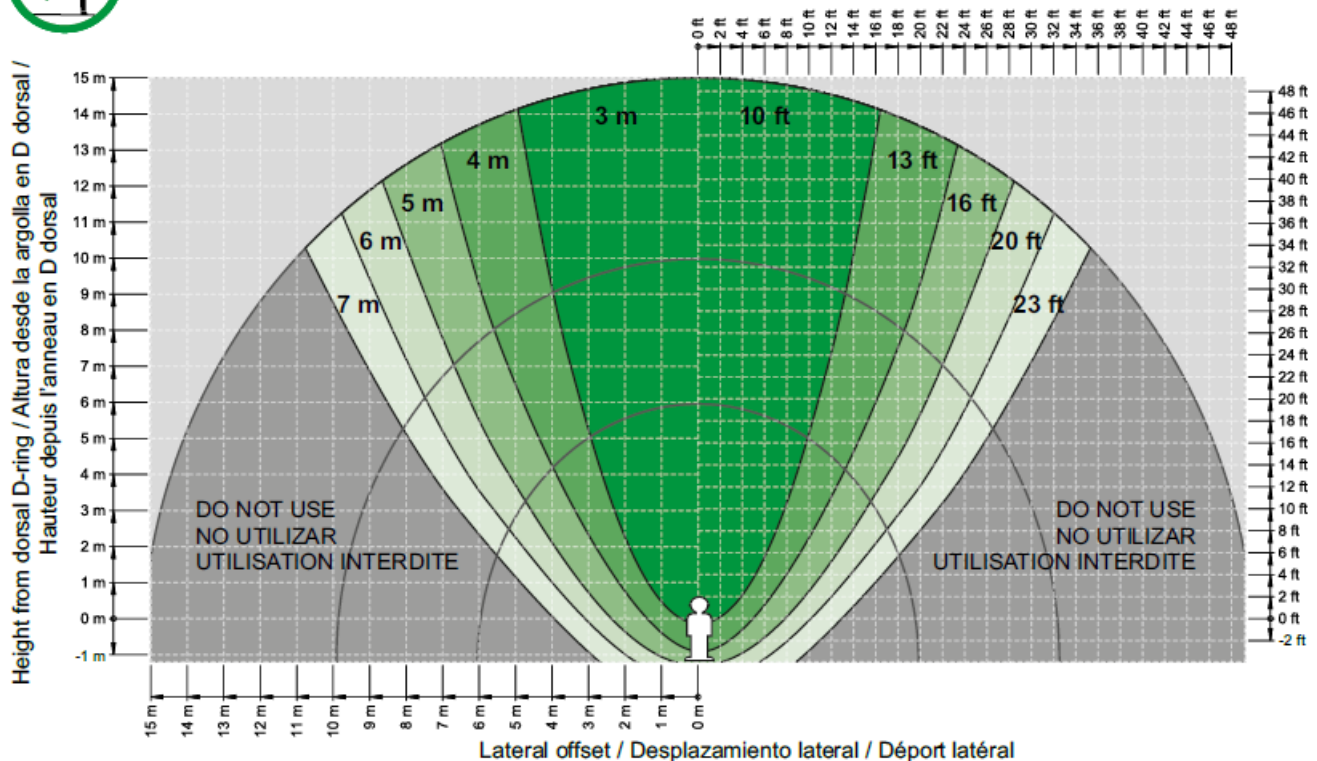
If the V-TEC EDGE SRL is attached to an anchor that may deflect or deploy in a fall, the deployment of that device shall be added to the minimum clearances specified in the below Acceptable Anchor Locations - Vertical Use Chart. The V-TEC EDGE SRL has not been tested for leading edge use with horizontal anchor lines (such as EN 795 Class C devices), dead-weight anchors (such as EN 795 Class E devices) or anchors which may deploy under load (e.g. standing seam roof posts). Therefore, only rigid anchors (such as EN 795 Class A, B or D devices) are suitable for leading edge use.

To reduce the potential for injury in a fall, work shall be carried out in such a way that the potential for a fall and the potential fall distance is minimized.

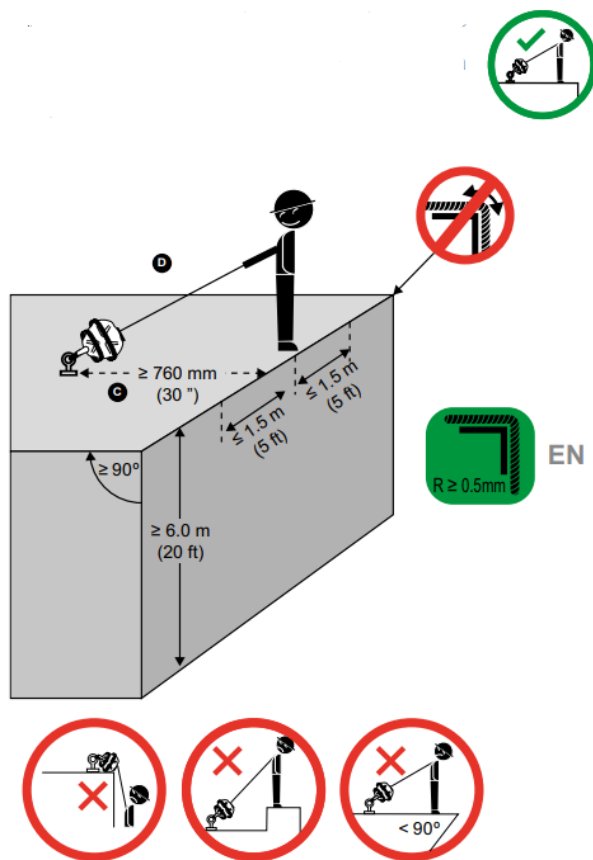
Acceptable Anchor Locations - Vertical Use



Vertical use - Acceptable anchor locations



Acceptable Anchor Location - Horizontal (Leading Edge) Use



3.4 Leading Edge Installation and Use

If a fall over an edge is possible, special rescue measures shall be defined and trained for. Consideration shall be given to accessing a suspended user without further loading or moving the lifeline over an edge.

WARNING!

- Leading Edge configurations shall only be used after all other hierarchy of controls, including restraint systems and overhead anchorages, have been exhausted.
- Leading Edge configurations shall only be used in accordance with local regulations.
- Leading Edge configurations shall be used in accordance with the instructions, warnings and limitations in these User Instructions.

Failure to follow these warnings can result in serious personal injury or death.

Horizontal Offset: When using V-TEC EDGE SRLs configurations in a horizontal (leading edge) application, lateral movements to both sides of the center axis shall be limited to a maximum 5 ft (1.5 m) when the unit is set back ≤ 5 ft (1.5 m). Large horizontal spans shall be avoided, as they can increase forces applied to the structure and introduce swing falls. Consult the anchor location information in Section 3.3 [Fall Clearance Charts](#) for additional detail.

Edge Types: V-TEC EDGE SRLs configurations have been tested for horizontal (leading edge) use over a steel edge without burrs using the methods in ANSI Z359.14-2021 (Class 2) and CSA Z259.2.2-2017 (Class SRL-LE). Therefore, the V-TEC EDGE SRLs may be used where a fall may occur over similar edges.



Additionally, while the ANSI Z359.14-2021 (Class 2) or CSA Z259.2.2-2017 (Class SRL-LE) standards do not address edges other than steel, the V-TEC EDGE SRL has been tested using the methods in ANSI Z359.14-2014 with the following edges:

- A cold formed corrugated steel test edge. Edges used for testing were at thicknesses ranging from 22 gage (0.0295" / 0.7493 mm) to 16 gage (0.0598" / 1.5189 mm). Therefore, V-TEC EDGE SRL configurations may be used where a fall may occur over similar edges.
- A concrete test edge with a compressive strength of 4500 - 5000 psi manufactured with an unfinished 90° edge without roughness, chipping, or other irregularities. Therefore, V-TEC EDGE SRLs configurations may be used where a fall may occur over similar edges.

