

also called suspension trauma or orthostatic 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 pounds (8kN). The length of the attachment element extender may affect free fall distances and free fall clearance calculations.

5. FBH stretch, the amount the FBH component of a personal fall arrest system will stretch and deform during a fall, can contribute to the overall elongation of the system in stopping a fall.
6. 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.
7. When not in use, unused lanyard legs that are still attached to a FBH D-ring should not be attached to a work positioning element or any other structural element on the FBH unless deemed acceptable by the competent person and manufacturer of the lanyard. This is especially important when using some types of "Y" style lanyards, as some load may be transmitted to the user through the unused lanyard leg if it is not able to release from the harness. The lanyard parking attachment is generally located in the sternal area to help reduce tripping and entanglement hazards.
8. Loose ends of straps can get caught in machinery or cause accidental disengagement of an adjuster. All FBH shall include keepers or other components which serve to control the loose ends of straps.
9. Due to the nature of soft loop connections, it is recommended that soft loop attachments only be used to connect with other soft loops or carabiners. Snaphooks should not be used unless approved for the application by the manufacturer.

Sections 10-16 provide additional information concerning the location and use of various attachments that may be provided on this FBH.

10. **Dorsal** - The dorsal attachment element shall be used as the primary fall arrest attachment unless the application allows the use of an alternate attachment. The dorsal attachment may also be used for travel restraint or rescue. When supported by the dorsal attachment during a fall, the design of the FBH shall direct load through the shoulder straps supporting the user and around the thighs. Supporting the user, post fall, by the dorsal attachment will result in an upright body position with a slight lean to the front with some slight pressure to the lower chest. Considerations should be made when choosing a sliding versus fixed dorsal attachment element. Sliding dorsal attachments are generally easier to adjust to different user sizes, and allow a more vertical rest position post fall, but can increase FBH stretch.
11. **Sternal** - The sternal attachment may be used as an alternative fall arrest attachment in applications where the 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. Accepted practical uses for a sternal attachment include, but are not limited to, ladder climbing with a guided type fall arrester, ladder climbing with an overhead self-retracting lifeline for fall arrest, work positioning and rope access. The sternal attachment may also be used for travel restraint or rescue.
12. When supported by the sternal attachment during a fall, the design of the FBH shall direct load through the shoulder straps supporting the user and around the thighs. Supporting the user, post fall, by the sternal attachment will result in roughly a sitting or cradled body position with weight concentrated on the thighs, buttocks and lower back. Supporting the user during work positioning by this sternal attachment will result in an approximate upright body position.
13. 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. This may include limiting the allowable free fall distance. It may be possible for a sternal attachment incorporated into an adjustable style chest strap to cause the chest strap to slide up and possibly choke the user during a fall, extraction, suspension, etc. The competent person should consider FBH models with a fixed sternal attachment for these applications.
14. **Frontal** - The frontal attachment serves as a ladder climbing connection for guided type fall arresters where there is no chance to fall in a direction other than feet first or may be used for work positioning. Supporting the user, post fall or during work positioning, by the frontal attachment will result in a sitting body position with the upper torso upright with weight concentrated on the thighs and buttocks. When supported by the frontal attachment the design of the

FBH shall direct load directly around the thighs and under the buttocks by means of the sub-pelvic strap.

15. If the frontal 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. This may include limiting the allowable free fall distance.
16. **Shoulder** - The shoulder attachment elements shall be used as a pair and are an acceptable attachment for rescue and entry/retrieval. The shoulder attachment elements shall not be used for fall arrest. It is recommended that the shoulder attachment elements be used in conjunction with a yoke which incorporates a spreader element to keep the FBH shoulder straps separate.
17. **Waist, Rear** - The waist, rear attachment shall be used solely for travel restraint. The waist, rear attachment element shall not be used for fall arrest. Under no circumstances is it acceptable to use the waist, rear attachment for purposes other than travel restraint. The waist, rear attachment shall only be subjected to minimal loading through the waist of the user and shall never be used to support the full weight of the user.
18. **Hip** - The hip attachment elements shall be used as a pair and shall be used solely for work positioning. The hip attachment elements shall not be used for fall arrest. Hip attachments are often used for work positioning by arborists, utility workers climbing poles and construction workers tying rebar and climbing on form walls. Users are cautioned against using the hip attachment elements (or any other rigid point on the FBH) to store the unused end of a fall arrest lanyard as this may cause a tripping hazard or, in the case of multiple leg lanyards, could cause adverse loading to the FBH and the wearer through the unused portion of the lanyard.
19. **Suspension Seat** - The suspension seat attachment elements shall be used as a pair and shall be used solely for work positioning. The suspension seat attachment elements shall not be used for fall arrest. Suspension seat attachments are often used for prolonged work activities where the user is suspended allowing the user to sit on the suspension seat formed between the two attachment elements. An example of this use would be window washers on large buildings.

