

# **Ritz**

## **FALL PROTECTION**

**This User Instruction Manual applies to the following models:**

**RTZ1DHV:**

*Hi-vis, five-point harness with single D-ring & regular mating buckle leg straps*

**RTZ4500U, RTZ45002X, RTZ4500SM:**

*Five-point harness with single D-ring & grommeted leg straps*

**RTZ3DHVXS, RTZ3DHVSMMD, RTZ3DHVLGXL, RTZ3DHV2X3X:**

*Hi-vis, five-point harness with three D-rings & grommeted leg straps & waist belt*

**RTZ4507U, RTZ3DGXM, RTZ3DGSMMMD, RTZ3DGLGXL, RTZ3DG2X3X**

## ***UNDER PENALTY OF LAW***

This manual must be read and understood in its entirety. This manual must also be used as part of a fall protection training program, as required by OSHA or any state/local regulatory agencies. This manual is intended to meet industry standards required by ANSI Z359.11-2014. The user must read and fully understand the limitations and proper use of the equipment and be properly trained by the employer prior to use. **NOTE:** This User Instruction Manual is not to be removed except by the equipment user. Current User Instruction Manuals must always be available to the user. Read and understand these instructions before using equipment. Do not discard these instructions.

## ***WARNINGS***

- This User Instruction Manual is not to be removed except by the user of this equipment.
- Current User Instruction Manuals must always be available to the user.
- Read and understand these instructions before using equipment. Do not throw them away.
- Equipment must not be altered in any way. Repairs must be performed only by the Manufacturer, or persons or entities authorized in writing by the manufacturer.
- Misusing the equipment may cause serious injury or death
- Do not use the equipment near sharp edges and abrasive surfaces, or around moving machinery and electrical hazards.
- Do not expose the equipment to chemicals, heat, flames or other environmental conditions, which may produce a harmful effect and to consult COMPANY NAME in case of doubt.
- Do not expose the PPE to UV light to avoid UV degradation
- The Ritz Safety Full Body Harnesses should be used only with the combinations of components, subsystems or both which may not affect or interfere with the safe function of one another. Be certain that connecting devices are compatible and that other elements of the PFAS are safe to use and compatible before use.
- All authorized persons/users must refer the regulations governing occupational safety, as well as applicable ANSI or CSA standards.
- Please refer to product labeling for information on specific OSHA regulations, and ANSI and CSA standards met by product.
- Any product exhibiting deformities, unusual wear, or deterioration must be immediately discarded. Any equipment subject to a fall must be removed from service.
- When not in use, unused lanyard legs that are still attached to a harness D-ring should not be attached to a work positioning element or any other structural element on the harness unless deemed acceptable by the competent person and manufacturer of the lanyard.

## ***INSTRUCTIONS FOR USE***

- Full Body Harnesses which meet ANSI/ASSE Z359.11 are intended to be used with other components of a Personal Fall Arrest system that limit maximum arrest forces to 1800 pounds (8 kN) or less.
- Failure to follow all instructions and limitations on the use of this equipment may result in serious personal injury or death.
- Prior to each use, inspect all personal fall arrest system equipment for wear, damage, and other deterioration.

- Defective components must be removed from service **immediately**.
- After a fall, the Ritz Safety Full Body Harnesses must be removed from service and destroyed immediately.
- Thoroughly evaluate and plan all elements of your fall protection system(s) before using your equipment. Make sure that your system is appropriate for your needs and facility. Also be sure to calculate fall clearance and swing fall clearance.
- Users must have a rescue plan and the means to implement it. This plan must provide prompt employee rescue or assure that employees can rescue themselves in the event of a fall.
- Store this equipment in a cool, dry, and clean environment that is out of direct sunlight when not in use.
- After a fall occurs, this equipment must be removed from service and destroyed immediately.
- Failure to follow all instructions and limitations on the use of Personal Energy Absorbers and Energy Absorbing Lanyards may result in serious personal injury or death.
- Failure to have the leg straps of the Full Body Harness properly adjusted may result in serious injury or death.
- Never attach the unused leg of the lanyard back to the Ritz Safety Full Body Harnesses anywhere other than an approved lanyard storage keeper.
- To minimize the potential for accidental disengagement, a Competent Person must ensure system compatibility.
- All equipment must be inspected before each use according to the instructions found in this *User Instruction Manual*. All equipment should be inspected by a qualified person on a regular basis.
- Never use fall protection equipment for purposes other than those for which it was designed.
- Environmental hazards should be considered when selecting fall protection equipment.
- Do not expose the equipment to any hazard that it is not designed to withstand. Consult Ritz Safety in case of doubt.
- Never remove product labels because they include important information for the Authorized Person/User.

