



USER GUIDE for STUNT VESTS

Including:

NYLON 80 PICK STUNT VEST Men's Style	SKU: VN50-01
NYLON 80 PICK STUNT VEST Women's Style	SKU: VN50-01
SPECTRA TITANIUM STUNT VEST Men's Style	SKU: VST-01
SPECTRA TITANIUM STUNT VEST Women's Style	SKU: VST-01

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1) GENERAL INFORMATION: CLIMBING SUTRA PERFORMER FLYING HARNESS

USE: This Harness is for professional performer flying use for stunt and theatrical performances, and shall only be used for that application. Improper use, incorrect selection, misuse, or poor maintenance can lead to serious injury or death. The user is responsible for adhering to the manufacturer's safety and inspection instructions. It is the responsibility of the user to obtain qualified instruction in the proper usage of this harness prior to usage. This equipment should only be used by trained and competent persons. This harness must be considered part of the performer flying system herein referred to as "machinery intended to move performers during artistic performances". More specifically this harness may be considered "machinery" classified as a "lifting accessory...allowing the load to be held, which is placed...on the load itself" where the performer is the load. Therefore, all safety precautions and inspection instructions concerning or regarding the "machinery" for moving performers must be obeyed. This is **not** a fall protection harness. Therefore, the performer flying system (which includes the harness) and choreography must be designed and utilized in such a way as to limit dangerous movement, shock load, or suspension trauma: <https://www.osha.gov/dts/shib/shib032404.pdf>
The performer must be healthy enough to engage in all the activities they will attempt.

The user agrees to comply with all relevant published industry standards. The user understands that it is beyond the scope of this guide to train the user in the safe use of this harness given all the possible performer flying scenarios. The user also understands that following these instructions alone does not qualify someone to perform, rig, or choreograph performer flying effects.

This product is never to be used for medical purposes of any kind.

This product should only be used as instructed and no alterations may be made to its original design. It may be used in conjunction with appropriate hardware of suitable specification and according to the applicable ANSI and/or EC (European) standards, with due consideration to the limits of each individual piece of equipment.

These instructions demonstrate some examples of improper uses of this product. Note that it is not possible to show or imagine all improper uses of this product. This product should only be used in the way specified by the manufacturer in these instructions.

The harness shall only be used in situations that have a rescue plan and/or rescue facilities in case the "machinery" stops working and the performer is stranded and/or suspended in the air. The rescue plan and/or facilities must ensure that the person in the harness can be QUICKLY rescued. The rescue needs to be rehearsed regularly by all users.

The purchaser agrees to check the manufacturer's website on a monthly basis for instruction revisions, updates, and or recall notices and to immediately inform the manufacturer of any defects or issues with the harness: www.climbingsutra.com Any product with a defect or an issue or that is affected by a recall should be immediately removed from service.

MAINTENANCE:

- Cleaning of textile and plastic parts: Rinse in clean water and neutral soap (max temperature 50°C/122°F) and air dry away from direct heat or sunlight.
- Cleaning of the metallic parts: Rinse in clean water and then dry well, checking that no moisture remains. See special instructions for cleaning Swivel Harnesses or Twisting Rings.
- Temperature: Always keep this product below 50°C/122°F so as not to affect the performance of the product.
- Chemicals: Withdraw the product from service if it comes into contact with chemical reagents, solvents, fuels, paint, dye, or acids, all of which could affect the performance of the product.

STORAGE: Store in a cool, ventilated, dry place away from UV light, heat sources, high humidity, sharp objects, corrosives, batteries, chemicals, or other possible causes of damage.

RESPONSIBILITY: The manufacturer or the distributor, will not accept any responsibility for damage, injury, or death resulting from misuse of, or from modifications to the original product. It is the user's responsibility at all times to ensure that they understand the correct and safe use of any equipment supplied by or from the manufacturer or the distributor, that they use it only for the purposes for which it was designed, and that they practice all proper safety procedures. Before using the equipment, the user agrees to take all necessary steps to become familiar with rescue techniques should an emergency occur. The user personally assumes all the risks and responsibilities for their actions and decisions; if they are unable or not in a position to assume these risks and responsibilities, they should not use this equipment.

LIMITED WARRANTY: Climbing Sutra warrants for 2 years from the manufacture date and only to the original retail buyer that all products are free from any faults in materials or manufacture. If the buyer discovers a warranty related defect, then the buyer should return the product to Climbing Sutra. Climbing Sutra reserves the option to repair or replace any product returned under warranty. That is the extent of our warranty, and upon the expiration of the applicable warranty period, all such liability shall terminate.