#### USER INSPECTION, MAINTENANCE AND STORAGE OF EQUIPMENT

Users of personal fall arrest systems shall, at a minimum, comply with all manufacturer instructions regarding the inspection, maintenance and storage of the equipment. The user's organization shall retain the manufacturer's instructions and make them readily available to all users. See ANSI/ASSP Z359.2, Minimum Requirements for a Comprehensive Managed Fall Protection Program, regarding user inspection, maintenance and storage of equipment.

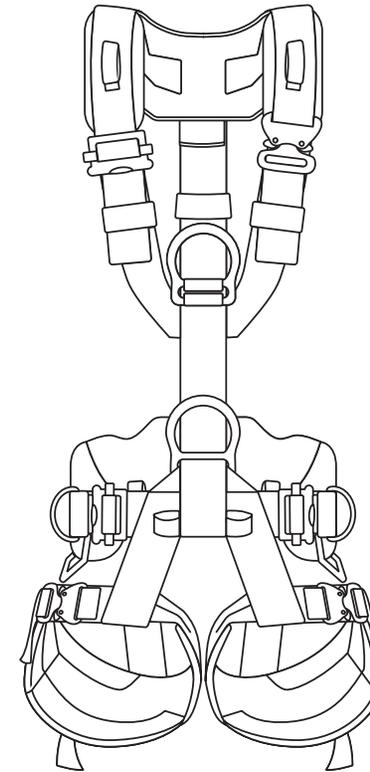
1. In addition to the inspection requirements set forth in the manufacturer's instructions, the equipment shall be inspected by the user before each use and additionally by a competent person, other than the user, at interval of no more than one year for:
  - Absence or illegibility of markings.
  - Absence of any elements affecting the equipment form, fit or function.
  - Evidence of defects in, or damage to, hardware elements including cracks, sharp edges, deformation, corrosion, chemical attack, excessive heating, alteration and excessive wear.
  - Evidence of defects in, or damage to, strap or ropes including fraying, unsplicing, 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.
2. 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.
3. When 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.

#### MAINTENANCE AND STORAGE

1. Maintenance and storage of equipment shall be conducted by the user's organization in accordance with the manufacturer's instructions. Unique issues, which may arise due to conditions of use, shall be addressed with the manufacturer.
2. Equipment, which is in need of, or scheduled for, maintenance shall be tagged as unusable and removed from service.
3. Equipment shall be stored in a manner as to preclude damage from environmental factors such as temperature, light, UV, excessive moisture, oil, chemicals and their vapors or other degrading elements

CMC™

# ATOM™ HARNESS



## ⚠ WARNINGS

Activities involving the use of this device are potentially dangerous. You are responsible for your own actions and decisions. Before using this device, you must:

- Read and understand these user instructions, labels, and warnings.
- Familiarize yourself with its capabilities and limitations.
- Obtain specific training in its proper use.
- Understand and accept the risks involved.

FAILURE TO HEED ANY OF THESE WARNINGS MAY RESULT IN SEVERE INJURY OR DEATH.



**CMC Rescue, Inc.**  
6740 Cortona Drive  
Goleta, CA 93117, USA  
805-562-9120 / 800-235-5741  
cmcpro.com

ISO 9001 Certified

© CMC Rescue, Inc. All rights reserved

CMC and **XC** are registered marks of CMC Rescue Inc.  
CMC Control No.: 202DIN01\_Rev00



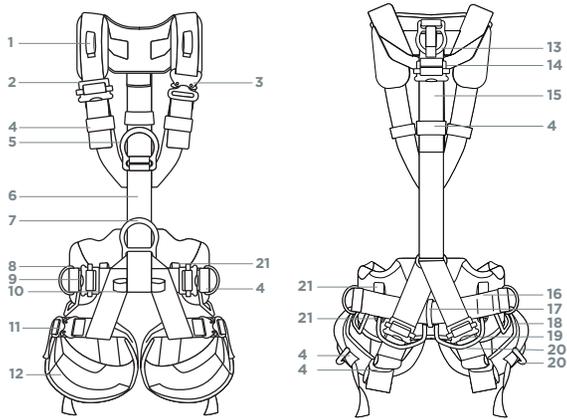
MEETS THE LIFE SAFETY HARNESS REQUIREMENTS OF NFPA 1983, INCORPORATED IN THE 2022 EDITION OF NFPA 2500. THIS HARNESS IS NOT FLAME-RESISTANT!

