

Cascade Rescue Professional Series Litter

MANUFACTURER:

USA

Cascade Rescue Company
1808 Industrial Dr.
Sandpoint, ID 83864

(844) 414-7377
cascade-rescue.com

- CRC-RSL-PSS1** One Piece Tapered Stainless Steel
- CRC-RSL-PSS2** Two Piece Tapered Stainless Steel
- CRC-RSL-PSSR-1** One Piece Rectangular Stainless Steel
- CRC-RSL-PSSR-2** Two Piece Rectangular Stainless Steel
- CRC-RSL-PT1** One Piece Tapered Titanium
- CRC-RSL-PT2** Two Piece Tapered Titanium
- CRC-RSL-PTR-1** One Piece Rectangular Titanium
- CRC-RSL-PTR-2** Two Piece Rectangular Titanium



Cascade Rescue is a product line of Harken Inc.

Read and understand all instructions before and after each use. This instruction manual is an integral part of the product, and it supplies all the necessary information for its correct safe use and maintenance, a copy should be kept with the equipment. Retain this manual in your permanent records for future consultation. This manual may be modified without notice. Updated versions are available on harkenindustrial.com.



SAFETY INFORMATION

- ▶ Untrained operators can cause injury or be injured. Permit only trained personnel to operate this litter. Improper use of the litter can cause injury. Only use the litter for the purposes described in this manual. An unrestrained or improperly restrained patient can suffer injuries. Always secure the patient in the litter with a restraint system suitable to the situation.
- ▶ Helpers can cause injury or be injured.
- ▶ Maintain control of the litter at all times and direct all helpers.
- ▶ Use the litter only as-sold by Cascade Rescue. Attaching improper or inappropriate items to the litter can cause injury. Use only Cascade Rescue approved spare parts and accessories on the litter.

INDICATIONS AND WARNINGS

- ▶ Using the litter requires a minimum of two trained operators. In most situations, operators will want or need additional help. For information about placement and direction of helpers, follow guidance contained in this manual.
- ▶ Follow standard emergency patient-handling procedures when using the litter.
- ▶ Stay with the patient at all times.
- ▶ Always use the patient restraints provided, as well as a supplementary restraining system as per your training and team protocols, and the situation.
- ▶ Personnel using the litter in high-angle environments are responsible for learning the proper techniques involved, and for selecting the equipment and procedures best suited to the rescue situation.

IMPROPER USE

- ▶ Improper operation can cause injury. Operate the litter only as described in this manual. An unattended patient can be injured. Stay with the patient at all times.
- ▶ Improper maintenance can cause injury and damage. Maintain litter only as described in this manual.
- ▶ Improper parts and service can cause injury. Use only Cascade Rescue approved parts and service on the litter. Modifying the litter can cause injury and damage.

INTENDED USE

The medical device family Professional Series Litters is designed for the recovery and transport of patients. They can be used for rescue operations in those cases where it is necessary to protect patients from side impacts, where it is not possible to intervene with normal transport equipment.

INTENDED USERS

The intended users of the medical device family of Professional Series Litters are rescue workers, typically technical, carrying out operations related to the use of harnessing systems. Personnel trained for use of the device must also have training in managing lifting and handling suspended loads with people.

TARGET PATIENTS

There are no particular indications related to patient group: the intended patient is injured and/or in a state of unconsciousness.

PERSONAL PROTECTIVE EQUIPMENT

- ▶ We recommend wearing a helmet, gloves, and appropriate clothing for your environment.
- ▶ Avoid direct contact with the patient's skin. In the event that the patient's skin is in contact with the device, it is necessary to protect it with a biocompatible surgical sheet.

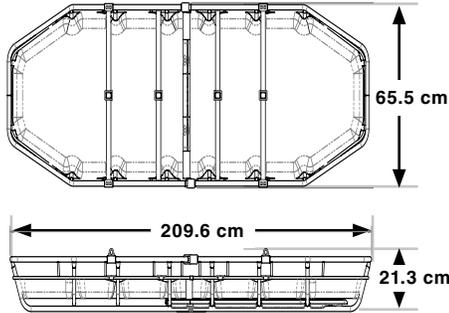
RISKS

- ▶ Activities involving the use of the Cascade Professional Series Litters are inherently dangerous. You are responsible for your own actions and decisions.
- ▶ Read and understand all instructions before and after use.
- ▶ Become acquainted with its capabilities and limitations.
- ▶ Understand and accept the risks involved.
- ▶ Failure to heed any of these warnings could result in severe injury or death.
- ▶ Over loading or dynamic loading on these litters may damage the product and result in injury or death.
- ▶ The litter is designed as a system and all components must be present and in good working condition.
- ▶ As a medical device, litters carry a risk of spreading disease. Disinfect litter according to directions in maintenance section of this manual.