WARRANTY EXCLUSIONS: Climbing Sutra does not warrant products against normal wear and tear, unauthorized modifications or alterations, incorrect storage, corrosion, exposure to paint/dye, exposure to chemicals, accidents, negligence, overloading, or other uses for which this product was not designed. After 2 years from the manufacture date this product may be inspected and recertified if use and condition of the harness allows. Inspection and recertification may only be performed by companies authorized by Climbing Sutra to perform inspections/recertifications of Climbing Sutra harnesses. Please visit www.climbingsutra.com for a current list of authorized inspectors.

SPECIFIC INFORMATION: For a correct fit follow the harness sizing guidelines in this manual on page 9. If there is any question about the fit or suitability of the harness for a particular use, contact the manufacturer at info@climbingsutra.com. Before using for the first time the user must carry out a suspension test in a safe place at ground level to ensure that the harness is fitted properly, has sufficient adjustment, is of an acceptable comfort level for the intended use, and that the performer cannot fall out of the harness in any body position including when inverted. Check all mechanical aspects of the harness to ensure that it is secure. Check all adjustable parts of the harness to assure that all parts of the harness are secure.

INSPECTIONS: Each harness must be inspected before and after each use. The user must take wear and tear into account when using these harnesses. Repeated use of the connection points may cause breakdown of nylon or spectra fibers and lead to weakening and eventual failure of the connection point. The user is solely responsible for monitoring the use, history, and condition of these harnesses. When in use, the harness must be inspected weekly, and the inspections documented. Completed inspection forms shall be kept in a maintenance log. A sample inspection form is included on page 13 of this manual. Downloadable forms are available at www.climbingsutra.com. Any harness with a defect or issue should be immediately removed from service.

- Check the legibility of the identification markings on the harness or hardware.
- Check all webbing for fraying, cuts, tears, or punctures.
- Check for fraying, cuts, snags, burns, or tears on all stitching.
- Examine all connection hardware including buckles, "O" rings, and "D" rings for distortion, corrosion, sharp edges, or wear.

- Examine all quick release hardware including Quad Releases, Single Click connectors, and Cobra Buckles for smooth action of all triggers and test that they close and release completely using both male and female interconnecting parts. Never attempt to connect one half of the Climbing Sutra quick release system with a part that is not made by Climbing Sutra.
- Examine the buckles for proper attachment, ease of connection and disconnection, and complete closure.
- Examine all riveted hardware including Cobra Buckles, Quad Release males and females, and Single Click females for consistent and firmly set rivet heads.

RE-CERTIFICATION: This product may be re-certified by companies authorized by Climbing Sutra after the 2-year warranty expiration. Please visit www.climbingsutra.com for a current list of authorized inspectors.

LIFETIME: The ultimate lifetime of the product is 6 years from the manufacture date unless any defect appears. In addition, this harness must be re-certified by the manufacturer or an authorized representative after 2 years from the manufacture date, and every year thereafter, or all warranties and certifications are void. The following factors can reduce the lifetime of the product: shock load, intense use, damage to components of the product, contact with chemical substances, high temperatures, tears and abrasions, and/or failure to maintain as recommended. (Typical flying effects for theater productions with ten to fifteen performances per week should expect about a three-to-five-year lifespan. More aggressive flying effects such as stunt flying may substantially shorten the lifespan of the harness.) If it is suspected that the harness is no longer safe and reliable, withdraw the harness from service immediately and contact Climbing Sutra: info@climbingsutra.com.

CERTIFICATIONS: This product is **third-party certified** to have passed the CLIMBING SUTRA TESTING STANDARD FOR PERFORMER FLYING HARNESSSES 3-12-2022.

The **Testing Standards, Videos of the Tests, and Certificates of Conformance** are posted on the harness product pages at www.climbingsutra.com.

CONFORMITY WITH ANSI E1.43-2016 ENTERTAINMENT TECHNOLOGY - PERFORMER FLYING SYSTEMS.

This product is manufactured in conformity with ANSI E1.43-2016 under **4.5.1 Harnesses**.

Use: Performer Flying Harness

Working Load Limit (WLL): 289 LBS. (131 kg)

Working Load Limit (WLL) is the maximum allowable mass of the user + harness.
Also called the Entertainment Load Limit (ELL).

Minimum Breaking Strength (MBS): 4,050 LBS. (1,835 kg)

Our Minimum Breaking Strengths are third party certified to the Climbing Sutra Standards for Performer Flying Harnesses 3-12-22.

Minimum design factor:

10 x Working Load Limit

MBS (4,046 LBS) must be equal to or exceed 10 x WLL. (**WLL 289 LBS** x 10 = 2,890 LBS)

6 x Characteristic Load

Characteristic Load is the WLL plus Dynamic Forces occurring during normal use.
The MBS must meet or exceed 6 x Characteristic Load.

Characteristic Load = **674 LBS** x 6 = 4,044 LBS.