FULL BODY HARNESS IN ACCORDANCE WITH ANSI / ASSP Z359.11-2021 AND CSA Z259.10-2018



Find the latest version and translations of this manual at [cmcpro.com](http://cmcpro.com)  
Manual refers to multiple product configurations.

## Nomenclature



- |  |   |
|--|---|
| <p>1 Lanyard parking element</p> <p>2 Shoulder strap adjustment buckle</p> <p>3 Quick-release shoulder strap adjustment buckle (varies by model)</p> <p>4 Elastic keepers for straps (multiple locations)</p> <p>5 Sternal attachment point ("A" label)</p> <p>6 Chest ascender location (ascender kit sold separately)</p> <p>7 Ventral attachment point</p> <p>8 Side work-positioning attachment points (varies by model)</p> <p>9 Adjustment buckles for waist straps</p> <p>10 Work seat connection loops (work seat sold separately)</p> | <p>11 Quick-release leg strap adjustment buckles (varies by model)</p> <p>12 Leg loops</p> <p>13 Dorsal attachment point</p> <p>14 Adjustment buckle for rear strap</p> <p>15 Visual indicator</p> <p>16 Tool carrier attachment point (tool carrier sold separately)</p> <p>17 Rear travel restraint point</p> <p>18 Gear loops (10 kg max, varies by model)</p> <p>19 Adjustment buckles for leg loop link strap</p> <p>20 Tool loops (10 kg max)</p> <p>21 Accessory attachment points (10 kg max)</p> |
|--|---|

## Visual Indicator



## Lanyard Parking Element



## USER INFORMATION

User Information shall be provided to the user of the product. NFPA Standard 1983, incorporated into the 2022 edition of NFPA 2500 recommends separating the User Information from the equipment and retaining the information in a permanent record. The standard also recommends making a copy of the User Information to keep with the equipment and that the information should be referred to before and after each use.

Additional information regarding life safety equipment can be found in NFPA 1500 and NFPA 1858 and NFPA 1983, incorporated in the 2022 edition of NFPA 2500 and the ANSI Z359 and CSA Z259 series of Fall Protection standards.

## LIFESPAN / INSPECTION / RETIREMENT

The equipment has a lifespan of 10 years from the date of manufacture shown on the product label. The type of use, intensity of use, and environment of use are all factors in determining serviceability of the equipment. A single exceptional event can be cause for retirement after only one use, such as exposure to sharp edges, extreme temperatures, chemicals, or harsh environments. Any concerns about its safe use is cause for retirement. Remove retired equipment from service and destroy it to prevent further use.

A device must be retired when it fails to pass inspection; it fails to function properly; it has illegible product labels or markings; it shows signs of damage or excessive wear; it has been subjected to shock loads, falls, or abnormal use; it has been exposed to harsh chemical reagents; it has an unknown usage history; you have any doubt as to its condition or reliability; or when it becomes obsolete due to changes in legislation, standards, technique or incompatibility with other equipment.

Inspect the equipment according to your department's policy for inspecting life safety equipment. CMC recommends a detailed inspection by a competent person at least once every 12 months depending on current regulations and conditions of use. Record the date, inspector name, and inspection results in the equipment log as well as any other relevant information to track the usage history.

When inspecting the equipment, confirm it is functioning properly and verify the presence and legibility of labels and markings. Check soft components for cuts, worn or frayed areas, broken fibers, soft or hard spots, discoloration, or melted fibers. Check the stitching for pulled threads, abrasion, or breaks. Check hardware for excessive wear or indications of damage such as deformation, corrosion, sharp edges, cracks, or burrs. Minor nicks or sharp spots may be smoothed with emery cloth or similar. Check for the presence of dirt or foreign objects that can affect or prevent normal operation. Confirm all pieces of equipment in the system are correctly positioned with respect to each other and monitor the condition of the equipment and its connections. Do not allow anything to interfere with the proper operation of the equipment.