## ***LIMITATIONS***

- This equipment is designed to be used in temperatures ranging from -40°F to +130°F (-40°C to +54°C).
- Do not expose this equipment to chemicals or harsh solutions that may have a harmful effect. Contact RITZ SAFETY with any questions.
- Use caution when working with this product near moving machinery, electrical hazards, sharp edges, or abrasive surfaces, as contact may cause equipment failure, personal injury, or death.
- Minors, pregnant women, and anyone with a history of back and/or neck problems should not use this equipment.
- Do not use or install equipment without proper training from a "Competent Person".
- Only RITZ SAFETY, or entities authorized in writing by RITZ SAFETY, shall make repairs or alterations to the equipment.
- RITZ SAFETY Full Body Harnesses are designed for users with a maximum capacity up to ANSI 310 lbs (141 kgs) / OSHA 420 lbs (190 kgs) including clothing, tools, etc.

*\*If the system is used by an employee having a combined tool and body weight between 310 lb. (140.6 kg.) and 400 lb. (181.4 kg.), then the employer must appropriately modify the criteria and protocols to provide proper protection for such heavier weights, or the system will not be deemed to be in compliance with the requirements of OSHA 1926.502(d) (16). [ANSI capacity range is 130 lb. – 310 lb. (59 kg. – 140.6 kg.).]*

- Personal Energy Absorbers and Energy Absorbing Lanyards marked with, “ANSI Z359.13,” and “6 ft. Free Fall” are designed for up to 6 ft. free fall applications with a maximum capacity up to 310 lb. (141 kg) including clothing, tools, etc.
- RITZ SAFETY Full Body Harnesses shall be used as part of a personal fall arrest system that limits the maximum free fall distance to 6 ft. (1.8 m). If used with appropriate connecting system, RITZ SAFETY Full Body Harnesses may be used with free falls exceeding 6 ft. (1.8 m).
- Full Body Harnesses shall only be used as part of a controlled descent or rescue system that eliminates free fall unless attached to the dorsal D-ring. When attached to the dorsal D-ring, the maximum free fall distance is 6 ft. (1.8 m).
- Full Body Harnesses shall only be used as part of a work positioning system that limits the maximum free fall distance to 2 ft. (0.6 m).
- Only use components rated for the same weight capacity. Not all fall protection components are rated for the same user weight capacity.
- Proper precautions should always be taken to remove any obstructions, debris, material, or other recognized hazards from the work area that could cause injuries or interfere with the effective operation of the system.
- Do not use fall protection equipment for towing or hoisting.
- Protect all synthetic material from slag, hot sparks, open flames, or other heat sources.
- Do not expose equipment to environmental hazards and chemicals which may produce a harmful effect. Polyester should be used in certain chemical or acidic environments.
- Do not allow equipment to contact anything that will damage it including (but not limited to): sharp edges, abrasive surfaces, moving machinery, or high-temperature applications like welding, heat sources, and electrical areas.
- Evaluate space below work area to ensure potential fall path is clear of obstructions.
- Allow adequate fall clearance below the work surface.
- Suspension intolerance is a serious condition that can be controlled with good harness design, prompt rescue and post fall suspension relief devices. A conscious user may deploy a suspension relief device allowing the user to remove tension from around the legs, freeing blood flow, which can delay the onset of suspension intolerance. An attachment element extender is not intended to be attached directly to an anchorage or anchorage connector for fall arrest. An energy absorber must be used to limit maximum arrest forces to 1800 lbs (8 kN). The length of the attachment element extender may affect free fall distances and free fall clearance calculations.

## **PERFORMANCE**

Each RITZ SAFETY Full Body Harness has a minimum tensile breaking strength of 3,600 pounds (16 kN) when statically tested in accordance with the requirements of the ANSI Z359.11-2014 standard. RITZ SAFETY Full

Body Harnesses stretch is less than 18 inches (457 mm). It is important to include the increase in fall distance created by FBH Stretch, as well as the FBH connector length, the settling of the user's body in the FBH and all other contributing factors when calculating total clearance required for a particular fall arrest system.