Edge Evaluation: Prior to use, leading edges must be evaluated by a qualified person. Use in these situations should only be as a last resort. Avoid working where the lifeline will continuously or repeatedly abrade against sharp, jagged, or abrasive edges. If the risk assessment indicates that an edge could damage the lifeline, then eliminate such contact or protect the edges using a pad or other means before starting work.

Anchorage Considerations: Horizontal (leading edge) use or anchoring at the feet of the user should be limited wherever possible to avoid the potential for swing fall and the possibility of the user striking a structure, potentially causing serious injury. To reduce the risk of a swing fall, anchor directly above the user.

The V-TEC EDGE SRL anchorage point shall be at the user's foot level or above. Climbing above the anchorage point is not permitted. Measures shall be taken to prevent use over unintended edges. Do not work on the far side of an opening opposite the anchorage point or around corners.

⚠ WARNING!

- Anchor locations shall adhere to V-TEC EDGE SRLs perspective fall clearance charts, including a redirection angle ≥ 90 and set back ≥ 760 mm (30"); ensuring the correct function of the device in the event of a fall.

Failure to follow this warning can result in serious personal injury or death.

4 Installation and Use

4.1 Harness Attachment

- Ensure the V-TEC SRL housing is connected to a suitable anchor point above the user.
- Ensure the V-TEC EDGE SRL housing is connected to a suitable anchor point at foot level or above with the appropriate connecting hardware.
- The V-TEC SRL, V-TEC EDGE SRL, or V-TEC Synthetic SRL may be connected to an approved full body harness by connecting the snaphook to the back D-ring of the harness.
- If utilizing the V-TEC SRL, V-TEC EDGE SRL, or V-TEC Synthetic SRL on a ladder system, the user may connect to an approved full body harness by connecting the snaphook to the front or back D-ring of the harness.

4.2 Intended Use

SRLs are intended to be used as a connecting element between a full body harness and anchor point. A full body harness is the only acceptable body holding device to be used with a SRL. If supplied as part of a complete system, components shall not be substituted.

4.3 General Installation and Use

Connectors: Ensure SRL connectors are compatible with the attachments to which they are connected (to prevent roll-out), and are fully closed and locked before use.

Anchors: Ensure the SRL is attached to a compatible anchor – flexible anchors, such as anchor lines, horizontal lifelines, rail, or cantilever structures can affect the ability of the SRL to lock-on in the case of a fall. For further clarification on compatibility specifications, refer to the user instructions of the flexible anchor product. Should compatibility information not be included in the flexible anchor user instructions, contact the flexible anchor manufacturer for clarification.

Retraction: In use, the SRL lifelines will extract and retract without hesitation. Do not allow the lifeline to pass through legs, under arms, or wrap around structures. If the lifeline does not retract in use, fully extract the lifeline and slowly allow it to retract. If the lifeline continues to hesitate in retraction, contact MSA.

Storage: When not in use, store with the lifeline fully retracted as prolonged periods of full extraction may weaken the retraction spring. Guide the lifeline back to the unit for full retraction. Do NOT release lifeline from a distance as it will retract at high speed, potentially damaging internal parts or cause cable jamming. If the lifeline is jammed, firmly pull on the lifeline to help cinch the line around the inner drum. Next, push the top of the rubber bumper toward the opening of the nozzle. If the lifeline does not then freely retract, repeat the process several times. If the unit cannot be unjammed after repeated attempts, discontinue use of the unit and contact MSA Customer Service. The connector may also strike objects in its path, causing damage to those objects and to the connector. See [Section 6 Cleaning and Storage](#) for full cleaning and storage instructions.

5 Pre-Use Checks and Periodic Examinations

Periodic examinations shall be completed by a person, other than the user, competent in the examination of SRLs, in accordance with the manufacturer's instructions. The interval will be dictated by the usage, local regulations, and environmental conditions, and will be at least annually. See Table 4 Periodic Examination Interval for more information.

The safety of the user relies upon the continued efficiency and durability of the equipment. Therefore, pre-use checks shall be completed before each use. A record shall be kept of the results of the examination. See Table 5 Pre-Use Checks for pre-use check information.

Table 3 Periodic Examination Interval

Usage	Interval
Infrequent to light	Annually (12 months)
Moderate to heavy	Semi-annually to annually (6-12 months)
Severe to continuous	Quarterly to semi-annually (3-6 months)

Usage shall be determined by a competent person.

Maximum product life: Continued use is dependent upon passing pre-use checks and periodic examinations. Service life may be reduced by frequency and conditions of use or local regulations.

Table 4 Pre-Use Checks

Pre-Use Checks	Method
Load Indicator	Ensure load indicator has not been deployed. See product label for examples of deployed load indicator.
Labels	Ensure labels are present and legible.
Examination Date	Ensure date of next examination has not elapsed. Ensure a periodic examination is not due as determined by a competent person. See Table 1 Periodic Examination Interval and product's inspection checklist.
General Condition and Lifeline	<p>For Cable Versions: Examine for signs of excessive damage, wear, corrosion or contamination. Inspect entire length of lifeline for kinks, bends, broken wires, bird caging, corrosion, damaged splices or damaged thimbles. Damage to the cable can significantly impact the performance. Verify there are no reductions in diameter of the lifeline.</p> <p>For Synthetic Rope Versions: Examine for signs of excessive damage, wear, or contamination. Inspect entire length of lifeline for broken, frayed, cut, abraded, or missing strands. Verify there are no reductions in width or thickness of the lifeline. Verify there are no smooth, discolored, shiny, hardened, or glazed areas of the lifeline that indicate exposure to heat or chemicals.</p>
Energy Absorber	<p>Check energy absorber for signs of cuts, abrasion, tears, burns, mold, discoloration or chemical damage. Verify the white tear webbing is not significantly exposed through the energy absorber cover.</p> <p>NOTE: For V-TEC EDGE SRLs Only</p>
Extraction and Retraction	Inspect lifeline extraction and retraction by pulling the full length of the line out and letting it retract back into the housing in a controlled manner. Maintain a light tension on the lifeline while it retracts. The line operation must be smooth and unhesitant.
Lock-on	Pull sharply on the lifeline – ensure device locks. Repeat three times.
Housing / Fasteners / Swivel	Examine the housing and verify there are no cracks, excessive signs of wear, or extreme discoloration. Verify that all fasteners and the swivel are in place, are secure and do not show signs of excessive damage, wear or corrosion. Verify the swivel can rotate.
Handle	If present, examine the housing handle and verify there are no cracks, excessive signs of wear, or extreme discoloration.
Connectors	Check for correct operation of connector and connector gate. Examine the connectors for signs of excessive damage, wear, or corrosion.
Nozzle and Nozzle Rod	<p>Inspect the nozzle for signs of excessive damage, wear or contamination.</p> <p>The interior nozzle rod may show signs of damage or wear without necessitating the product's removal from service as long as the product meets all other pre-use and functional checks.</p>

Hazards

WARNING!

- Use caution when working around moving machinery. Chemical hazards, heat, and corrosion may damage the SRL. Any chemical exposure should be avoided, if possible. All chemical hazards should be accounted for prior to beginning work.
- More frequent formal inspections are required in environments with chemical hazards, heat, and corrosion. As with all chemical exposures, consult the safety officer for review and recommendations for decontamination. Cleaning is strongly suggested - reference specific product cleaning guidance.
- Prior to use, the end user is responsible for testing the product in the environment and conditions in which it will be used.

Failure to follow these warnings can result in serious personal injury or death.

6 Cleaning and Storage

If required, the SRL exterior and lifelines may be cleaned using a damp cloth and warm water (max 40°C), and allowed to dry naturally before use. Excessive build-up of dirt, paint etc. can compromise both retraction and strength of the lifeline.

Store or transport the SRL in a cool, dry, clean environment, away from heat, steam, harmful fumes, corrosive agents, rodents, dust, oil, and direct sunlight. During transportation, the device shall be protected to prevent damage or contamination. Examine the SRL after long periods of storage prior to returning it to service.

Moving parts of snaphooks and carabiners may require periodic lubrication with low viscosity penetrating oil. Follow lubricant manufacturer's instruction. Do not over-lubricate. Wipe excess with a clean, dry cloth.