PRODUCT DESCRIPTION AND COMPONENTS

Cascade Rescue Professional Series Litters are constructed of titanium (grade 2 and grade 9) or 304 stainless steel. Their components are made of nylon webbing straps, a HDPE backboard with foam pad, and a vinyl coated mesh.

Dimensions
(same for all models)



CERTIFICATIONS



MEETS THE LITTER REQUIREMENTS OF NFPA 1983, INCORPORATED IN THE 2022 EDITION OF NFPA 2500.

Additional information regarding litters can be found in NFPA 1500 and NFPA 1858 and NFPA 1983, incorporated in the 2022 edition of NFPA 2500.

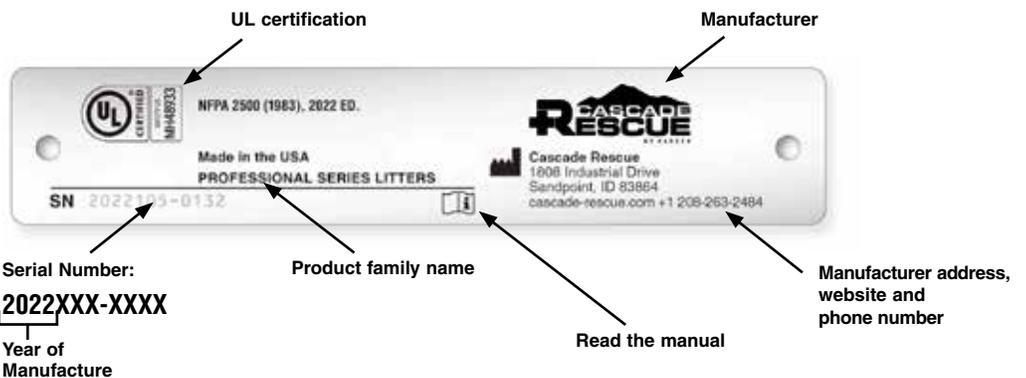
LOAD RATINGS

Vertical breaking strength: 11kN
 Horizontal breaking strength: 11kN
 Articulating Lift Points (ALP):
 Minimum breaking strength: 9kN each

NOMENCLATURE OF PARTS



LABEL COMPONENTS:



| Litter product no. | Description | Dimensions (all litters) | Weight | Back board compatible |
|--------------------|---------------------------------------|---|--------------------|-----------------------|
| CRC-RSL-PSS1 | One Piece Tapered Stainless Steel | 82.5 x 25.8 x 8.4in. 2,096 x 655.3 x 213.4mm | 25 lbs / 14 kg | |
| CRC-RSL-PSS2 | Two Piece Tapered Stainless Steel | | 27.5 lbs / 14.5 kg | |
| CRC-RSL-PSSR-1 | One Piece Rectangular Stainless Steel | | 25 lbs / 14 kg | • |
| CRC-RSL-PSSR-2 | Two Piece Rectangular Stainless Steel | | 27.5 lbs / 14.5 kg | • |
| CRC-RSL-PT1 | One Piece Tapered Titanium | | 18 lbs / 8.2 kg | |
| CRC-RSL-PT2 | Two Piece Tapered Titanium | | 19 lbs / 8.6 kg | |
| CRC-RSL-PTR-1 | One Piece Rectangular Titanium | | 18 lbs / 8.2 kg | • |
| CRC-RSL-PTR-2 | Two Piece Rectangular Titanium | | 19 lbs / 8.6 kg | • |

USE

Before use

- ▶ Read and understand these user instructions and warnings.
- ▶ Get specific training.
- ▶ Familiarize yourself with its capabilities and limitations.