## **ANCHORAGE REQUIREMENTS**

■ All anchorages to which the Personal Energy Absorbers and Energy Absorbing Lanyards attach must meet the requirements of ANSI Z359.18-2017:

*Anchorages to which personal fall arrest equipment is attached shall be capable of supporting at least 5,000 lb. (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, under the supervision of a qualified person.*

■ ANSI Z359.18-2017 states that anchorages in a personal fall arrest system must have strength capable of sustaining static loads applied in all directions permitted by the system of at least:

- (a) Two times the maximum arrest force permitted on the system with certification, or
- (b) 5,000 lb. (22.2 kN) in the absence of certification

*When more than one personal fall arrest system is attached to the anchorage, the strength in (a) and (b) must be multiplied by the number of personal fall arrest systems attached to the anchorage.*

■ Anchorages used in controlled descent and rescue systems must be capable of supporting loads of 3,100 ft-lb. (13.8 kN) for non-certified anchorages or a 5:1 safety factor for certified anchorages per ANSI Z359.4-2013.

■ Anchorages used in restraint systems must be capable of supporting loads of 1,000 ft-lb. (4.5 kN) for non-certified anchorages or two times the foreseeable force for certified anchorages per ANSI Z359.18-2017.

■ Anchorages used in work positioning systems must be capable of supporting loads of 3,000 ft-lb. (13.3 kN) for non-certified anchorages or two times the foreseeable force for certified anchorages per ANSI Z359.18-2017.

■ Anchorages should be located as vertically as possible above the user's head and be positioned as not to exceed the maximum allowable free fall for the system.

## **CONNECTION COMPATIBILITY LIMITATIONS**

All RITZ SAFETY equipment must be coupled to compatible connectors. OSHA 29 CFR 1926.502 prohibits snap hooks from being engaged to certain objects unless two requirements are met:

1. It must be a locking type of snap hook.
2. It must be "designed for" making such a connection. Designed for means that the manufacturer specifically created the snap hook to be used to connect to the equipment in question.

The following conditions can result in rollout\* when a non-locking snap hook is used. Rollout is a process by which a snap hook or carabiner unintentionally disengages from another connector or object to which it is coupled. Avoid the following connections:

- 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.



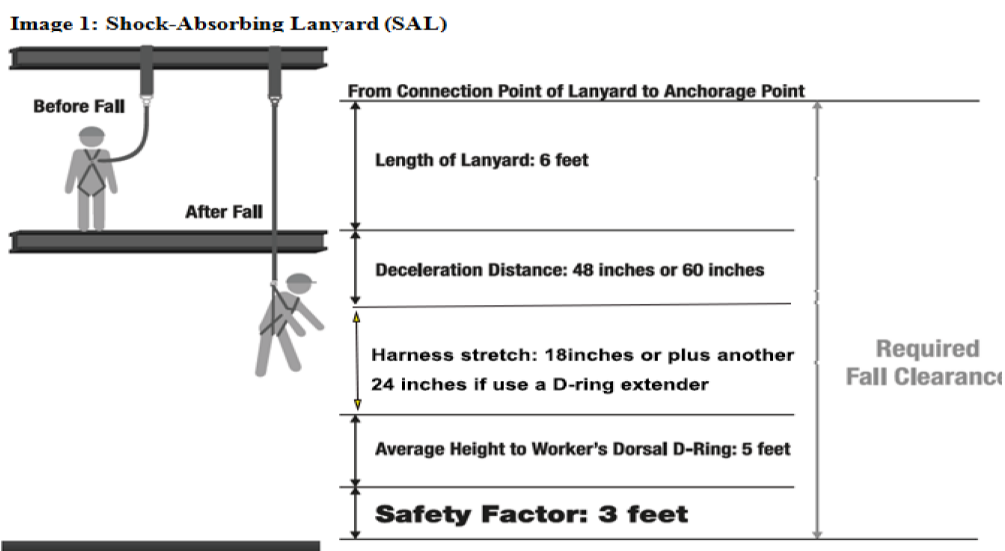
## FALL CLEARANCE REQUIREMENTS

Image 1 shows a shock-absorbing lanyard anchored overhead with the other end connected to the dorsal D-ring of a full body harness. Note that the length of your shock-absorbing lanyard in relation to where it is attached is directly related to the amount of fall clearance that you will need. When using a shock-absorbing lanyard, include the following distances in your calculations:

**Using the 6 Foot RITZ SAFETY Shock-Absorbing Lanyard** will require a total fall clearance of approximately 19.5 feet (5.95 meters) as measured from the anchorage point of lanyard to the nearest obstruction below or 21.5feet (6.56m) if use with a D-ring extender. The total fall clearance combines the sum of the length of the lanyard, the maximum elongation of the lanyard (4 feet or 1.2 meters), the average distance between the worker’s dorsal D-ring (5 feet or 1.5 meters), the harness stretch (18inches or 0.45meter) and the safety factor (3 feet or 0.9 meters) or plus another 24inches (or 0.61m) if use with a D-ring extender.