7 Warranty

Express Warranty – MSA warrants that the product furnished is free from mechanical defects or faulty workmanship for a period of one (1) year from first use or eighteen (18) months from date of shipment, whichever occurs first, provided it is maintained and used in accordance with MSA's instructions and/or recommendations. Replacement parts and repairs are warranted for ninety (90) days from the date of repair of the product or sale of the replacement part, whichever occurs first. MSA shall be released from all obligations under this warranty in the event repairs or modifications are made by persons other than its own authorized service personnel or if the warranty claim results from misuse of the product. No agent, employee or representative of MSA may bind MSA to any affirmation, representation or modification of the warranty concerning the goods sold under this contract. MSA makes no warranty concerning components or accessories not manufactured by MSA, but will pass on to the Purchaser all warranties of manufacturers of such components. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AND IS STRICTLY LIMITED TO THE TERMS HEREOF. MSA SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Exclusive Remedy – It is expressly agreed that the Purchaser's sole and exclusive remedy for breach of the above warranty, for any tortious conduct of MSA, or for any other cause of action, shall be the repair and/or replacement, at MSA's option, of any equipment or parts thereof, that after examination by MSA are proven to be defective. Replacement equipment and/or parts will be provided at no cost to the Purchaser, F.O.B. Purchaser's named place of destination. Failure of MSA to successfully repair any nonconforming product shall not cause the remedy established hereby to fail of its essential purpose.

Exclusion of Consequential Damages – Purchaser specifically understands and agrees that under no circumstances will MSA be liable to Purchaser for economic, special, incidental, or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of the non-operation of the goods. This exclusion is applicable to claims for breach of warranty, tortious conduct or any other cause of action against MSA.

For additional information, please use your local contacts on our website www.MSAafety.com.

8 Inspection Checklist

Inspection Checklist

Model Number: _____ Serial Number: _____

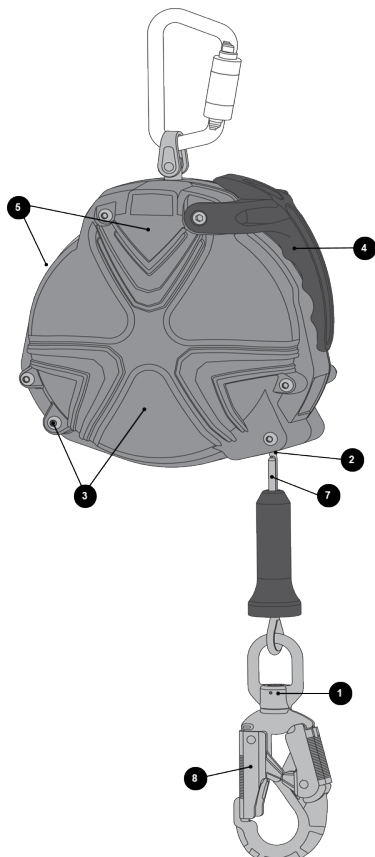
Date: _____ Inspector (Name / Signature): _____

Date of Manufacture: _____ Date of Purchase: _____

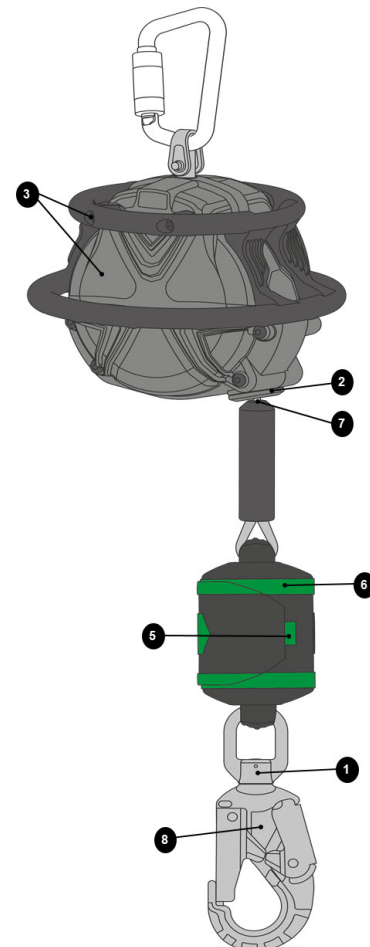
Date of First Use: _____ Date Due for Next Periodic Inspection: _____

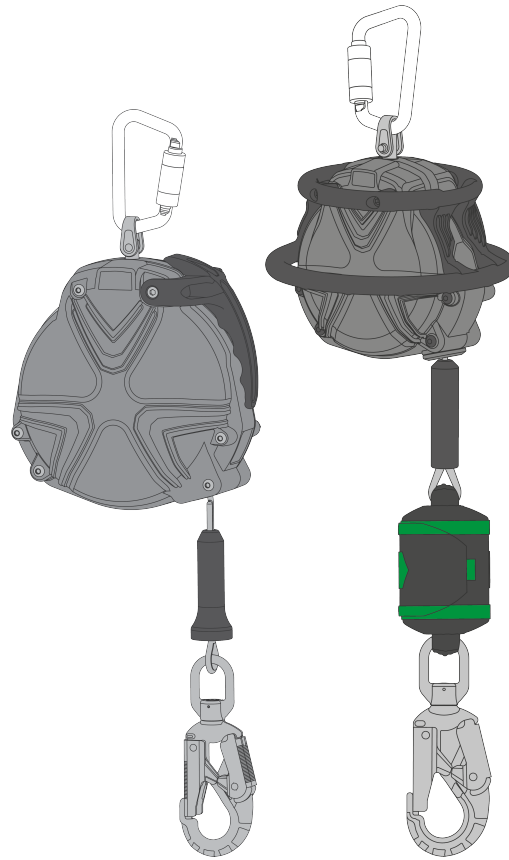
#	Description	Good— Safe for Use	Good— Safe for Use	Good— Safe for Use	Good— Safe for Use	Good— Safe for Use	Damaged, Worn, Altered, Missing— Remove from Service	Comments
1	Load indicator							
2	Nozzle / Nozzle Rod							
3	Housing / Fasteners							
4	Handle (If Present)							
5	Labels							
6	Energy absorber pouch (V-TEC® EDGE SRLs Only)							
7	Lifeline							
8	Snaphook							
	Lock on (ensure device locks)							

V-TEC SRL / V-TEC Synthetic SRL



V-TEC EDGE SRL





用户使用说明

V-TEC®、V-TEC® Synthetic 和 V-TEC® EDGE 速差自控器
坠落保护



订单号: 10246816/00 (GB)

印刷规: 10000005389 (EO)

CR: 800000066486

警告!

使用产品前须将本说明提供给用户，且应对其妥善保管，以方便用户随时参阅。使用或维护仪器前，请仔细阅读本手册。仅在按照制造商说明使用和维护时，设备才会按计划运行。否则其或将无法按设计运行，而依赖此装置确保安全的人员可能遭受重伤或死亡。

若未按照本手册的说明安装和使用产品，则 MSA 公司对该产品的质保承诺将失效。为保护您自身及您的员工，请按照说明操作。

请阅读并遵循手册中的“警告”和“注意”事项。如欲了解产品使用或修理的更多详细信息，请在工作日期间致电 1-800-MSA-2222。

MSA 是 MSA Technology, LLC 在美国、欧洲和其他国家的注册商标。有关所有其它商标，请访问 <https://us.msasafety.com/Trademarks>。



The Safety Company

1000 Cranberry Woods Drive
Cranberry Township, PA 16066
美国
电话 1-800-MSA-2222

更多您当地 MSA 公司的联系信息，请访问我们的网站 www.MSAafety.com

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1 安全法规



警告!