3 x Peak Load

Peak Load is the maximum allowable force on the harness, typically resulting from abnormal conditions or irregular operation. The MBS must meet or exceed 3 x Peak Load. Peak Load = **1,348 LBS** x 3 = 4,044 LBS.
Inspection of the harness required with any occurrence of a Peak Load. Examples of Peak Load could occur with emergency stops on fly systems (Category 0 or 1), overly aggressive stunt style ratchets or "dead stops", or other unplanned shock-loading conditions. Special care must be taken to avoid injury to performers!

THIS PRODUCT MANUFACTURED IN CONFORMITY WITH EC DIRECTIVES:

Machinery Directive 2006-42-EC

4.1.2.5 Lifting accessories and their components (C) working coefficient for...textile ropes and slings...equal to 7 (7 X the ELL)

6.1.1 Mechanical Strength coefficients for components...intended for the lifting of persons must ...be doubled (7 X the ELL) X 2 = safety factor of 14 for all harnesses.

EN 17206:2020 Entertainment Technology -Machinery for stages and other production areas- Safety requirements and inspections

Use: Performer Flying Harness

WLL (maximum mass of user + harness or ELL): 131 kg (289 LBS)

MBS (Minimum Breaking Strength): 1,835 kg (18 kN)

Working Coefficient (Safety Factor): 14 x WLL (ELL)

Working Coefficient Dynamic Force (Safety Factor): 14 x WLL (ELL)

The MBS (1,835 kg) must meet or exceed 14 X the WLL and 14 X the Dynamic Force:

14 X 131 kg = 1,834 kg (18kN).

Peak Load: 611 kg (6 kN)

Peak Load is the maximum allowable force on the harness, typically resulting from abnormal conditions or irregular operation. Inspection of the harness required with any occurrence of a Peak Load. Special care must be taken to avoid injury to performers!

2) DESCRIPTION AND USE:

Stunt Vest type Performer Flying Harness also called Jerk Vest, Jerk Harness, Flying Vest, Theatrical Vest, Multi-pick Vest. Has multiple load-bearing webbing attachment points (PICKS). The number of PICKS may increase or decrease based on size of harness. Men's medium has 93 PICKS. Used for both stunts and flying effects for film and live performance. Covers the upper body of the performer. Helps to spread the force of ratchet pulls and "dead stops" over the torso of the performer. **For stunts and flying effects only. NOT for fall protection or work safety!**

NYLON 80 PICK STUNT VEST Men's Style SKU: VN50-01

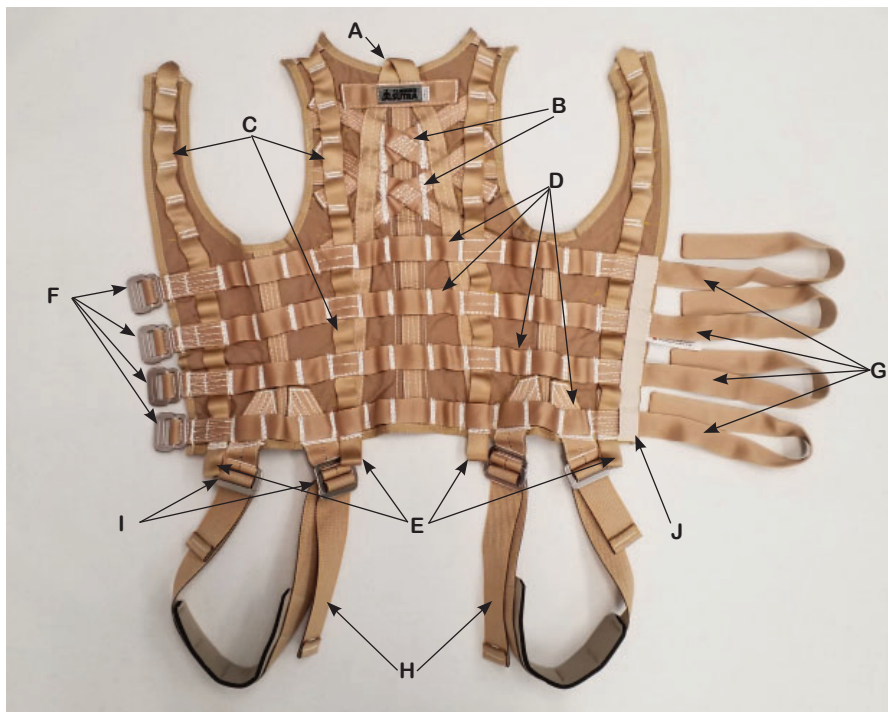
NYLON 80 PICK STUNT VEST Women's Style SKU: VN50-01