**Using an extended free fall (12 foot) RITZ SAFETY Shock Absorbing Lanyard** will require a total fall clearance of approximately 20.5 feet (6.25 meters) when anchored at foot level and measured from the anchorage point of lanyard to the nearest obstruction below or 22.5feet (6.76m) if use with a D-ring extender. The total fall clearance combines the sum of the length of the lanyard, free fall distance, the maximum elongation of the lanyard (5 feet or 1.5 meters), the average distance between the worker’s dorsal D-ring, (5 feet or 1.5 meters), the harness stretch (18inches or 0.45meter) and the safety factor (3 feet or 0.9 meters) or plus another 24inches (or 0.61m) if use with a D-ring extender.

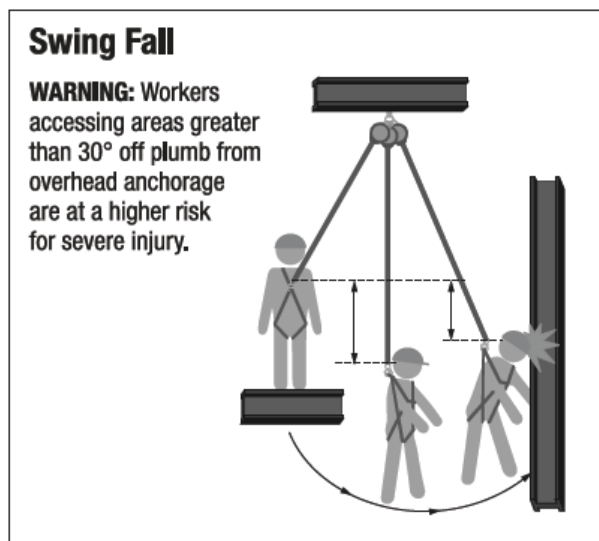
During a fall, the harness will stretch and deform, which can contribute to the overall elongation of the system in stopping a fall. It is important to include the increase in fall distance created by this stretch, as well as the FBH connector length, the settling of the user’s body in the FBH and all other contributing factors when calculating total clearance required for a particular fall arrest system.



## **SWING FALL**

To minimize the possibility of a swing fall, work as directly under the anchorage connector 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.

**WARNING:** Workers accessing areas greater than 30 degrees off-plumb from overhead anchorage are at higher risk for severe injury. Striking objects horizontally due to the pendulum effect of a swing may cause serious injury or death.



## **CONNECTION COMPATIBILITY LIMITATIONS**

■ **The dorsal (back) D-ring** affixed to all RITZ SAFETY Full Body Harnesses is to be used as the primary fall arrest attachment for fall arrest or restraint systems. The dorsal D-ring may also be used for rescue applications. After a fall, dorsal attachment result in an upright body position with a slight lean to the front with some slight pressure to the lower chest.



■ **Hip D-rings**, as a pair, are used solely for positioning and restraint systems. ***Hip D-rings are not for fall arrest or climbing applications.*** Users are cautioned against using the hip attachment elements (or any other rigid point on the Full Body Harness) to store the unused end of a fall arrest lanyard, as this may cause a tripping hazard, or, in the case multiple leg lanyards, could cause adverse loading to the Full Body Harness and the wearer through the unused portion of the lanyard.

■ **Chest (sternal) D-rings** are mainly used for ladder climbing and rescue. Sternal d-rings can also be used as an alternative fall arrest attachment in applications where dorsal attachment is determined to be inappropriate by a competent person, and where there is no chance to fall in a direction other than feet first. If the sternal attachment is used for fall arrest, the competent person evaluating the application should take measures to ensure that a fall can only occur feet first. After a fall, sternal attachment results in roughly a sitting or cradled body position with weight concentrated on the thighs, buttocks and lower back.

## ***FITTING A RITZ SAFETY FULL BODY HARNESS***

Correct fit of a Full Body Harness is essential to proper performance. Users must be trained to select the size and maintain the fit of their Full Body Harness. Users must follow manufacturer's instructions for proper fit and sizing, paying particular attention to ensure that buckles are connected and aligned correctly, leg straps and shoulder straps are kept snug at all times, chest straps are located in the middle chest area and leg straps are positioned and snug to avoid contact with the genitalia should a fall occur.