用户要求

- 速差自控器 (SRL) 的用户应身体健康并接受过适当培训。
- 孕妇、未成年人或受酒精或毒品影响的人不得使用速差自控器。
- 仅限单个用户在制造商规定的重量范围(包括用户、服装和工具)之内使用。
- 如果您对本产品的安全状况存在疑虑,为保证安全,请勿使用该设备。如果该设备曾经受过防坠外力,禁止再次使用该设备,直到由授权的合资格人员提供书面确认。

锚固器要求/摆动坠落/坠落间距

- 锚点必须能够支撑所需负荷。请参阅章节 [2.2 产品技术规格](#) 和 [3.2 产品技术规格](#) 了解关于锚点强度的详细信息。
- 确保可用坠落间距等于或大于 V-TEC、V-TEC Synthetic 和 V-TEC EDGE SRL 坠落间距图表中所要求的坠落间距。
- 清除可能加速组件割裂或磨损的所有表面污染(例如但不限于混凝土、灰泥和屋面材料等)。
- 根据章节 [2.3 坠落间距图表](#) 和 [3.3 坠落间距图表](#) 中所示的可接受位置规定使用该设备。用户应考虑及摆动坠落造成的所有风险。
- 摆动坠落可令坠落间距增大。在高空应用中,在锚点正下方作业。在水平(边缘保护型)应用中,请最大限度减少水平偏移量。增加水平偏移量会加大摆动坠落的幅度。始终清除坠落路径当中或邻近的障碍物。保证工作区域中不存在可能影响坠落保护系统安全运行的碎屑、障碍物、绊倒危险、泄漏物或其他危险。对于水平应用,除非合格人员已检查过工作场所,并确定已将发现的摆动坠落危险排除或对其作出防范,否则请勿使用该设备。

产品用途

- 速差自控器仅在其限制范围之内用于预期用途。切勿故意误用本产品。切勿将坠落保护设备用于其设计用途以外的其他用途。切勿将坠落保护设备用于牵引、起重或搬运材料。
- 不得改装速差自控器或为其添装部件。不得对其进行未经授权的维修、修改、改装和/或为其添装部件。只有 MSA 或经制造商书面授权的人员或机构才能维修该速差自控器。
- 救援和疏散:用户必须制定救援计划并准备好救援计划的实施工具。救援计划须配备并包含在所有可以预见情况下迅速施以救援所需的设备及特殊培训。
- 请勿凭感觉或声音判断连接器的连接是否正确。在使用前确保连接器已闭合。
- 不得添加其他系索连接器,因为如此将延长织带并增加自由坠落风险。
- 只能将锚点连接至外壳顶部的旋转环。切勿将锚连接至外壳上的手柄。
- 不适用于不稳定的表面、细粒材料或微粒表面(例如沙子或煤炭),因为速度不足或将令坠落过程中无法进行锁定(潜在坍塌危险)。
- 请勿用在绳索可能接触尖锐、锯齿状或磨蚀性边缘之处。有关边缘保护型产品指南,请参阅章节 [3.4 边缘保护型产品的安装和用途](#)。
- 速差自控器不得接触灼热表面(如热管)、卷入移动机械或接触具有电气危险性的部件(例如高压电源线)。
- 应避免速差自控器受到火源、酸性物质、腐蚀性溶液或外界温度(-40°F 至 130°F(-40°C 至 54°C))的影响。
- 请勿在可能造成产品损坏或变质的环境中安装速差自控器。请参阅章节 [6 清洁和存储](#) 中有关保养的详细信息和章节 [5 使用前检查和定期检查](#) 中的检查详细信息。
- 应保留采用目的国语言编写的说明书并将其提供给所有速差自控器用户,即便在转售时也是如此。
- 切勿超出管理标准或子系统组件指定的最大坠落制动力。

- 使用组件或子系统的组合或将二者同时使用可能会影响或干扰组件或子系统的安全功能。仅使用兼容的组件或子系统,切勿为系统添加额外长度。

边缘保护型特定产品用途

- V-TEC EDGE 速差自控器锚点应位于用户地面或以上高度。
- 仅将边缘保护型配置用作应急托底方案。只有在所有其它控制层级(包括防坠系统和高空锚点)均已耗尽时,才能使用边缘保护型配置。
- 产品标签表明产品是否可用于边缘保护型应用。
- 避免在织带将遭遇持续或重复摩擦,具备尖锐、锯齿状或粗糙边缘的位置作业。
- 切勿在锚点对面开口远端或墙角周围作业。
- 只能根据当地法规使用边缘保护型配置。
- 在无缩进的边缘保护型应用中,确保设置为不支持外壳装置或顶部连接器在发生坠落时接触边缘保护型应用。

检查/停止使用产品

- 若速差自控器设备已经制止过坠落或者无法通过检查,应在其上加贴“UNUSABLE”(不可使用)标签,直到将其销毁并根据当地法规对其进行处置。
- 由于某些止坠事件的性质,可不安装负载指示器。若速差自控器受到坠落制动力且未安装负载指示器,则仍须停止使用速差自控器并在其上加贴“UNUSABLE”(不可使用)标签,直到将其销毁并根据当地法规对其进行处置。
- 如果已安装负载指示器,须立即停止使用速差自控器并在其上加贴“UNUSABLE”(不可使用)标签,直到将其销毁并根据当地法规对其进行处置

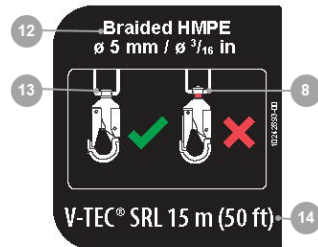
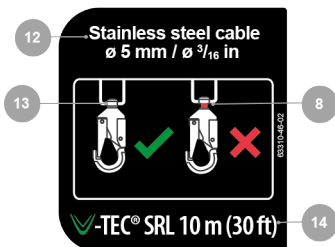
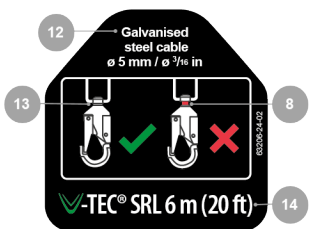
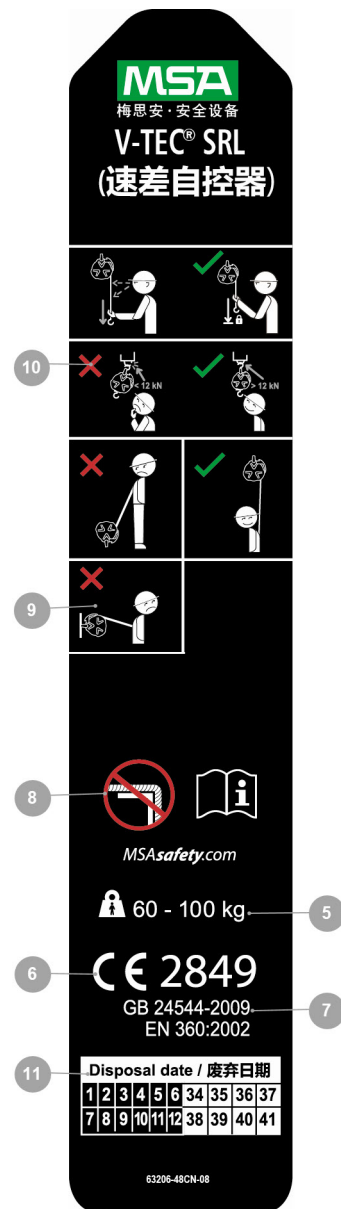
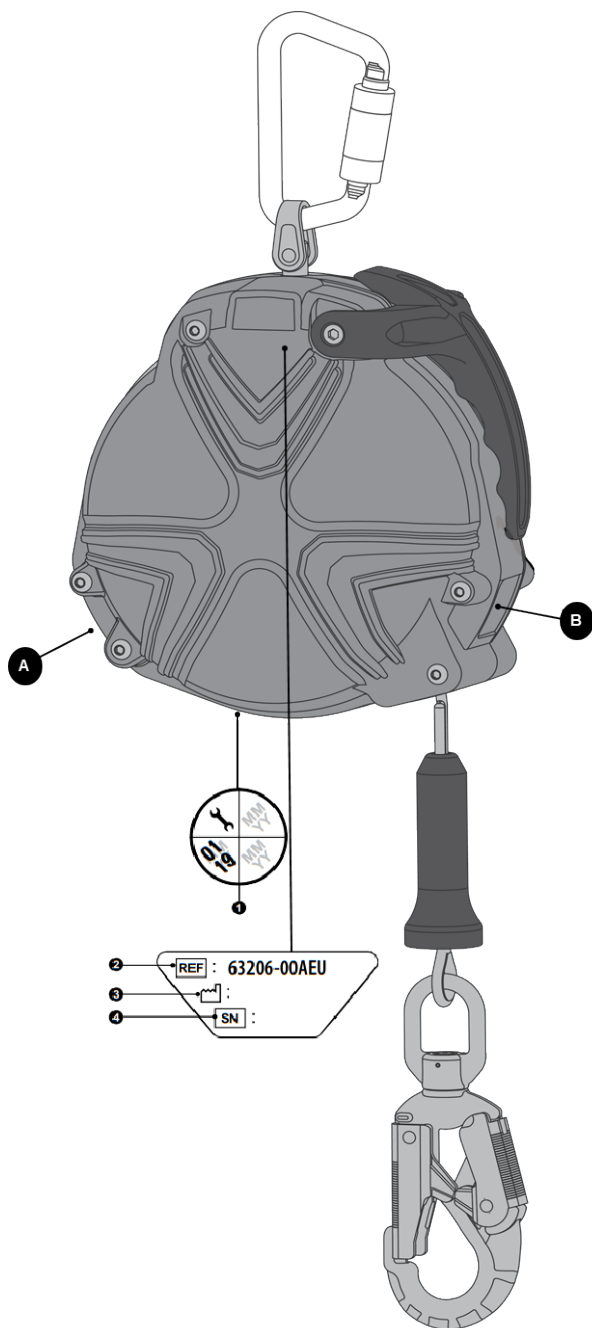
未遵守上述警告可能导致严重的人身伤害甚至死亡后果。