Selecting other components for the system:

Verify that this product is compatible with the other elements of the system in your application. Equipment used with Cascade Rescue litters must meet the current standard in your country

Pre-use inspection:

- ▶ The litter must be inspected before each use. Do not use the litter if any part of the top railing is deformed, bent, dented or otherwise in a shape or form other than specified by the manufacturer.
- ▶ Inspect each tubular component of the Professional Series Litter. Minor nicks in, small dents in the runners and side ribs are acceptable. Scratches, abrasion marks, etc are acceptable forms of normal wear and tear. When in doubt, remove the litter from service and contact the manufacturer.
- ▶ Inspect back support, liner, and straps. If cracks, tears, fraying or any damage is detected the suspect part should be replaced or repaired.
- ▶ Inspect each Articulating Lift Point (ALP) for cracking, deformation or damage. Inspect tubing around and under ALP for damage.
- ▶ Keep a history log of training sessions and actual missions. When in doubt of the structural status of any litter or its history of use – DO NOT USE. Contact the manufacturer if the condition or history of the litter is in question.

A recommended safety log is included on the last page of this manual.

Operation

- ▶ Restraints Each litter has four Quick-Tab Patient Straps installed. These straps are intended only for securing the patient onto the litter; they should not be used for lifting. To use, simply insert the small square slider into the larger hollow rectangle and pull the strap. To remove, give a tug on the red Quick-Tab and the strap comes loose. Each Quick-Tab strap has been tested to 6.2kN MBS.

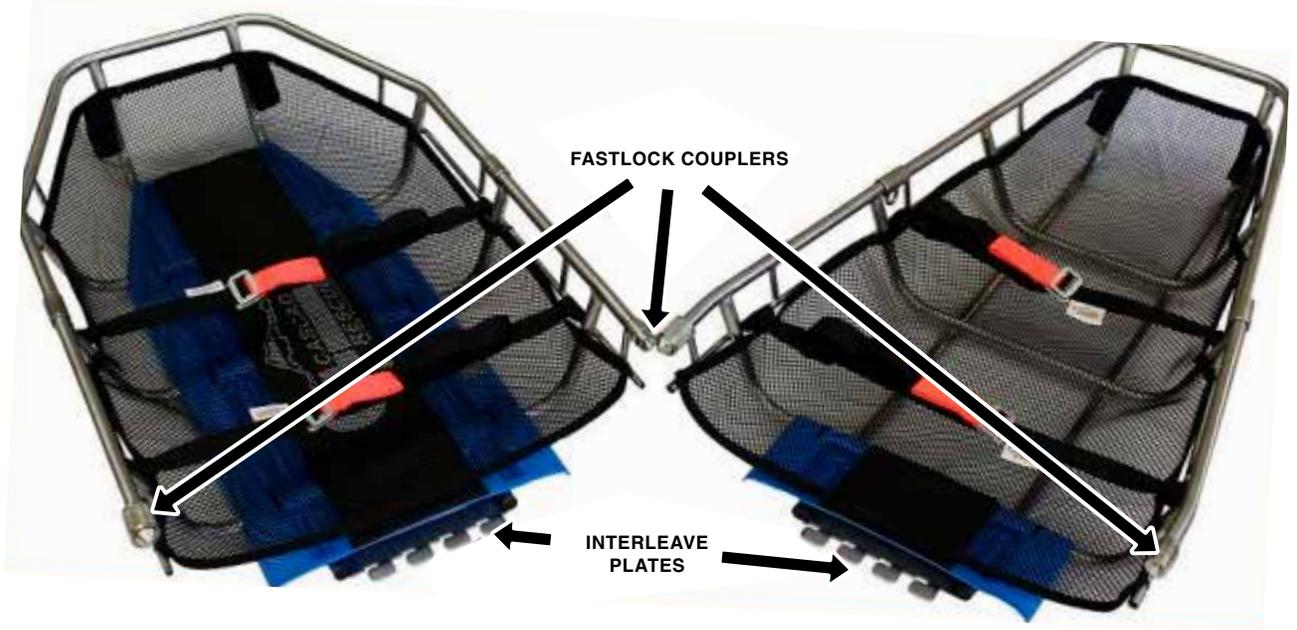


The male end is inserted through the female end and twisted to lock.

- ▶ **Articulating Lift Points:** Cascade Rescue's patented ALPs allow a variety of litter rigging to be used. Position them straight up and use them with a traditional four-point harness or rotate them to the outside to facilitate use with a two-point harness for vertical work. When not needed, simply fold them in the down position, completely out of the way with no potential for patient injury. Each ALP has a MBS of 9kN.

