



Rollgliss®
R520 Escape Device
Model Numbers: (See back pages.)

USER INSTRUCTION MANUAL **ROLLGLISS® R520 ESCAPE DEVICE**

This Manual is intended to meet the manufacturer's instructions as required by ANSI Z359-4 and CSA Z259.2.3-12. It should be used as part of an employee training program as required by OSHA.

WARNING: This product is part of an emergency rescue system. The user must follow manufacturer's instructions for each part of the system. These instructions must be provided to the user of this equipment. The user must read and understand these instructions before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this equipment. Alterations or misuse of this equipment, or failure to follow instructions, may result in serious injury or death.

IMPORTANT: For further information and questions on the use, care or suitability of the R520 Escape Device for your application please contact Capital Safety.

This instruction describes installation and use of the Rollgliss R520 Escape Device. This instruction should be read and understood before using the R520 and used as part of an employee training program.

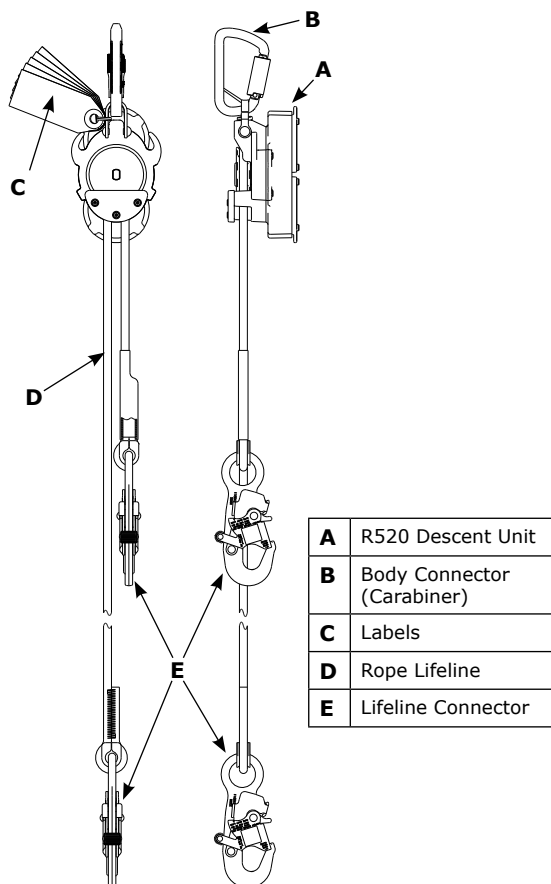
IMPORTANT: Before using the R520 Escape Device, record the product identification information from the ID label into the Inspection and Maintenance log in this manual.

DESCRIPTION:

The R520 Escape Device (Figure 1) is available for Descent application only. The R520 is packaged in a duffle-style bag for rope lengths of 100 ft (30 m) or less. It can be also be stored in a backpack style bag when used with long rope lifeline lengths.

Figure 1 - R520 Escape Device

Rollgliss R520 Models, 10 ft (3 m) to 500 ft (150 m) Rope Lifeline Lengths



1.0 APPLICATION

- 1.1 PURPOSE:** The Rollgliss R520 Escape Device is intended to lower one person from an elevated height to a lower rescue station. Several people may use the device to descend, one after another. The descent speed is automatically limited during the descent.

WARNING: The Rollgliss R520 Escape Device must not be used as a fall arrest device.

- 1.2 LIMITATIONS:** The following application limitations must be recognized and considered before using this product:

A. CAPACITY: Required capacities and descent distances for the Rollgliss R520 are as follows:

Users	Total Weight (including tools, clothing, etc.)	Max. Descent Distance	Number of Descents
1 Person	130 lbs (59 kg) - 330 lbs (150 kg)	500 ft (150 m)	6
1 Person	130 lbs (59 kg) - 310 lbs (141 kg)	500 ft (150 m)	6
1 Person	130 lbs (59 kg) - 220 lbs (100 kg)	500 ft (150 m)	9
1 Person	130 lbs (59 kg) - 165 lbs (75 kg)	500 ft (150 m)	12

- B. DESCENT SPEED:** The speed at which the user(s) will be lowered when using the Rollgliss R520 Escape Device increases with the weight of the user. The approximate descent speed is 2 - 3 ft per second (0.6 - 0.9 meters per second).