2 V-TEC SRL / V-TEC Synthetic SRL

如需下载符合性声明, 请访问 MSAsafety.com/DoC

如需查看完整的条款和条件, 请访问 MSAsafety.com 中的此产品页面, 然后点击“Literature”(文献资料)选项卡。

2.1 标签和图标



GT: 表格 1V-TEC SRL 产品标识

A	壳体标签位置 (GB)
B	织带标签位置(镀锌/不锈钢/高密度聚乙烯编织物)
1	下次检查日期
2	型号
3	制造日期(月/年)
4	序列号
5	载重
6	认证机构编号
7	标准
8	请勿使用
9	产品警告
10	请勿使用
11	废弃日期
12	织带结构
13	负载指示器位置
14	长度

2.2 产品技术规格

组件	认证
锚点连接器标准	ANSI Z359.18 / OSHA 1926.502, 1910.140 / CSA Z259.15 / CSA Z259.13 / EN 795 和 / 或 TS 16415 / NBR 15837
安全带标准	ANSI Z359.11 / OSHA 1926.502, 1910.140 / CSA Z259.10 / EN 361 / NBR 15835 / NBR 15836
连接器标准	ANSI Z359.12 / OSHA 1926.502, 1910.140 / CSA Z259.12 / EN 362 / NBR 15837
结构强度	3600 lbf (16 kN) 已认证 5000 lbf (22.2 kN) 未认证 / 5000 lbf (22.2 kN) / 12 kN

2.2.1 V-TEC SRL / V-TEC Synthetic SRL 材料

组件	材料
外壳	聚碳酸酯
轮毂	PC-ABS / 铝 / 不锈钢 (7 米、10 米、15 米)
底盘、锁爪、锁紧装置、旋转环、主弹簧	不锈钢
织带	5 mm 镀锌钢、不锈钢或高模量聚乙烯 (HMPE)
连接器	钢

2.3 坠落间距图表

V-TEC SRL / V-TEC Synthetic SRL

确保有足够的间距，以防止在坠落期间撞击到障碍物或前缘(如横梁和大梁)。间距不足、障碍物和前缘会妨碍 V-TEC SRL 和 V-TEC Synthetic SRL 的功能。为降低摆动坠落风险，最好在正上方进行锚固。

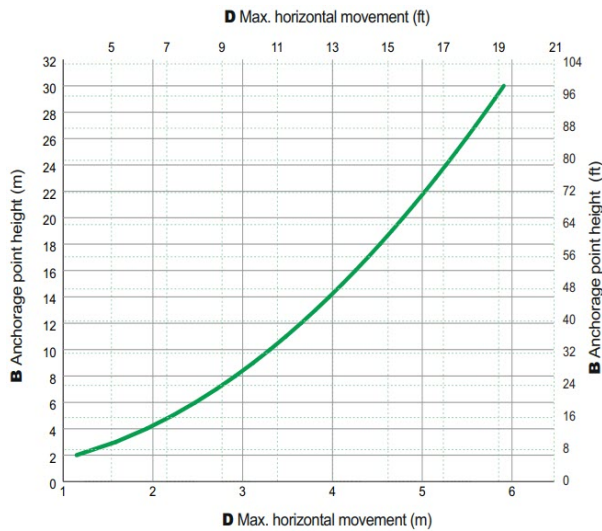
最小坠落间距为 2.8 米。坠落间距的计算方法是作业平台与下方第一个障碍物(如下一个平台或地面)之间的垂直距离。

V-TEC SRL 和 V-TEC Synthetic SRL 适用于经批准的水平生命线或刚性锚点。如果 V-TEC SRL 或 V-TEC Synthetic SRL 连接到在坠落时可能偏移或展开的锚(如自重锚或锚索)，则该装置的额外展开应作为最小间距的安全容限。如需进一步了解如何确定适当的坠落间距，请联系 MSA。