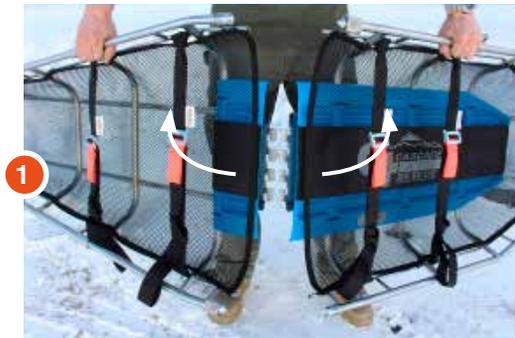


► **FastLock System:** Two-piece litters have a rapid take-down FastLock System comprised of (2) FastLock Couplers and a two-part Interleave Plate.



To assemble 2-piece litters:

Pick up the litter and bend in the middle, pulling toward you, until the litter is at an approximately 30-degree angle (1). Insert the tabs on the Interleave Plate through each other (2).

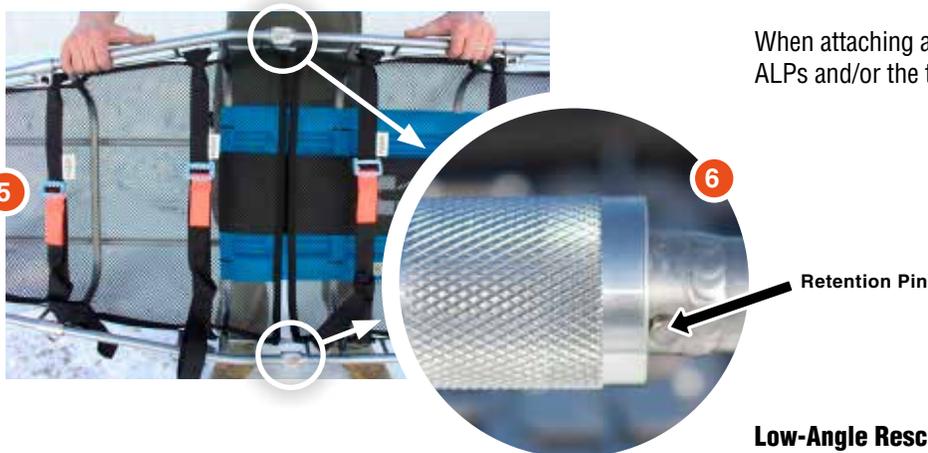


Use slight pressure to lift one section of the litter straight up, while pushing down slightly on the other section. This will engage the tabs of the Interleave Plate (3). Rotate the ends of the litter away from you until the litter is relatively flat and the FastLock Couplers align (4).



Engage the FastLock Couplers by screwing them together, much as you would a screw-gate carabiner.

(5). Ensure that the coupler is completely closed and observe that the locking button is fully extended at the back of the FastLock Coupler (6).



To disassemble 2-piece litters: Repeat steps 1-6 in reverse order. Note: Retention pin must be depressed before unscrewing the coupler to pull apart the halves.

General recommendations for use:

- ▶ Always inspect litter to ensure suitability for task at hand.
- ▶ Using this product requires a minimum of two trained operators.
- ▶ Patient should be accompanied and restrained at all times. Load patient into litter using approved first aid, basic life support or advanced life support techniques.
- ▶ Secure patient to bed of litter with attached straps. Additional packaging may be required as dictated by appropriate rescue techniques advised by appropriately trained rescue professionals.
- ▶ Operators attempting high or low-angle rescue are responsible for being adequately trained in the techniques involved and selecting the appropriate equipment for the situation.
- ▶ Use an even number of operators to carry the litter, positioning them to keep the litter as level as possible.
- ▶ Avoid surfaces and hazards that could penetrate the netting, causing discomfort or harm to the patient.

High-Angle Rescue:

High-Angle Rescue requires specialized tools and equipment in which the proper and safe use requires professional instruction and training. All equipment should have an adequate load rating that is at least equal to that of the litter (11.1kN). The litter can be oriented horizontally or vertically. The patient should be restrained in a manner to prevent sliding in any direction.

When attaching a litter bridle for high angle rescue, use only the ALPs and/or the top rail for attachment. when suspending the litter.