**Visual Indicator:** Prior to donning the harness, inspect the visual indicator located in proximity of the dorsal attachment point. If the visual indicator is damaged or shows signs of deployment, remove the harness from service.

## LIMITATIONS AND PROPER USE

The ATOM Harness is designed for optimum performance, dependability, and comfort in rescue and work positioning applications. Its low-profile construction and supportive architecture provides excellent mobility on rope and on the ground. When using the ATOM Harness, follow best practices for avoiding high impact falls. Always keep the safety line (belay) above the wearer and keep the slack in the safety line to a minimum. To ensure the safety and comfort of your ATOM Harness, make sure it is properly sized and adjusted per the instructions below. Depending on the configuration of the harness, not all attachment elements outlined in this user guide apply. CMC warns against using the equipment around moving machinery and electrical hazards.

**Rescue:** NFPA 1983, incorporated into the 2022 edition of NFPA 2500 provides specifications for a rescue harness. All front and back D-ring connection points are dynamically and statically tested, and independently certified to this standard.

**Rope Access Work:** A harness equipped for rope access work needs comfort and support very similar to a rescue harness, which is not available in a harness designed solely for fall arrest applications. **Depending on the applicable regulations, fall protection may also be required.**

**Fall Protection:** Harnesses designed for fall protection must meet the requirements of ANSI Z359.11 and CSA Z259.10. All attachment points are independently certified to these standards. When using this equipment the user shall have a rescue plan and the means at hand to implement it when using the harness for fall arrest.

**To prevent roll out when using carabiners to attach to an attachment point, use only locking models. If using manual locking carabiners, verify that they are locked before use. It is the users responsibility to verify equipment compatibility with components and sub-systems before use.**

Consult with the current edition of ANSI/ASSP Z359.11 / CSA Z259.10 and applicable state or provincial regulations governing occupational safety. The user should consider all component extensions and allow clearance for an arrest to take place a safe distance away from the ground or structure. A harness stretch factor of up to 18 inches (46 cm) should be factored in while calculating fall clearance.

## PULLING ON YOUR HARNESS

- Loosen all the harness straps for easy donning, including waist belt, leg loops, and shoulder strap (disconnect quick-connect buckles if present).
- Hold shoulder straps to the side and step through the waist belt, putting each foot into the proper leg loop.
- Position the waist belt and ventral attachment point above the waistline.
- Tighten the waist belt by pulling both sides simultaneously until the waist is snug, and the front D-ring is centered.

- Position the dorsal attachment point level with shoulder blades and adjust back strap.
- Position the sternal attachment point as high as possible and adjust shoulder straps on each side.
- Tighten the rear leg straps, this is especially important when using the dorsal point.
- Position the leg loops with padding along back and side of legs.
- Tighten leg loops, leaving about a finger width of space between the leg loops and the legs.
- Before use, confirm all straps are tight, stow excess web in elastic keepers and apply load to the sternal attachment point and confirm position of all D-rings.

A suspension test should be carried out in a safe place prior to putting the harness in service. A suspension test will verify that the harness is the correct size, has sufficient adjustment and is of an acceptable comfort level for the intended use.

**WARNING: Make sure the straps are snug. This increases the comfort when sitting in the harness and helps prevent the quick-connect buckles from disconnecting. When wearing the harness, double-check the buckles, adjusters, and fit of the harness immediately prior to relying on it for support.**

## LANYARD PARKING ELEMENT

If using a fall arrest lanyard or Ylanyard, connect the lanyard snaphook to the parking element located on the shoulders of the harness when not in use (unless otherwise connected to an anchorage point). The lanyard parking element of the harness is intended to disengage in the event that the lanyard is hung up or tangled during a fall or during normal use creating a hazard.

## CARRYING, MAINTENANCE & STORAGE

During use, carrying, storage, and transport keep the equipment away from acids, alkalis, exhaust emissions, rust and strong chemicals. Do not expose the equipment to direct heat, flame, or high temperatures or other adverse environmental conditions. If the equipment becomes soiled, it can be washed in cold water with a mild detergent that is safe for use with nylon and polyester. Rinse thoroughly. Do not use a pressure washer. Air dry in temperatures between 10° C and 30° C. Do not dry the equipment in direct sunlight or using an automatic dryer. Lubricate moving parts as needed. During storage and transport, protect the equipment from heat, direct sunlight, moisture, chemicals, and external loads or impacts. Do not store where equipment may be exposed to moist air, particularly where dissimilar metals are stored together. Consult with manufacturer in case of any doubt.