SPECTRA TITANIUM STUNT VEST Men's Style SKU: VST-01

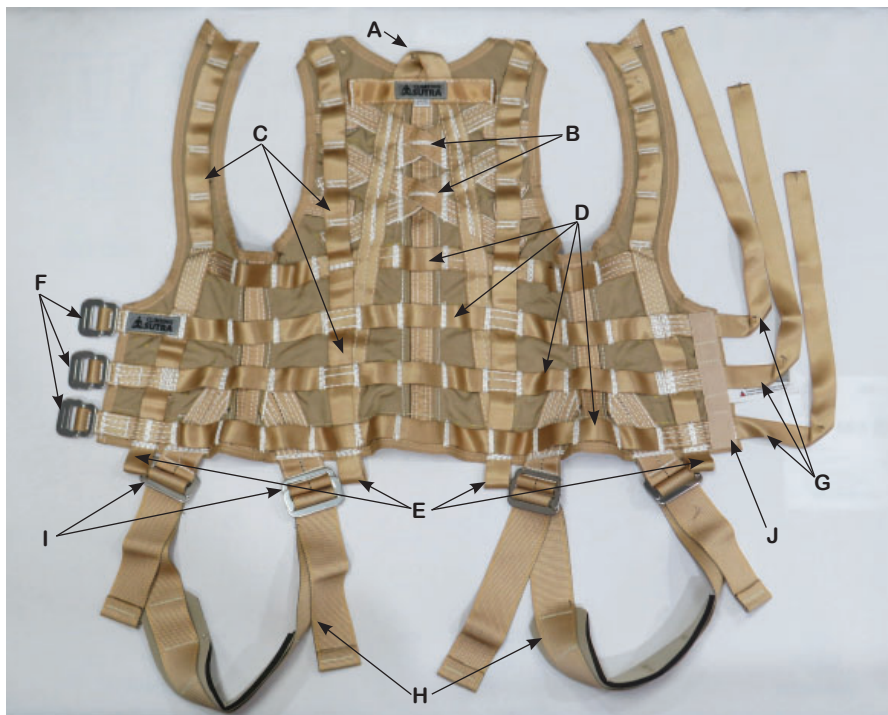
SPECTRA TITANIUM STUNT VEST Women's Style SKU: VST-01

3) PARTS AND DETAILS:

Men's Style Stunt Vest



Women's Style Stunt Vest



LOAD BEARING ATTACHMENT (PICK) POINTS:

A. Neck Loop: pick at the top of center back. **MBS 6,744 lbs. / 3,059 kg (30kN)**

B. Back "X"s: 2 picks formed by crossed webbing at the mid back. **MBS 6,744 lbs. / 3,059 kg (30kN)**

Note: the higher breaking strengths and positions of the two Back "X"s and the Neck Loop make them suitable anchors for shock loads and for use as a 'back-up' or secondary anchor for other picks.

C. Vertical Strap Picks: Picks formed by pockets between stitching in the Vertical Straps. **MBS 4050 lbs. / 1,837 kg (18kN)**

D. Horizontal Strap Picks: Picks formed by pockets between stitching in the Horizontal Straps. **MBS 4050 lbs. / 1,837 kg (18kN)**

E. Hem Loop Picks: 4 Picks at the hem (bottom) of the harness. **MBS 4050 lbs. / 1,837 kg (18kN)**

Note: shockloads in excess of 1,600 lbs (6.6 Kn) may cause tearing of stitches on vertical or horizontal picks. This is a normal function to preserve the integrity of the webbing. Should this occur, immediately remove the harness from service and contact info@climbingsutra.com for repair or replacement.

OTHER PARTS OF THE HARNESS:

F. FRONT ADJUSTER BUCKLES: Used to secure the FRONT ADJUSTER STRAPS around the performer's torso.

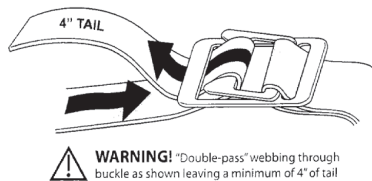
G. FRONT ADJUSTER STRAPS: Threaded through the FRONT ADJUSTER BUCKLES to secure the performer.

H. LEG STRAPS: Secure the performer's legs to the harness. (Leg straps are interchangeable with optional Leg Cuffs).

I. LEG ADJUSTER BUCKLES: Attach and adjust either leg straps or leg cuffs to the harness.

J. ELASTIC STRAP KEEPERS ! WARNING !
The elastic strap keepers are **NON-LOAD BEARING** and are **ONLY** for optional use to organize webbing strap ends.