- C. HAZARDOUS AREAS:** Use of this equipment in hazardous areas may require additional precautions to reduce the possibility of injury to the user or damage to the equipment. Hazards may include, but are not limited to: high heat, caustic chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, and sharp edges.

- D. TRAINING:** This equipment is intended to be installed and used by persons trained in its correct application and use.

- 1.3 APPLICABLE STANDARDS:** The R520 Rollgliss Escape Device conforms to ANSI standard Z359.4 2007, CSA Z259.2.3-12 and federal (OSHA) standard requirements governing the use of this product.

2.0 SYSTEM REQUIREMENTS

- 2.1 COMPATIBILITY OF COMPONENTS:** DBI-SALA equipment is designed for use with DBI-SALA approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may effect the safety and reliability of the complete system.

- 2.2 COMPATIBILITY OF CONNECTORS:** Connectors (hooks, carabiners, D-rings) used to suspend the R520 Escape Devices must be capable of supporting at least 3100 lbs (15 kN). Connectors must be compatible in size, shape, and strength. Non compatible connectors may unintentionally disengage (roll-out). Roll-out occurs when interference between the connector and anchorage connector causes the hook or carabiner gate to unintentionally open and release. Self locking snap hooks and carabiners must be used with this system to reduce the possibility of roll-out. Do not use connectors that will not completely close over the attachment element.

- 2.3 ANCHORAGE STRENGTH - R520 ESCAPE DEVICE:** Anchorages used to suspend the R520 Escape Device must sustain static loads applied along the axis of the device. When more than one R520 Escape device is attached to an anchorage the anchorage strength requirement must be multiplied by the number of descent devices attached to the anchorage. It is recommended that the strength of the attachment be at least 3100 lbs (15 kN).

WARNING: If greater anchorage strength requirements apply where the Rollgliss R520 Rescue Device will be used, anchorages must comply with that requirement.

It is the responsibility of the user and purchaser of this equipment to be trained in the correct care and use of this equipment. The user and purchaser must be aware of the operating characteristics, application limits, and consequences of improper use of this equipment.

WARNING: Training must be conducted without exposing the trainee to a fall hazard. Training should be repeated on a periodic basis.

3.0 INSTALLATION AND USE

- 3.1 BEFORE EACH USE:** Carefully inspect the R520 Escape Device in accordance with Section 5 of this manual.
- 3.2 PLANNING:** Plan your emergency escape system and how it will be used before starting your work. Consider all factors that will affect your safety before, during, and after an escape. Consider the following when planning your system:
- A. ANCHORAGE:** Select a rigid anchorage point that is capable of supporting the load as specified in Section 2.3 of this document.
 - B. DESCENT PATH AND LANDING AREA CLEARANCE:** The planned descent path must be unobstructed and the landing area must be clear of obstructions to permit safe landing of the user. Failure to provide an unobstructed descent path and landing area may result in serious injury. Maintain a minimum distance of 31 cm (12 in) from any vertical surface to ensure a safe descent.
 - C. TESTING THE SYSTEM:** DBI-SALA recommends performing a test descent using a 55 kg (120 lb) weight. The descent speed should be uniform and allow the user to reach the landing area safely. A further check may be carried out by pulling the descent rope through the device while turning the rope sheave. The twin brake pinion shafts will be visible and should be turning. This provides visual evidence that both brake drum assemblies are operational. If one or both of the shafts do not turn, the R520 must be removed from service and tagged out.
- Note:** Record descents in the Descent Log in this manual.
- D. SHARP EDGES:** Avoid using this equipment where system components will be in contact with unprotected sharp edges. An edge protector (Figure 2, part number 3320003) or protective padding must be used when ascending over any edge.
- 3.3 INSTALLATION:** The Rollgliss R520 Escape Device is available in several configurations. Installation procedures vary depending on the intended application of the device.
- **Connection to an anchorage:** The Rollgliss R520 Escape Device may be attached to an anchorage by connecting the unit's carabiner directly to a D-ring or anchor strap that has been attached to the structure (Figure 3). See Section 2 for compatibility and anchorage strength requirements.