***WARNING:*** *Not all fall protection components are rated for the same user weight capacity. Only use components rated for the same weight capacity. There must be a functional rescue plan if users of fall protection systems cannot rescue themselves.*

***IMPORTANT:*** *Sewn terminations should be secure, complete, and not visibly damaged. No load indicators shall be deployed. Damaged and other deteriorated and defective components must be immediately removed from service.*

1. Hold the dorsal (back) D-ring of the harness and shake to allow all straps to fall into place. Straps must not be buckled or twisted.
2. Slip shoulder strap over one shoulder, then pull the other shoulder strap around the back and over the second shoulder — much like putting on a jacket. The dorsal D-ring will be located on your back while the chest strap is located in the front. Straps must not be tangled as the harness hangs freely from shoulders.
3. Pull one leg strap between your legs and connect it to the opposite end on the same side. Repeat with second leg strap. Ensure that the leg straps are not twisted or crossed. Leg straps must be comfortably snug to achieve proper adjustment.
4. Fasten the chest strap just above the nipple line. Chest strap should be snug with excess strap-length secured through the web keepers.
5. Adjust shoulder straps with the two adjusters located at the lower end of the shoulder strap. Adjust the left and right sides to the same length.
6. After all straps have been tightened and harness fits snugly, secure all excess straps through the web keepers.



## ***TRAINING***

Employers are responsible for providing training to any employee who may be exposed to fall hazards. Training will enable an employee to recognize and reduce fall hazards. Training must be conducted by a Competent or Qualified Person. Trainer and trainees must not be exposed to fall hazards during the training course.

## ***INSPECTION STEPS***

Before each use, proceed with thorough visual examination to ensure that the PPE is intact (the same applies for the equipment used with the harness) and take all necessary steps concerning the implementation of rescue in total safety. If inspection indicates the equipment is not suitable for use, remove from service, tag as 'UNUSABLE', and dispose of the product. Never attempt to modify or repair PPE.

## ***INSPECTION FREQUENCY***

Ritz Safety Full Body Harnesses must be inspected prior to each use and annually by a Competent Person other than the user. If inspection reveals defects in, damage to, or inadequate maintenance of equipment, the equipment shall be permanently removed from service or undergo adequate corrective maintenance, by the original equipment manufacturer or their designate, before return to service.

## ***INSPECTION PROCEDURE***

Inspection criteria for the equipment shall be set by the user's organization. Such criteria for the equipment shall equal or exceed the criteria established by this standard or the manufacturer's instructions, whichever is greater. Inspection criteria may include the following steps:

- Bend a portion of the webbing 15-20 cm into an upside-down 'U' shape. Continue along all webbing inspecting for fraying, un-splicing, unlaying, kinking, knotting, roping, broken or pulled stitches, excessive elongation, chemical attack, excessive soiling, abrasion, alteration, needed or excessive lubrication, excessive aging and excessive wear.
- Adjust all keepers, buckles, padding, and D-ring to inspect webbing hidden by these components.
- Sewn terminations must be secure, complete, and not visibly damaged.
- Check all hardware elements for damage, distortion, cracks, breaks, and rough or sharp edges. Inspect for any unusual wear, frayed, or cut fibers, or broken stitching of the buckle attachments. Make sure buckles properly engage.
- Ensure that the Quick-Connect buckle's dual-tab release mechanism is free of debris and engages properly. Double-check the buckle locking mechanism by tugging on both halves of the buckle to make sure it is firmly connected and will not disengage.
- All markings must be legible and attached to the product.
- All hardware must be free of cracks, sharp edges, deformation, corrosion, or any evidence of defect.
- Check THE Fall Indicator located on the back shoulder straps for deployment. If indicators are deployed, the harness should be removed from service immediately and disposed of.

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

## ***CLEANING***

RITZ SAFETY Full Body Harnesses can be wiped down with a mild detergent and missed with a clean cloth to remove detergent. The hardware can also be wiped down with a clean, dry cloth to remove grease or dirt.

## ***MAINTENANCE***

Any Harness that requires maintenance must be tagged "unusable" and removed from service.

## ***STORAGE***

- When not in use, the Harnesses should be stored in a cool, dry place out of direct sunlight.
- Do not store in areas 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 must be cleaned and dried prior to storage.
- Equipment that has been stored for an extended period must be inspected as described in these User Instructions prior to use.



Supplier: \_\_\_\_\_ Date Purchased \_\_\_\_/\_\_\_\_/\_\_\_\_ User name: \_\_\_\_\_ Date First use: \_\_\_\_/\_\_\_\_/\_\_\_\_

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