Buckle Function



Buckle Key Function



CLIMBING SUTRA BUCKLES (ALL SIZES) MINIMUM BREAKING STRENGTH (LOOP): 4050 LBS (1,837 KG or 18kN)

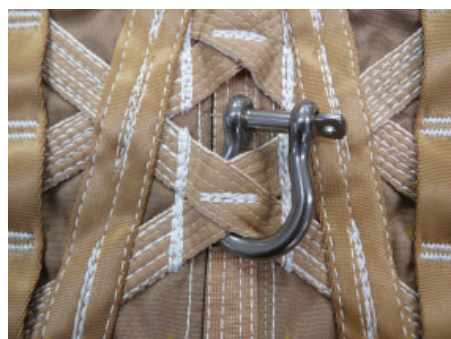
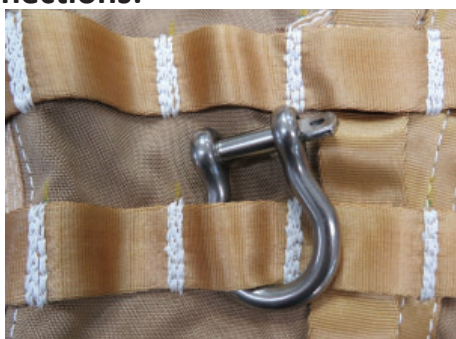
4) PROPER CONNECTION:

Always use an approved shackle or rated steel connector of .25" (6mm) stock diameter or greater to connect directly to the Pick Points of the harness.

DO NOT anchor a line, cable, or sling directly to the Pick Points (webbing) on the harness. This could cause failure of the Pick Point(s).

DO NOT connect two or more Pick Points on the same strand of webbing with a single connector. This could cause failure of the connection!

Correct connections:

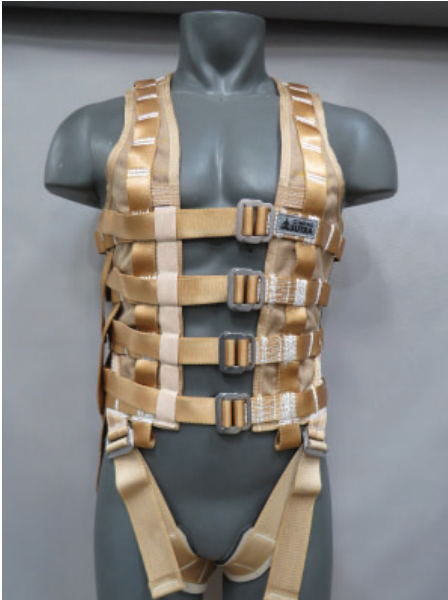


Incorrect connection: DANGER!