Figure 2 - Edge Protector

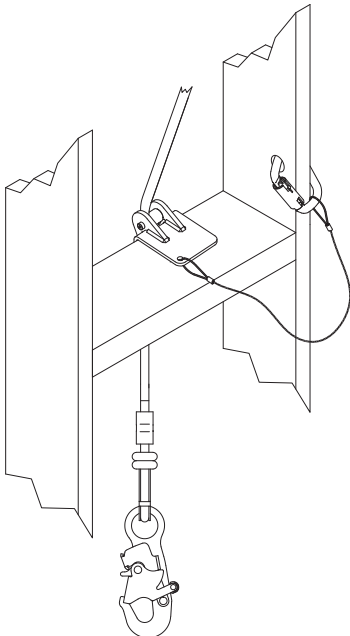
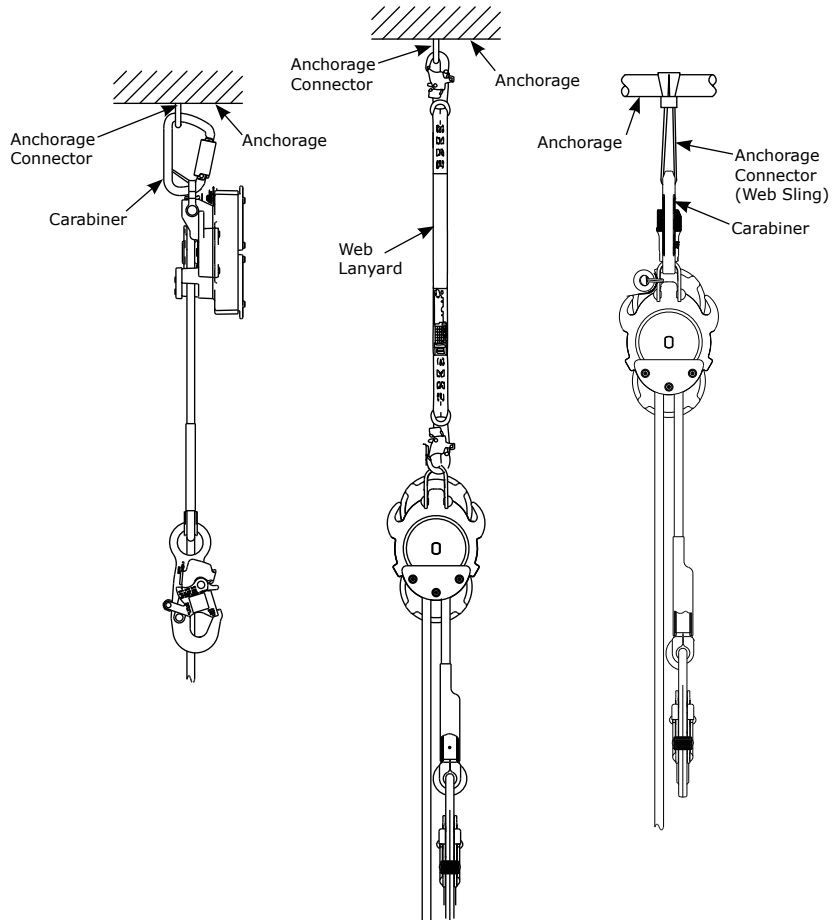


Figure 3 - Connecting the R520 Escape Device to Anchorage



- **Supplied in backpack bag:** The R520 Escape Device can be supplied in kit form, with accessories and various rope lengths, for storage in a backpack style bag.

3.4 SINGLE PERSON UNASSISTED ESCAPE: Procedures for performing and unassisted descent with the R520 Escape Device are as follows:

WARNING: The users of this equipment must be in good physical condition. The user must have the ability to absorb the landing.