## WARRANTY & REPAIRS

If your CMC product has a defect due to workmanship or materials, please contact CMC Customer Support at info@cmcpro.com for warranty information and service. CMC's warranty does not cover damages caused by improper care, improper use, alterations and modifications, accidental damage or the natural breakdown of material over extended use and time. All repair work shall be performed by the manufacturer. All other work or modifications void the warranty and releases CMC from all liability and responsibility as the manufacturer.

## SAMPLE INSPECTION AND MAINTENANCE LOG

The following sample log provides an example of the records that should be maintained by the purchaser or user of life safety equipment.

| EQUIPMENT INSPECTION AND MAINTENANCE LOG |                        |          |      |
|--|------------------------|----------|------|
| Item #                                   | Date in Service        |          |      |
| Brand/Model                              | Strength               |          |      |
| Date                                     | How Used or Maintained | Comments | Name |
|  |                        |          |      |
|  |                        |          |      |

## ANNEX A - NORMATIVE

**Note:** The following information from the ANSI/ASSP Z359.11 standard is required to be included in the instruction manual for the end user. The manufacturer of this equipment may impose more stringent restrictions on the use of the products they manufacture; see the manufacturer's instructions.

- It is essential that the users of this type of equipment receive proper training and instruction including detailed procedures for the safe use of such equipment in their work application. ANSI/ASSP Z359.2, Minimum Requirements for a Comprehensive Managed Fall Protection Program, establishes guidelines and requirements for an employer's managed fall protection program including policies, duties and training; fall protection procedures; eliminating and controlling fall hazards; rescue procedures; incident investigations; and evaluating program effectiveness.
- Correct fit of a full body harness (FBH) is essential to proper performance. Users must be trained to select the size and maintain the fit of their FBH.
- 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.
- FBHs which meet ANSI/ASSP Z359.11 are intended to be used with other components of a personal fall arrest system that limit maximum arrest forces to 1800 pounds (8kN) or less 5. Suspension intolerance,

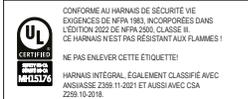
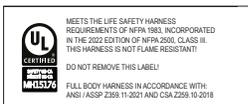
## Labels



MODEL NO.: 202C-C3-SM-BK-AL-00-00-Q3  
 DATE: 05/05/21  
 LOT NO.: RD1075  
 SIZE: SMALL  
 FITS WAIST: 66-81 CM, 26"-32"  
 FITS CHEST SIZE: 56-66 CM, 22"-26"  
 MAX LOAD: 140KG, 310 LBS  
 MADE OF POLYESTER MATERIALS

MODEL NO.: 202C-C3-MD-BK-AL-00-00-Q3  
 DATE: 05/05/21  
 LOT NO.: RD1075  
 SIZE: MEDIUM  
 FITS WAIST: 81-107 CM, 32"-42"  
 FITS CHEST SIZE: 56-66 CM, 22"-26"  
 MAX LOAD: 140KG, 310 LBS  
 MADE OF POLYESTER MATERIALS

MODEL NO.: 202C-C3-LG-BK-AL-00-00-Q3  
 DATE: 05/05/21  
 LOT NO.: RD1075  
 SIZE: LARGE  
 FITS WAIST: 107-122 CM, 42"-48"  
 FITS CHEST SIZE: 56-66 CM, 22"-26"  
 MAX LOAD: 140KG, 310 LBS  
 MADE OF POLYESTER MATERIALS



|                     |      |          |
|---------------------|------|----------|
| MANUFACTURED IN USA | DATE | INITIALS |
| BY COMPONENTS INC.  | DATE | INITIALS |
| 800-235-5741        | DATE | INITIALS |
| 805-562-9120        | DATE | INITIALS |
| CMC PRO.COM         | DATE | INITIALS |
| #CMCPRO             | DATE | INITIALS |

NAME: \_\_\_\_\_  
 AGENCY: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 DATE IN SERVICE: \_\_\_\_\_