为减少坠落受伤的可能性，应最大限度减小坠落距离。

可接受的锚点位置

- A - 地面
- B - 锚点高度
- C - 锚点
- D - 最大水平运动
- E - 最小坠落间距

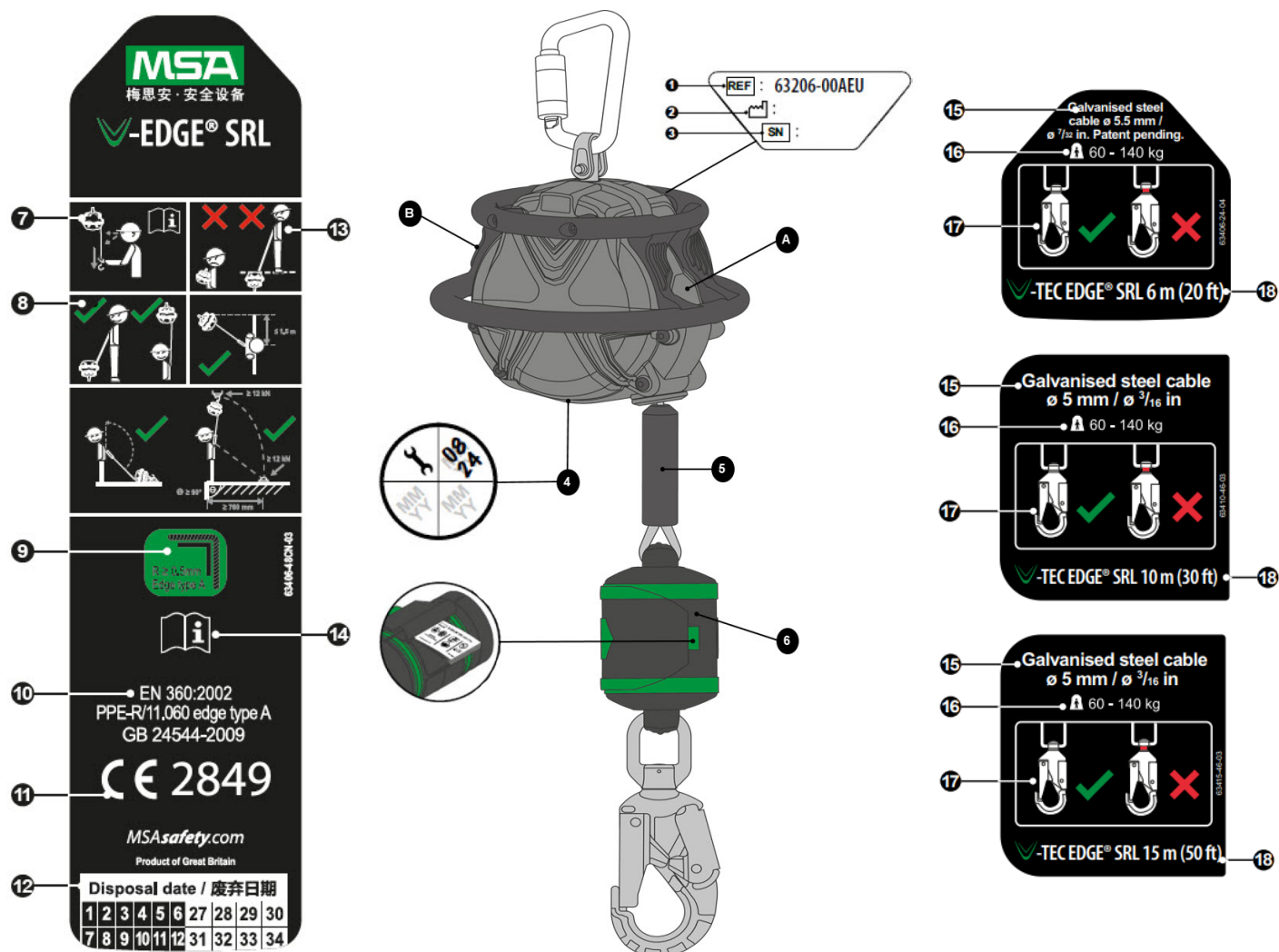


3 V-TEC EDGE SRL

如需下载符合性声明, 请访问 MSAsafety.com/DoC

如需查看完整的条款和条件, 请访问 MSAsafety.com 中的此产品页面, 然后点击“Literature”(文献资料)选项卡。

3.1 标签和图标



GT: 表格 1V-TEC EDGE 产品标识

A	壳体标签位置 (GB)	12	废弃日期
B	织带标签位置 (镀锌钢)	13	请勿使用
1	型号	14	阅读用户使用说明
2	制造日期 (月/年)	15	织带结构
3	序列号	16	载重
4	下次检查日期	17	负载指示器
5	冲击管	18	长度
6	撕裂式织带盒		
7	使用前检查		
8	产品警告		

9	可接受的边缘类型		
10	标准		
11	认证机构编号		

3.2 产品技术规格

组件	GB
锚点连接器标准	GB 30862
安全带标准	GB 6095
连接器标准	GB/T 23469
结构强度	12 kN

3.2.1 V-TEC EDGE 速差自控器材料

组件	材料
外壳	聚碳酸酯
轮毂	PC-ABS / 铝 / 不锈钢(10 米、15 米)
底盘、锁爪、锁紧装置、旋转环、主弹簧	不锈钢
织带	Ø 5 mm 镀锌钢 (3/16")
吸震包箱	聚丙烯 (PP)
吸震包	高模量聚乙烯 (HMPE)
连接器孔眼和轴	不锈钢

3.3 坠落间距图表

确保有足够的间距，以防止在坠落期间撞击到障碍物或结构。间距不足或障碍物可妨碍 V-TEC EDGE SRL 的功能。

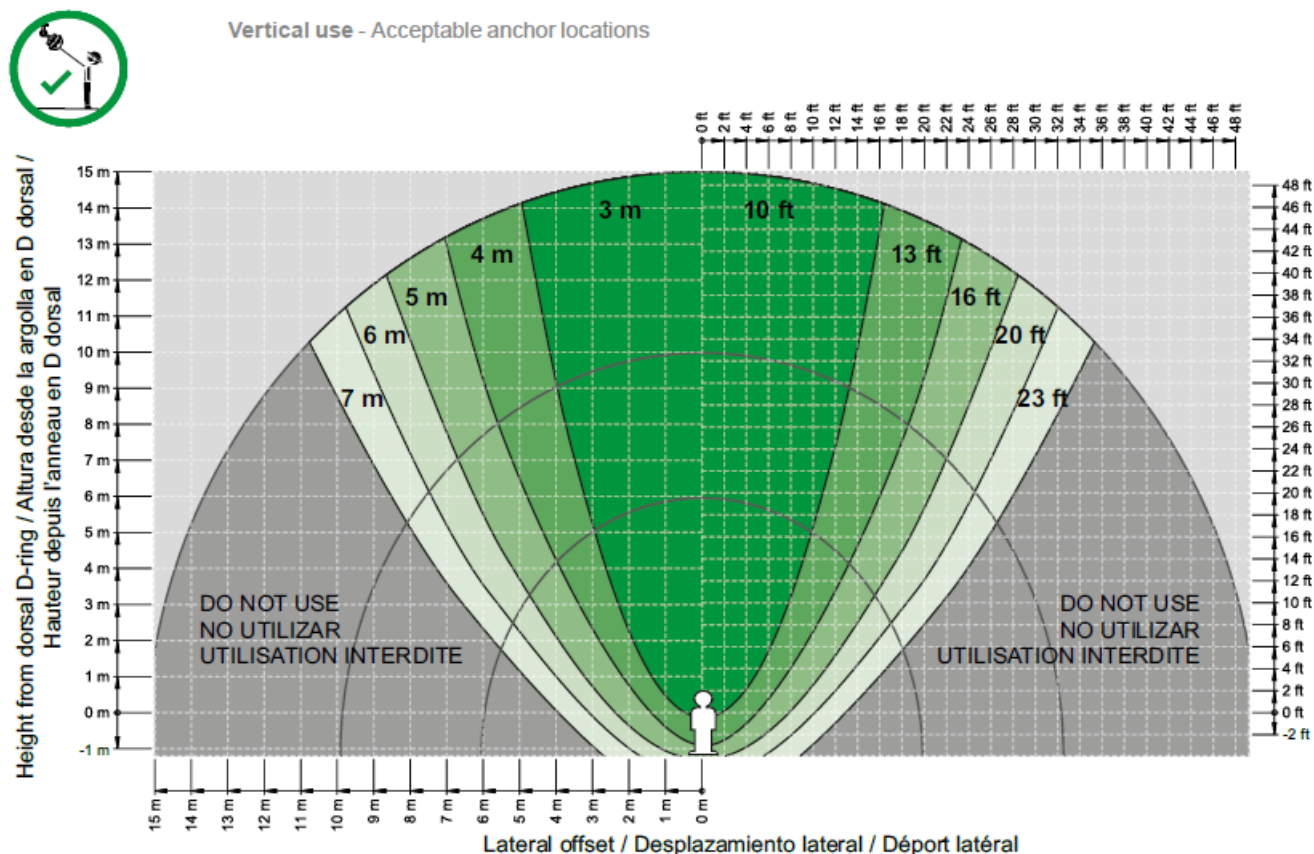
对于重 140 kg (310 lbs) 的用户，V-TEC EDGE SRL 和吸震包的最大部署高度通常为 1.4 m (55")。有关与用户相关的可接受锚固位置和最小间距要求，请参阅(垂直使用)或(水平使用)。坠落间距是作业平台与下方第一个障碍物(如下一个平台或地面)之间的垂直距离。要准确计算足够的坠落间距，可采用以下方法：坠落间距 = 最大部署距离 + 锁定(制动)距离 + 摆动坠落距离 + 安全容限。