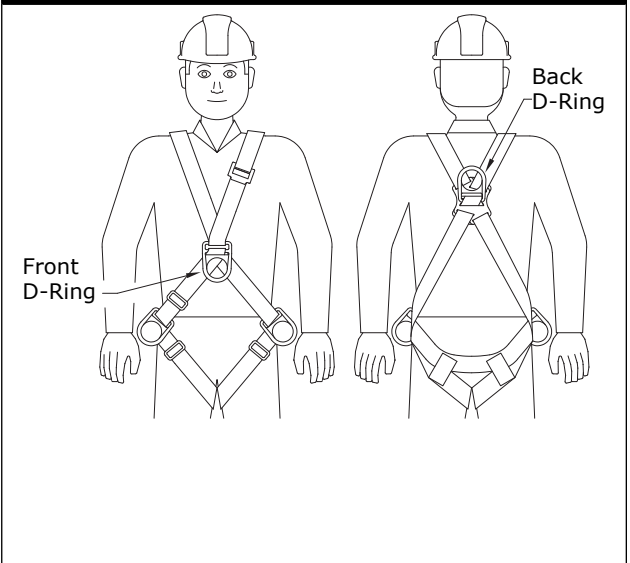
- Step 1. Connect to a Full Body Harness or other Body Support:** A full body harness or other means of supporting the user must be used with the R520 Escape Device.

WARNING: Do not use a body belt with this equipment. Body belts do not support your entire body, which may result in serious injury.

When using a full body harness, connect the Snap Hook on the lifeline to the front or back D-ring (Figure 5). Ensure the D-ring is positioned to hold the user upright. See the full body harness manufacturer's instructions for more information.

- Step 2. Prepare the Lifeline:** Remove the lifeline from the duffel or backpack storage bag. Lower one end of the lifeline to the ground or landing below. Ensure the lifeline is free of knots or kinks.

Figure 5 - Connecting to a Full Body Harness



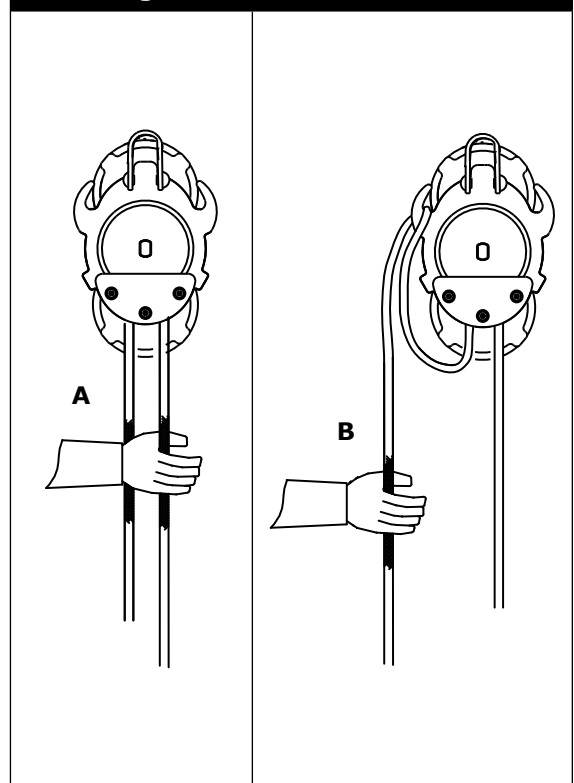
- Step 3. Prepare for Descent:** Prior to descent, the section of the lifeline between the user and the R520 Escape Device must be tightened to remove any slack. Tighten the lifeline by pulling on the free end of the rope until slack between the user and R520 Escape Device is removed. Once the lifeline is taut, hold the free end of the lifeline tightly until descent is initiated.

- Step 4. Descend to Safety:** Release the free end of the lifeline to initiate descent. Descent speed will be automatically controlled to a rate of .6 - .9 m/s (2-3 ft/s) by the R520 Escape Device's centrifugal brake.

NOTE: Users should not hold the lifeline unless attempting to slow or stop descent. Descent may be interrupted by firmly grasping the free end of the lifeline. (A, Figure 6)

For increased ease of control of descent speed, the free end of the lifeline can be looped through notch (B, Figure 6) on the same side of the unit. Apply pressure to the free end of the lifeline during descent to control descent speed.