Low-Angle Rescue

Low angle rescue rigging at the head of the litter should incorporate both the top rail and two bottom runners. Low-angle bridles should not exceed a 90 degree interior angle and should be short enough to prevent entanglement from obstacles during a rescue. Low angle rescue should only be carried out by rescuers trained in low angle rescue techniques. The patient should always be restrained in a manner that prevents movement, and they should have an attendant with them at all times.



REPLACEMENT PARTS

| Accessory product no. | Description |
|-----------------------|-------------------------------------|
| CRC-TBA-QTS | Quick-Tab Straps |
| CRC-RLA-PSL1 | Rescue Litter Liner - One Piece |
| CRC-RLA-PSL2 | Rescue Litter Liner - Two Piece |
| CRC-RLA-PSBB | Patient Contour Padded Back Support |

REMOVING FROM SERVICE

- ▶ Product can be severely damaged if exposed to chemical reagents and should be removed from service if safe function is in doubt.
- ▶ Retire any litter that is showing excessive wear. Do not attempt to repair or replace any metal component or weld.
- ▶ If there is a significant dynamic event or shock load that results in damage, deformation, or users suspects damage, remove from service.
- ▶ Disposal: the devices can be disposed of as normal municipal solid waste if they have not been contaminated by special agents, otherwise follow the regulations in force regarding special waste.
- ▶ If in doubt, check with Cascade Rescue.

INSPECTION

- ▶ Inspect litter at regularly scheduled intervals (no less than once a year), after each use, suspected damage, and if litter has sustained significant force from operations or from shock loading.
- ▶ Inspect each tubular component of the Professional Series. Minor nicks in, small dents in the runners and side ribs are acceptable. Scratches, abrasion marks, etc are acceptable forms of normal wear and tear. When in doubt, remove the litter from service and contact the manufacturer.
- ▶ Inspect back support, liner, and straps. If cracks, tears, fraying or any damage is detected the suspect part should be replaced or repaired.
- ▶ Inspect each Articulating Lift Point (ALP) for cracking, deformation or damage. Inspect tubing around and under ALP for damage.
- ▶ Inspect each weld for damage, retire if welds have fractured.
- ▶ Two Piece litter: Inspect interlocking bed plates for bends
- ▶ Two Piece litter: Inspect interlocking Threads for damage
- ▶ Titanium litters should be inspected closely for deep gouges or scratches. Due to the nature of titanium, this type of damage must be monitored when occurring on high-stress areas such as the top railing.



WARNING!

PROTECT THE LITTER FROM HIGH HEAT AT ALL TIMES. EXPOSING ANY SOFT GOODS COMPONENT OF THE LITTER TO FLAME OR HIGH TEMPERATURE CAN MELT OR BURN THE MATERIAL, CAUSING IT TO FAIL.

LIFESPAN

- ▶ Operating temperature is between minus 10°C and plus 50°C.
- ▶ The maximum lifetime of the adjustment straps are 10 years from date of manufacture. However, this can be considerably shorter depending on the usage intensity and environment in which it is used.
- ▶ Unlimited lifespan for metal components unless damage occurs during use or storage

PACKAGING, STORAGE, AND TRANSPORTATION

- ▶ Dry, away from solvents and corrosive materials
- ▶ Do not store at extreme temperatures or with direct exposure to UV
- ▶ Litters should be stored in a manner that they are protected from the elements, which can have a cumulative effect in weakening any piece of rescue equipment.
- ▶ Litters should be stored either indoors or within a protective case away from excessive heat, cold or UV.
- ▶ Two-piece litter: protect threads on the interlocking coupler during storage

MAINTENANCE

- ▶ If soiled, rinse in clean warm water (maximum temperature 40°C) with non-detergent at appropriate dilution (Ph range 5.5-8.5), thoroughly rinse. When the equipment becomes wet, either from being in use or when due to cleaning, it should be allowed to dry naturally, and should be kept away from direct heat. Light surface corrosion may be removed with a wire brush (no power tools). Retire if corrosion is heavy.
- ▶ Disinfection: When required, soak the product in a warm water solution with 59ml of bleach per gallon of water for at least 1 hour, then rinse in clean warm water (maximum temperature 40°C) it should be allowed to dry naturally, and should be kept away from direct heat.
- ▶ On soft goods, do not use enzymatic cleansers.
- ▶ Two-piece litter threads can be lubricated with white lithium grease.
- ▶ If the patient straps, back support or mesh liner become damaged, contact Cascade Rescue or authorized service center for replacement.