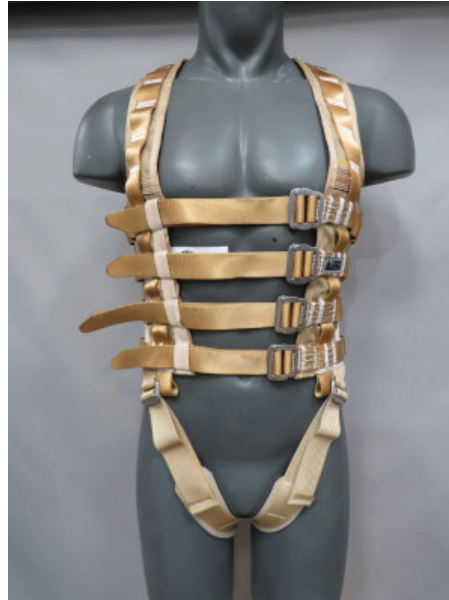


Men's Style Sizing

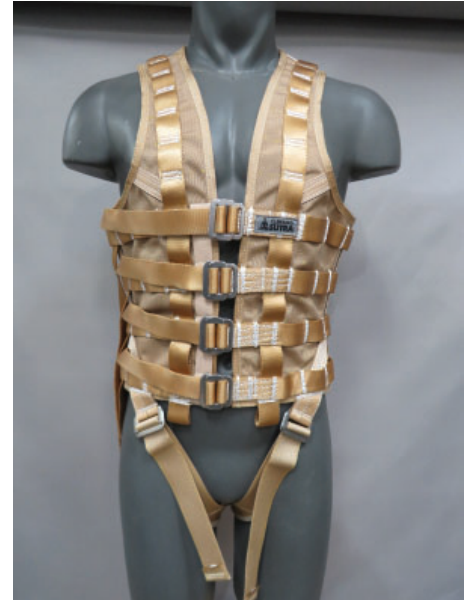
Correct



Harness too small



Harness too large

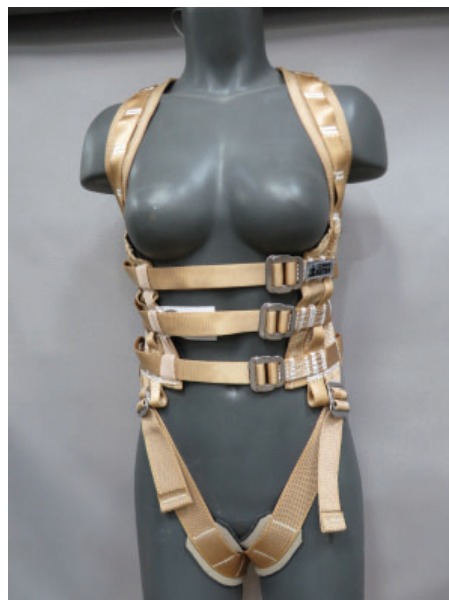


Women's Style Sizing

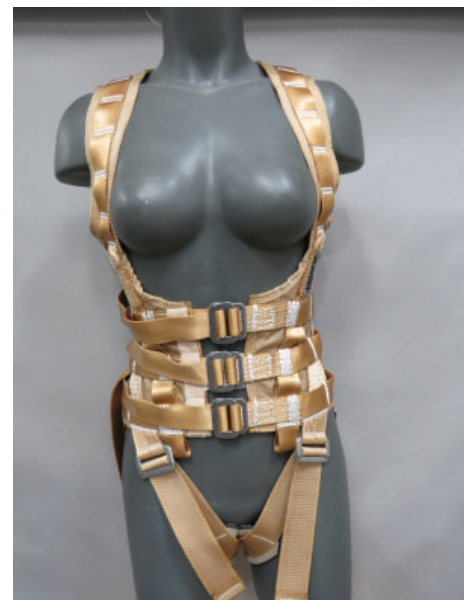
Correct



Harness too small



Harness too large



CLIMBING SUTRA STANDARD SIZING CHART

MEN

INCHES:	X-Small		X-Small/Small		Small		Small/Medium		Medium	
Chest	30	32	32.5	34.5	34.5	36.5	36.5	38.5	39	41
Waist	24.5	26.5	27	28	28.5	30.5	30.5	31.5	32	34
INCHES:	Medium/Large		Large		Large/X-Large		X-Large		XX-Large	
Chest	41	42	42.5	44	45	47	46	48	50	52
Waist	34	35.5	36	38	37.5	39	40	42	44	46
CENTIMETERS:	X-Small		X-Small/Small		Small		Small/Medium		Medium	
Chest	76	81	82.5	87.5	87.5	92.5	92.5	98	99	104
Waist	62	67	68.5	71	72.5	77.5	77.5	80	81	86.5
CENTIMETERS:	Medium/Large		Large		Large/X-Large		X-Large		XX-Large	
Chest	104	106.5	108	112	114	119.5	117	122	127	132
Waist	86.5	90	91.5	96.5	95	99	101	106.5	112	117

WOMEN

INCHES:	X-Small	Small		Medium		Large		X-Large	
USA Size	4	6	8	10	12	14	16	18	20
Bust	33	34	35	36	37 ^{1/2}	39	40 ^{1/2}	42 ^{1/2}	44 ^{1/2}
Waist	25	26	27	28	29 ^{1/2}	31	32 ^{1/2}	34 ^{1/2}	36 ^{1/2}
Hips	35 ^{1/2}	36 ^{1/2}	37 ^{1/2}	38 ^{1/2}	40	41 ^{1/2}	43	45	47
CENTIMETERS:	X-Small	Small		Medium		Large		X-Large	
Size	10	15	20	25	30 ^{1/2}	35 ^{1/2}	40 ^{1/2}	46	51
Bust	84	86	89	91 ^{1/2}	95	99	103	108	113
Waist	63 ^{1/2}	66	68 ^{1/2}	71	75	79	82 ^{1/2}	88	93
Hips	90	93	95	98	101 ^{1/2}	105	109	114	119



Fitting Guide

Climbing Sutra Stunt Vests (all models)

STEP 1 of 6

Open all straps and drape harness over shoulders. You may also “step into” the harness if the leg straps are not undone.



STEP 2 of 6

Buckle the two leg straps around performers legs. Adjust the rear buckle so the padding is centered between the legs. Once they are set properly it is easiest to make adjustments with the front buckle. Now tighten the leg straps until snug by pulling down on them.

Hint: the leg straps are correctly tightened when you feel slight pressure on your shoulders.



Climbing Sutra stunt vests should be worn snug. “SNUG” means close fitting without creating discomfort or restricting breathing and/or movement of the performer. It should be possible to just slide a flat hand under the straps (about 1” of clearance) but NOT a clenched fist (2” or more of clearance) when properly adjusted.