Figure 6 - Descent Control



Bend your knees to prepare for landing. After landing, disconnect the lifeline from the body support.

- Step 5. Prepare for the Next Descent:** After use of the R520 Escape Device, the lifeline must be pulled through the device as needed to position a lifeline end and Snap Hook adjacent to the next person to descend.

4.0 TRAINING

It is the responsibility of the user and purchaser of this equipment to be trained in the correct care and use of this equipment. The user and purchaser must be aware of the operating characteristics, application limits, and consequences of improper use of this equipment.

WARNING: Training must be conducted without exposing the trainee to a fall hazard. Training should be repeated on a periodic basis.

5.0 INSPECTION

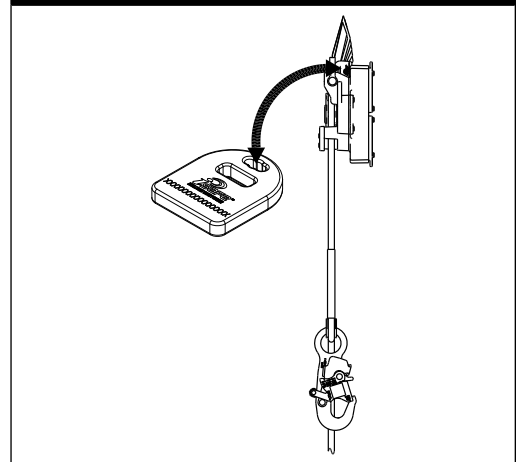
To ensure safe, efficient operation, the R520 Escape Device should be inspected at intervals defined in Section 5.1. See Section 5.3 for inspection procedures.

5.1 FREQUENCY: In addition to inspecting the R520 Escape Device prior to each use, Inspection should be performed at the following regular intervals:

- **Monthly:** A formal inspection should be completed by a competent person¹ other than the user. A formal inspection should be completed if the system parameters are changed, such as after a system is moved, Re-rigged, anchorages moved, etc. Extreme working conditions may require increasing the Inspection frequency. Inspect the R520 Escape Device in accordance with Section 5.3 and Section 5.4. Record inspection results in the Inspection and Maintenance Log, or use the i-Safe™ inspection web portal to maintain inspection records (see Section 5.2).
- **Every Two Years:** The R520 Escape Device must be sent to an authorized service center for inspection and service (see Section 6.2).

5.2 I-SAFE™ RFID TAG: R520 Escape Devices are equipped with an i-Safe™ Radio Frequency Identification (RFID) tag (Figure 7). The i-Safe™ RFID tag on the R520 Escape Device can be used in conjunction with the i-Safe handheld reading device and the web based portal to simplify inspection and inventory control and provide records for fall protection equipment. If you are a first-time user, contact a Customer Service representative in the US at 800-328-6146 or in Canada at 800-387-7484. If you have already registered, go to: <http://isafe.capitalsafety.com>. Follow the instructions provided with the i-Safe handheld reader or on the web portal to transfer your data to the web log.

Figure 7 - i-Safe™ RFID Tag



5.3 INSPECTION STEPS: Per the intervals defined in Section 5.1, inspect the R520 Escape Device as follows:

- Step 1.** Inspect device for loose fasteners and bent or damaged parts.
- Step 2.** Inspect device housing for distortion, cracks, or other damage. Ensure the anchorage handle is not damaged or distorted.
- Step 3.** The rope lifeline must pull through the device. Inspect the entire lifeline for cuts, burns, severely abraded areas, and excessive wear.
- Step 4.** Device labels must be present and fully legible (see Section 8).
- Step 5.** Inspect for corrosion on the device.
- Step 6.** Inspect carabiners for damage, corrosion, and working condition.
- Step 7.** Inspect all system components and subsystems according to manufacturer's instructions.
- Step 8.** Record inspection results in the Inspection and Maintenance Log (Section 10) or on the i-Safe web portal (Section 5.2).

5.4 UNSAFE OR DEFECTIVE CONDITIONS: If inspection reveals an unsafe or defective condition, remove the device from service and contact an authorized service center for repair.

1 Competent Person: Person who is knowledgeable of the current periodic examination requirements, recommendations and instructions issued by the manufacturer applicable to the relevant component, subsystem or system.