(垂直使用)中的间距要求基于自由坠落条件。障碍物(如结构边缘)的存在可能会降低间距要求，但亦可能带来额外危险(例如可能造成撕裂或撞击伤害)。

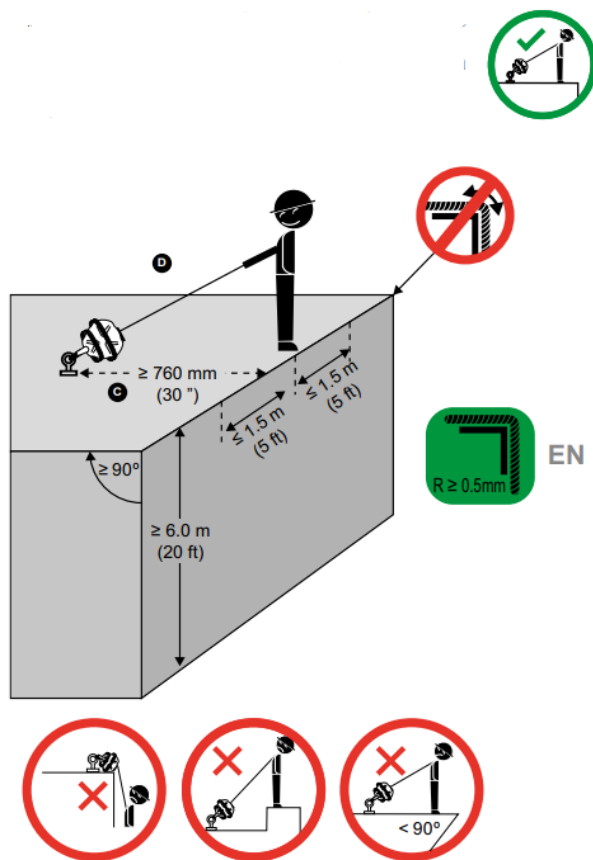
如果 V-TEC EDGE SRL 安装到在坠落时可能偏移或展开的锚点，则应将该装置的展开添加至以下“可接受的锚点位置 - 垂直使用图表”中规定的最小间距。V-TEC EDGE SRL 尚未通过测试，不得与水平锚索(如 EN 795 C 类装置)、自重锚(如 EN 795 E 类装置)或可能在负载下展开的锚(如立缝屋顶支柱)一起用于边缘保护型应用。因此，仅刚性锚固件点(如 EN 795 A、B 或 D 类装置)适用于边缘保护型应用。

为减少坠落造成伤害的可能性，工作时应最大限度减少坠落的可能性和潜在坠落距离。

可接受的锚点位置 - 垂直使用



可接受的锚点位置 - 水平(边缘保护型)应用



3.4 边缘保护型产品的安装和用途

如果可能从边缘处坠落,应确定特殊救援措施并开展相关培训。应考虑在不进一步释放或移动边缘处织带的情况下接近悬吊的用户。

警告!

- 只有在所有其它控制层级(包括防坠系统和高空锚点)均已耗尽时,才能使用边缘保护型配置。
- 只能根据当地法规使用边缘保护型配置。
- 应根据上述用户使用说明中的相关说明、警告和限制要求使用边缘保护型配置。

未遵守上述警告可能导致严重的人身伤害甚至死亡后果。

水平偏移量:在水平(边缘保护型)应用中使用 V-TEC EDGE SRL 配置时,在装置缩进距离 ≤ 5 英尺(1.5 米)时,向中心轴两侧的横向移动距离应被限制为最大 5 英尺(1.5 米)。应避免较大的水平间距,因为由此可令施加在结构上的力有所增加,从而引发摆动坠落。有关锚点位置信息的更多详情,请参阅章节 3.3 坠落间距图表。

边缘类型:已借助 ANSI Z359.14-2021(2 类)和 CSA Z259.2.2-2017(SRL-LE 类)标准中的方法对 V-TEC EDGE SRL 配置实施测试,证明其可在无毛刺型钢质边缘上用于水平(边缘保护型)应用。因此,可在类似边缘处或发生坠落处使用 V-TEC EDGE SRL。

此外,尽管 ANSI Z359.14-2021(2 类)或 CSA Z259.2.2-2017(SRL-LE 类)标准并未说明非钢质边缘的边缘要求,然而已借助 ANSI Z359.14-2014 标准中的相关方法,针对以下边缘对 V-TEC EDGE SRL 进行了测试:

- 冷成型波纹钢测试边缘。待测试边缘的厚度范围在 22 ga(0.0295 英寸 / 0.7493 毫米)到 16 ga(0.0598 英寸 / 1.5189 毫米)之间。因此,可在类似边缘处可能发生坠落的地方使用 V-TEC EDGE 速差自控器配置。
- 抗压强度为 4500 - 5000 psi,采用无粗糙、碎屑或其他异常情况的未抛光的

90° 边缘制造的混凝土测试边缘。因此，可在类似边缘处或发生坠落处使用 V-TEC EDGE 速差自控器配置。

边缘评估: 使用之前，必须由合格人员对边缘进行评估。仅将边缘保护型配置用作应急托底方案。避免在织带将遭遇持续或重复摩擦，具备尖锐、锯齿状或粗糙边缘的位置作业。如果风险评估表明某个边缘可能会损坏织带，请避免此类接触，或在工作开始前使用垫板或其他方法对该边缘加以保护。

锚点注意事项: 应尽可能限制在用户脚下使用或锚定水平(边缘保护型)应用，以避免发生摆动坠落以及用户撞击某个结构从而造成严重伤害的可能性。为降低摆动坠落风险，锚点应位于用户正上方。

V-TEC EDGE 速差自控器锚点应位于地板或以上高度。不得攀爬到锚点上方。应采取适当措施，以防止在非预期边缘上使用该产品。切勿在锚点对面开口远端或墙角周围作业。

 **警告!**

- 锚点位置应符合 V-TEC EDGE SRL 的相关坠落间距图表要求，包括重定向角度 $\geq 90^\circ$ 和缩进 $\geq 760 \text{ mm (30")}$ *；以确保在发生坠落事件时装置功能正确无误。

未遵守该警告可能导致严重的人身伤害甚至死亡后果。

4 安装和用途

4.1 安全带连接件

- 确保将 V-TEC SRL 外壳连接至用户上方的适当固定点。
- 确保使用恰当的连接硬件将 V-TEC EDGE SRL 外壳连接至地板或以上高度的适当锚固点。
- 通过将安全钩穿过安全带的背部 D 形环, 可将 V-TEC SRL、V-TEC EDGE SRL 或 V-TEC Synthetic SRL 连接至经认证的全身式安全带。
- 借助梯形结构上的 V-TEC SRL、V-TEC EDGE SRL 或 V-TEC Synthetic SRL, 通过将安全钩穿过安全带的正面或背部 D 形环, 用户可连接至经认证的全身式安全带。

4.2 预期用途

速差自控器旨在被用作全身式安全带与锚点之间的连接元件。全身式安全带是唯一一种可与速差自控器搭配使用的经认可的身体支撑装置。如果其作为完整系统的一部分提供, 则不得替换其组件。

4.3 一般安装和用途

连接器: 确保速差自控器连接器与其连接的附件相兼容(以防滑出), 且在使用之前为完全闭合锁定状态。

锚点: 确保速差自控器连接至兼容的锚点 - 柔性锚点(例如锚索、水平生命线、轨道或悬臂结构)可在坠落时影响速差自控器的锁定能力。如欲了解关于兼容性规范的详细说明, 请参阅柔性锚点产品的用户使用说明。如果柔性锚点用户使用说明中未包括兼容性信息, 请联系柔性锚点制造商获取详细说明。

回收: 在使用期间, SRL 织带会发生迅速拉伸与回收。切勿令织带穿过腿间、臂下或是环绕某部位肢体。如果织带未在使用时回收, 请完全拉出织带并令其缓慢收回。如果织带依旧回收缓慢, 请联系 MSA。

存储: 在未使用时, 请在织带完全回收的状态下存储该装置, 因为织带长时间完全拉伸可能会令回收弹簧的强度有所削弱。引导织带回到装置以进行完全回收。请勿从远处释放织带, 因其可能发生高速回收, 进而造成内部部件受损或钢缆卡塞。如果织带卡塞, 请用力拉动织带, 帮助将绳索固定在内部轮毂周围。接下来, 将橡胶缓冲块顶部推过喷嘴的开口。如果之后织带未自由回收, 请多次重复上述步骤。如果在多次尝试后仍无法消除该装置的卡塞情况, 请停止使用该装置并联系 MSA 客户服务部门。连接器还可能撞击其路径上的物件, 造成这些物件以及连接器损坏。有关完整的清洁和存储说明, 请参阅章节 6 清洁和存储。

5 使用前检查和定期检查

应当由用户以外的某位有资质检查速差自控器的人员根据制造商的说明完成定期检查。定期检查时间间隔将视使用情况、当地法规及环境条件而定，每年至少应进行一次定期检查。如需了解更多信息，请参见表 4 定期检查时间间隔。