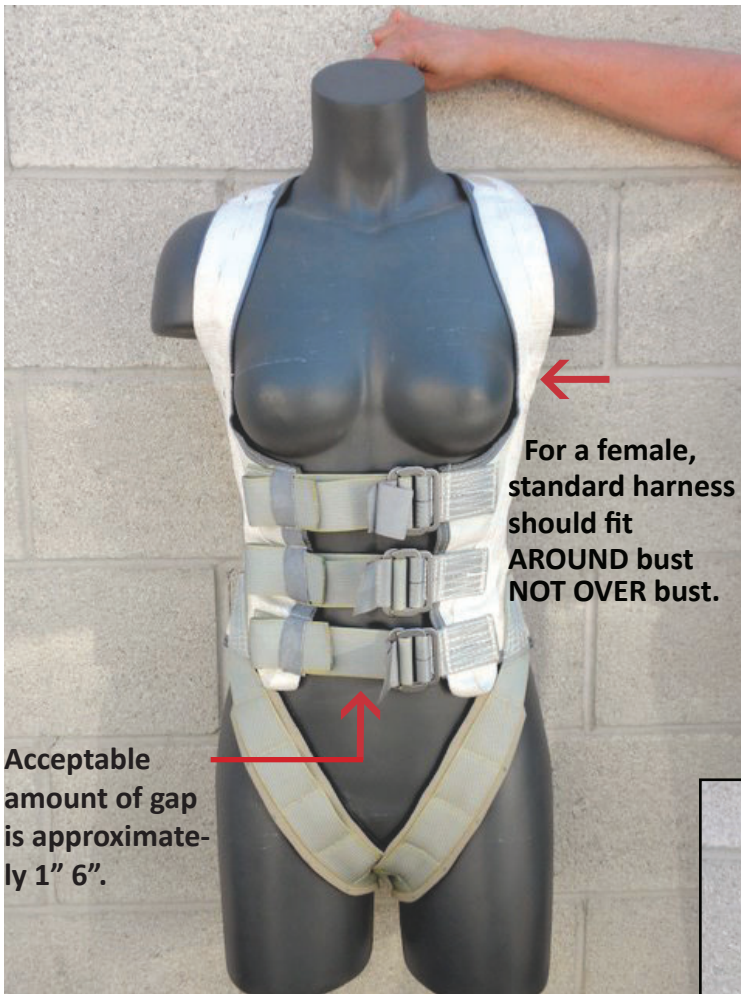
Harness is too big if any strap is completely tightened (the buckle “bottoms-out”) and the harness is not “snug”. DO NOT USE IT! Contact Climbing Sutra for a correctly fitted harness.

Harness is too small if any strap is opened completely and the harness is still too tight (restricting breathing and/or movement, or a hand will not slide under the strap(s)) then the harness is too small. DO NOT USE IT! Contact Climbing Sutra for a correctly fitted harness.

STEP 3 of 6

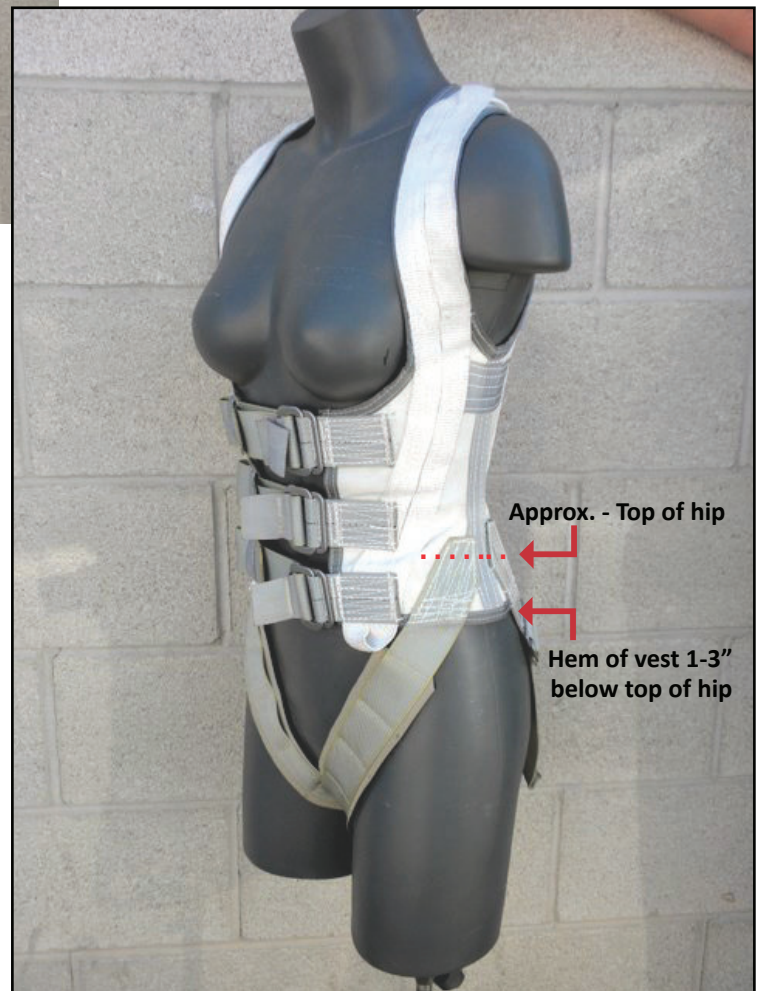
Buckle front straps and tighten until snug. Extra strap can be tucked under elastic.