6.0 MAINTENANCE, SERVICE, STORAGE

6.1 MAINTENANCE:

- **Rollgliss R520 Escape Device:** Periodically clean the exterior of the R520 Escape Device with water and mild detergent. Position the device so excess water will drain out. Clean labels as required. Clean rope lifeline with water and mild detergent. Rinse and thoroughly air dry. Do not force dry with heat. A buildup of dirt, paint, etc., may prevent the lifeline from pulling through the device. Ensure no knots are present.

6.2 SERVICE: Maintenance and service must be completed by an authorized service center. An authorization and return number must be issued by Capital Safety. Do not attempt to disassemble the device. The R520 Escape Device requires service by an authorized service center every two years. Service by and authorized service center is also required when the Maximum Cumulative Descent Distance has been reached. Descent Distances should be logged and totaled in the Descent Log (Section 11). Service shall include an intensive inspection and cleaning of all components and replacement of Friction Pads as required. Failure to provide required service may shorten the product life and compromise safety and performance.

NOTE: Only Capital Safety or parties authorized in writing may make repairs to this equipment.

6.3 STORAGE: Store the R520 Escape Device in a cool, dry, clean environment, out of direct sunlight. Avoid areas where chemical or organic vapors are present. Thoroughly inspect the R520 Escape Device after extended storage.

7.0 SPECIFICATIONS

7.1 MATERIALS:

Housing:	Aluminum Alloy
Pulley:	Aluminum Alloy
Anchorage Handle:	Stainless Steel
Fasteners:	Stainless Steel
Shafts & Gears:	Alloy Steel
Bushings:	Teflon Coated Galvanized Steel
Lifeline:	3/8" (9.5 mm) Polyamide Static Kernmantel Rope
Finish Paint:	Polyester Baked Finish

7.2 PERFORMANCE

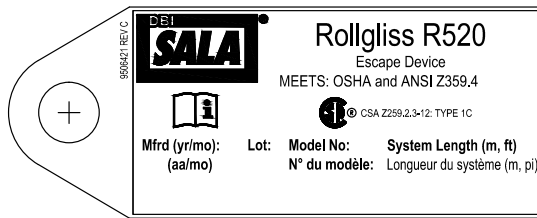
Anchorage Strength Required:	3,100 lb (1,410 kg)
Capacity:	1 Person: 130 lb - 310 lb (59 kg - 141 kg)
Maximum Allowed Descent Height:	1 Person: 500 ft (152 m) when system length permits
Nominal Descent Speed:	1 Person: 2 ft/s - 3 ft/s (0.6 m/s - 0.9 m/s)
Maximum Consecutive Descents:	The Maximum Number of Consecutive Descents is equal to the Total Cumulative Descent Distance divided by the Descent Height. Total Cumulative Descent Distances for various weight limitations are as follows:

1 Person to 330 lb (150 kg)	3000 ft (900 m)
1 Person to 310 lb (141 kg)	3193 ft (957 m)
1 Person to 220 lb (100 kg)	4500 ft (1350 m)
1 Person to 165 lb (75 kg)	6000 ft. (1800 m)

Device meets OSHA, CSA Z259.2.3-12 and ANSI Z359.4 Requirements.

8.0 LABELING

The following labels should be securely attached to the R520 Rescue & Escape Device and should be fully legible:



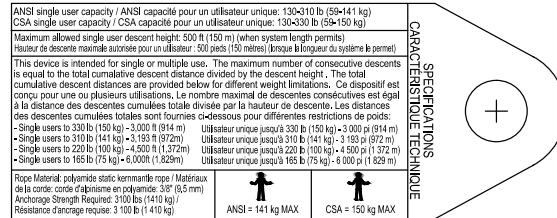
Identification



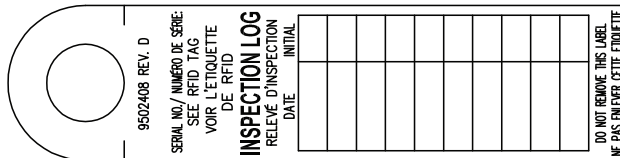
Contact



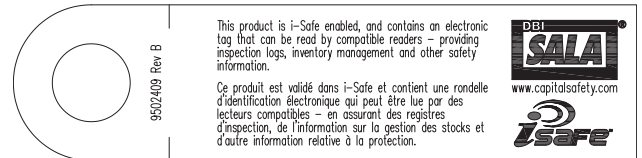
Specifications



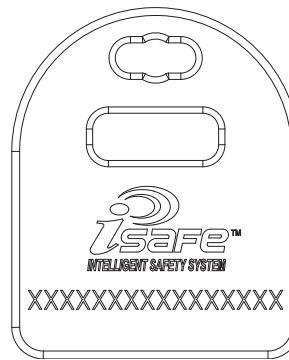
Specifications



Inspection Log



i-Safe™



i-Safe™ RFID

9.0 MODELS

Model	Product	Application	Descent Length:	
			Feet	Meters
3305040	Rollgliss R520		50	15.2
3305041	Rollgliss R520		100	30.58
3305042	Rollgliss R520		200	60.0
3305043	Rollgliss R520		300	91.4
3305044	Rollgliss R520		400	121.9
3305045	Rollgliss R520		500	152.4

NOTE: Additional Model Numbers may appear on the next printing of these instructions. Contact Capital Safety for models not listed.

10.0 INSPECTION AND MAINTENANCE LOG

SERIAL NUMBER:		
MODEL NUMBER:		
DATE PURCHASED:		DATE OF FIRST USE:

[illegible]

11.0 DESCENT LOG

SERIAL NUMBER:		
MODEL NUMBER:		
DATE PURCHASED:		DATE OF FIRST USE:

[illegible]

1. Match the greatest Descent Weight logged above with the appropriate Weight Limit in the table below to determine the allowed Maximum Cumulative Descent Distance.

Weight Limits	Max. Cumulative Descent Distance
1 Person to 330 lb (150 kg)	3000 ft (900 m)
1 Person to 310 lb (141 kg)	3193 ft (957 m)
1 Person to 220 lb (100 kg)	4500 ft (1350 m)
1 Person to 165 lb (75 kg)	6000 ft. (1800 m)

2. If the Cumulative Descent Distance calculated above meets or exceeds the Maximum Cumulative Descent Distance from Step 1, the R520 Escape Device should be serviced by an Authorized Service Center. Service Dates should be logged below:

Service Date	Service Date

LIMITED LIFETIME WARRANTY

Warranty to End User: D B Industries, Inc., dba CAPITAL SAFETY USA ("CAPITAL SAFETY") warrants to the original end user ("End User") that its products are free from defects in materials and workmanship under normal use and service. This warranty extends for the lifetime of the product from the date the product is purchased by the End User, in new and unused condition, from a CAPITAL SAFETY authorized distributor. CAPITAL SAFETY'S entire liability to End User and End User's exclusive remedy under this warranty is limited to the repair or replacement in kind of any defective product within its lifetime (as CAPITAL SAFETY in its sole discretion determines and deems appropriate). No oral or written information or advice given by CAPITAL SAFETY, its distributors, directors, officers, agents or employees shall create any different or additional warranties or in any way increase the scope of this warranty. CAPITAL SAFETY will not accept liability for defects that are the result of product abuse, misuse, alteration or modification, or for defects that are due to a failure to install, maintain, or use the product in accordance with the manufacturer's instructions.

CAPITAL SAFETY'S WARRANTY APPLIES ONLY TO THE END USER. THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO OUR PRODUCTS AND IS IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED. CAPITAL SAFETY EXPRESSLY EXCLUDES AND DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SHALL NOT BE LIABLE FOR INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY NATURE, INCLUDING WITHOUT LIMITATION, LOST PROFITS, REVENUES, OR PRODUCTIVITY, OR FOR BODILY INJURY OR DEATH OR LOSS OR DAMAGE TO PROPERTY, UNDER ANY THEORY OF LIABILITY, INCLUDING WITHOUT LIMITATION, CONTRACT, WARRANTY, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE) OR OTHER LEGAL OR EQUITABLE THEORY.



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