用户的安全依赖于设备的持续高效和耐用特性。因此，每次使用前均应进行使用前检查。必须保留检查结果的记录。有关使用前检查信息，请参见表 5“使用前检查”。

GT: 表格 1 定期检查时间间隔

使用情况	时间间隔
不常使用至少量使用	每年(12个月)
适度使用至大量使用	每半年至每年(6-12个月)
频繁使用至不间断使用	每季至每半年(3-6个月)

使用情况应由合格人员确定。

产品最大使用寿命: 能否持续使用取决于是否经过了使用前检查和定期检查。使用寿命或根据使用频率、使用条件或地方法规差异而有所缩短。

GT: 表格 2 使用前检查

使用前检查	方法
负载指示器	确保尚未安装负载指示器。参见产品标签，了解已安装负载指示器的相关示例。
标签	确保标签清晰可辨。
检查日期	确保尚未超出下次检查日期。由合格人员确定定期检查未到期。请参阅表 1“定期检查时间间隔”和产品检查表。
一般条件和织带	<p>检查不同型号的钢缆是否存在过度损坏、磨损、腐蚀或污染迹象。检查整条织带是否扭结、弯曲、断股、局部扭曲、腐蚀、接合处或套管是否破损。钢缆损坏可能会严重影响性能。确认织带的直径未发生减少。</p> <p>检查不同型号的合成绳是否存在过度损坏、磨损或污染迹象。检查整条织带是否断开、剥落、割断、磨损或线头缺失。确认织带的宽度或粗细未发生减少。确认织带上不存在因接触高温或化学品而呈现的光滑、褪色、发亮、变硬或釉质表面。</p>
吸震包	<p>检查吸震包是否存在切口、磨损、撕裂、烧痕、发霉、变色或化学损伤迹象。确认白色撕裂式织带未明显伸出吸震包盖。</p> <p>备注: 仅适用于 V-TEC EDGE SRL</p>
拉伸和回收	通过将绳索全部拉出并以受控方式让其回收到外壳中，检查织带的拉伸和回收情况。在织带回收时保证其承受轻微的张力。绳索操作必须平稳敏捷。
锁定	用力拉织带 - 确保设备可以锁定。重复三次。
外壳/紧固件/旋转环	检查外壳，确认无裂缝、过度磨损或极端变色迹象。确认所有紧固件和旋转环均已固定到位、牢固可靠且未出现过度损坏、磨损或腐蚀迹象。确认旋转环可以旋转。
手柄	检查外壳手柄(如有)，确认无裂缝、过度磨损或极端变色迹象。
连接器	检查是否正确操作了连接器和连接器锁扣。检查连接器是否存在过度损坏、磨损或腐蚀迹象。
喷嘴和喷嘴杆	<p>检查喷嘴是否存在过度损坏、磨损或污染迹象。</p> <p>只要该产品符合所有其他使用前检查和功能检查要求，则如未强制停止使用该产品，内部喷嘴杆便可能出现损坏或磨损迹象。</p>

危险

警告！

- 在移动机械周围作业时，请放置警示牌。化学危险品、高温和腐蚀性物质可能会损坏速差自控器。应尽可能避免接触任何化学物质。在开始工作之前，应考虑到所有化学危险。
- 对于存在化学危险品、高温和腐蚀性物质的环境，应进行更加频繁的正规检查。与所有接触化学品的情况一样，请咨询安全官员，以了解有关消毒的审查和建议。强烈建议进行清洁 - 请参阅特定产品清洁指南。
- 使用前，最终用户有责任在使用环境和条件下对产品进行测试。

未遵守上述警告可能导致严重的人身伤害甚至死亡后果。

6 清洁和存储

可使用湿抹布和温水(最高 40°C)清洁速差自控器外表面及织带(如需要)，然后使用前静待其自然晾干。织带上积尘过厚或附着油漆等物可能影响织带的收缩性能和强度。

在凉爽、干燥且洁净的环境中存储或运输速差自控器，使其不受高温、蒸汽、有害烟气、腐蚀剂、啮齿动物、灰尘、油以及阳光直射的影响。运输过程中，应对本仪器加以保护，防止其损坏或遭受污染。若存放时间长，则先检查速差自控器产品，然后再投入使用。

挂钩和连接锁的移动零件可能需要使用低流速渗透油定期润滑。请务必遵照润滑剂制造商的说明使用。请勿过度润滑。用干净的干布擦除多余油脂。

7 质保

明示担保 – MSA 保证只要用户根据 MSA 的使用说明和/或建议进行维护和使用，本产品无任何机械缺陷或不完善的工艺(从第一次使用第一 (1) 年首次使用或从出厂日期起十八 (18) 个月内)，两者之中以先发生为准。更换部件和维修的保修期为九十 (90) 天，从产品维修或销售更换零件之日起，两者之中以先发生为准。如果维修或修改工作由非专业或未经授权的维修人员进行，或因外力损坏或误用产品导致保修索赔，MSA 将不对此质保条件承担任何责任。MSA 的代理方、雇员或代表均无法代表 MSA 对根据本合同项出售的商品进行任何有关保修的肯定、陈述或修改。MSA 不会对非卖方制造的组件或附件进行担保，但会将此类组件制造商的所有担保交给购买者。本担保替代所有其他明示、暗示或规定的担保，并且严格限制于此处的条款。MSA 尤其不对适销性或适合特定用途做任何担保。

排他性补救 - 双方明确同意，对于 MSA 违反上述担保、以及 MSA 的侵权行为，购买者享有的唯一以及仅有的赔偿，是在 MSA 检测证实存在故障后，由 MSA 选择维修和/或更换任何设备或其中的零件。更换设备和/或零件不会对购买者产生费用(在 FOB 购买者指定的目的地)。如果 MSA 未成功维修任何不合格产品，则不会导致此处确定的补救方式在基本用途上失效。

间接损害免责 - 买方明确了解并同意，在任何情况下，对于因商品非工作情况下导致的经济性、特定、意外或间接损害或者任何此类损失，包括但不限于预期利润损失和任何其他损失，MSA 均不对买方承担责任。此项免责声明适用于违反担保条件、对 MSA 有侵权行为或任何其他诉因的索赔。

更多您当地 MSA 公司的联系信息，请访问我们的网站 www.MSAafety.com。

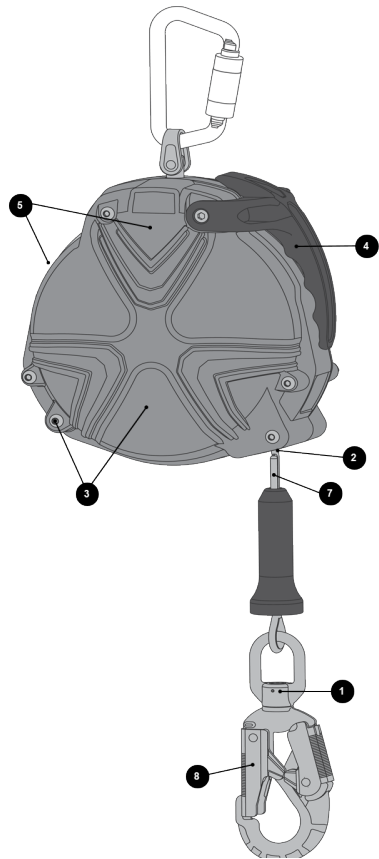
8 检查表

检查表

型号: _____ 序列号: _____
 日期: _____ 检查员(姓名/签名): _____
 制造日期: _____ 购买日期: _____
 首次使用日期: _____ 下次定期检查的预定日期: _____

#	描述	良好 - 可安全使用	良好 - 可安全使用	良好 - 可安全使用	良好 - 可安全使用	良好 - 可安全使用	损坏、磨损、改动、缺失 - 停止使用	评论
1	负载指示器							
2	喷嘴/喷嘴杆							
3	外壳/紧固件							
4	手柄(如有)							
5	标签							
6	吸震包袋(仅 V-TEC® EDGE SRL)							
7	织带							
8	安全钩							
	锁定(确保设备已锁定)							

V-TEC SRL / V-TEC Synthetic SRL



V-TEC EDGE SRL