There should be a minimum of 4" of extra strap. (See the warning label adjacent to the torso straps on your vest). If there is less than 4", the strap is too short. **DO NOT USE THE HARNESS!**



STEP 4 of 6

Check length of harness. Hem of vest should ride just below top edge of hip line on a standard vest. Custom vests could fit shorter or longer as desired.





STEP 5 of 6

Harness should hug body without excess space between body and fabric.

If there is looseness or gaps, attempt re-tightening leg and waist straps.

“SNUG” means close fitting without creating discomfort or restricting breathing or movement of the performer. It should be possible to just slide a flat hand under the straps (about 1” of clearance) but NOT a clenched fist (2” or more of clearance) when properly adjusted.

If there are still gaps then you may require a different size of harness. If this is the case take at least three photos (front, back and side) of the performer in the harness and email them to info@climbingsutra.com for fitting assistance.

STEP 6 of 6

Perform a suspension test of the harness fit by raising the performer a few inches off the ground so they are completely suspended in the harness. Re-adjust the waist and leg straps as needed to achieve a “snug” fit.

7) INSPECTIONS MEN'S AND WOMEN'S STUNT VESTS : INSPECTION SHEET

Climbing Sutra Stunt Vests must be inspected before and after each use. When in use, the harness must be inspected weekly, and the inspections documented. Completed inspection forms shall be kept in a maintenance log. Downloads of these forms are available at www.climbingsutra.com. Any product or component showing any defect or wear shall be withdrawn from service immediately. If there is any doubt about the serviceability of any harness or component remove the harness from service and contact Climbing Sutra. See www.climbingsutra.com monthly to check for harness updates or notices.

INSPECTION CHECKLIST FOR STUNT VESTS

Labels - Check legibility and condition of each including the Manufacturer, Warning, Read This Notice, and Serial# labels.

Webbing - Check all webbing for fraying, cuts, tears, punctures, burns, color changes, or staining.

Fabric - Check all fabric for fraying, cuts, tears, punctures, burns, color changes, or staining.

Stitching - Check all stitches for fraying, cuts, snags, burns, or tears.

Buckles - Examine for distortion, corrosion, sharp edges, wear, proper attachment, ease of connection and disconnection, and complete closure.

Connection hardware - Examine all including any "O" rings, and "D" rings for distortion, corrosion, sharp edges, or wear.

Quick release hardware - Examine all including Quad Releases, Single Click connectors, and Cobra Buckles for smooth action of all triggers and test that they close and release completely using both male and female interconnecting parts. Examine all for consistent and firmly set rivet heads. Never attempt to connect one half of the Climbing Sutra quick release system with a part that is not made by Climbing Sutra.

HARNESS MODEL: _____ **SERIAL#:** _____ **MFG DATE:** _____ **INPECT DATE:** _____

Areas to Inspect	Pass/Fail	By	Notes
Labels			
Webbing			
Fabric			
Stitching			
Buckles			
Connection Hardware			
Quick Release Hardware			

INSPECTIONS MEN'S AND WOMEN'S STUNT VESTS : HARNESS LIFE SHEET

LIFETIME: The ultimate lifetime of the product is 6 years from the manufacture date unless any defect appears. In addition, this harness must be re-certified by the manufacturer after 2 years from the manufacture date, and every year thereafter, or all warranties and certifications are void. The following factors can reduce the lifetime of the product: shock load, intense use, damage to components of the product, contact with chemical substances, high temperatures, tears and abrasions, and/or failure to maintain as recommended. (Typical flying effects for theater productions with ten to fifteen performances per week should expect about a three-to-five-year life lifespan. More aggressive flying effects such as stunt flying may substantially shorten the lifespan of the harness). If it is suspected that the harness is no longer safe and reliable, withdraw the harness from service immediately and contact Climbing Sutra.

HARNESS MODEL: SERIAL#: MFG DATE: EXP DATE:

PURCHASE DATE: DATE OF FIRST USE: USER: RECERT BY MFR:

YR	DATE	INSPECTOR NAME / SIGNATURE	NOTES
1			
2			
3			
4			
5			
6			