BUCKINGHAM MFG.

BUCKSORBER INSTRUCTIONS & WARNINGS

Energy Absorber

Model No. 400000 Series

PN 400000 BuckSorber 1 and PN 400000X12 BuckSorber 2

Warning: Do not use this product if you cannot understand and follow the instructions and warnings that come with it and complete all necessary functions.

- This equipment is intended for use by properly trained professionals only.
- Fall protection equipment, (i.e. fall arrest, work positioning belts, retrieval, suspension etc.) should not be resold or provided to others for re-use after use by original user as assurance cannot be granted that a used product meets criteria of applicable standards and is safe for use to a subsequent user.
- Manufacturer's instructions shall be provided to the user of this product. If an additional copy is needed, contact supplier or Buckingham Mfg. Co.
- Read, understand, and follow all instructions and cautions attached to and/or packed with product before using this equipment.
- Employer - instruct employee as to proper use and warnings before use of equipment.
- Be certain this equipment is suitable for the intended use and work environment. It should only be used as personal protection equipment (PPE). If suitability for intended use is in doubt, contact supplier or consult a safety engineer or Buckingham Mfg. Co. before using.
- ANSI Z359.13, ASTM F887, and applicable OSHA regulations are standards / regulations utilized by Buckingham Manufacturing Co. for various energy absorbing lanyards manufactured. Energy absorbing lanyards are labeled to these standards as they are applicable.

The table below outlines energy absorber required specifications according to these standards / regulations.

STANDARD	MAXIMUM ALLOWABLE FREE FALL	STATED CAPACITY RANGE	MAXIMUM ARREST FORCE	AVERAGE ARREST FORCE	MAXIMUM ELONGATION
ANSI Z359.13	6 ft. (1.83 m)	130 lbs. - 310 lbs. (59 kg - 140.6 kg)	1800 lbs. (8 kN)	900 lbs. (4 kN)	48 in. (1.2 m)
	12 ft. (3.66 m)	130 lbs. - 310 lbs. (59 kg - 140.6 kg)	1800 lbs. (8 kN)	1350 lbs. (6 kN)	60 in. (1.5 m)
OSHA 1926.502(d)(16)	6 ft. (1.83 m)	* 310 lbs. Maximum (140.6 kg) Maximum	1800 lbs. (8 kN)	NA	42 in. (1.07 m)

* If the system is used by an employee having a combined tool and body weight of 310 pounds (140 kg) or more, the employer must appropriately modify the criteria and protocols of the Appendix 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).

NOTES:

Buckingham's BuckSorbers are manufactured and tested in excess of the above listed standards / regulations and rated to be used by a person with a maximum weight of 350 lbs. (190.5 kg) when fully equipped and only when used with an equivalently weight rated harness / accessories. When using the BuckSorber 1, free fall is limited to a maximum of 6 ft. (1.83 m) with a lanyard and 4 ft. (1.22 m) with a mobile fall arrest device. When using the BuckSorber 2, free fall is limited to a maximum of 12 ft. (3.66 m) with a lanyard and 2.5 ft. (0.76 m) with a mobile fall arrest device.

The BuckSorber 2 when being used with a Fall Arrester is also rated for two-person rescue (maximum of 550 lbs.) with free fall limited to 2.5 ft. (0.76 m) or less.

- Only Buckingham Mfg. Co. or those people authorized in writing by Buckingham Mfg. Co. may make repairs to this equipment.
- Product must not be altered in any way.
- Please consult with your physician prior to using this product. Do not use this product under the influence of drugs or alcohol.
- In the event of a fall, the employee must have a rescue plan and the means to implement it.
- Energy absorbing lanyards should be considered as a part of a personal fall arrest system. The energy absorber must always be attached to the fall arrest attachment device included on the user's equipment. The energy absorber must not be removed from the pack, and must have the two hook and loop retainer straps securely in place.
- Never use an energy absorbing lanyard for positioning. Unit can open and extend, which could result in a fall.
- OSHA requires that impact force in a fall NOT exceed an 1800 lb. limit with a harness. Keep connecting device slack to a minimum to stay under these limits.
- Equipment subjected to impact loading must be immediately removed from service, destroyed, and discarded.
- Always attach BuckSorber to designated rear D-ring of a personal fall arrest system with an appropriately rated carabiner.
- Fall arrest anchor points must support a minimum of 5,000 lbf. (22.2 kN) per attached worker and be independent of worker support.
- No fall protection system can guarantee that you will not sustain injuries should a fall occur. Therefore, BuckSorber systems should be kept as short as possible to minimize free fall distance. OSHA requires that maximum length of energy absorbing lanyards provide for a fall of no greater than six (6) feet (1.8 m), allow no contact with any lower level, and unit elongation not exceed 42" (3.5 ft.) (1.07 m).

- When using the BuckSorbers with a Fall Arrester
  1. The user can attach the BuckSorber 1 or BuckSorber 2 to either the sternal or dorsal attachment point of the harness and must be rigged such that the free fall is limited to 4' with the BuckSorber 1 and 2.5' with the BuckSorber 2.
  2. When using a BuckSorber 1 or 2, keep the anchor point above the fall arrest attachment. If climbing above anchor point, attach to a new anchor point higher up.
  3. Always position the Fall Arrester as high as possible on the lifeline to minimize the free fall distance.

- When using the BuckSorbers as an Energy Absorbing Lanyard
  1. The fall arrest attachment point on the user should be in the middle of the back near shoulder blade level.
  2. When using a BuckSorber 1 or 2, keep the anchor point above the Fall Arrest attachment. If climbing above anchor point, attach to a new anchor point higher up. If anchor point above the Fall Arrest attachment device is not available, BuckSorber positioning must be such that free fall will be limited to a maximum of six (6') feet (1.8 m) and that there will be no contact with a lower level. If anchor point is below the fall arrest attachment, the BuckSorber 2 as well as a BuckArrest / BuckStop product number suffixed with X12 can be used.

See Figure 1. For calculating fall distance / clearance for the BuckSorber 1 and 2 when attached to a Fall Arrester
See Figure 2. for calculating fall distance / clearance for both standard BuckSorber 1 and BuckSorber 2 when used as an Energy Absorbing Lanyard.

BuckSorbers attached to a Fall Arrester
FC = Fall Clearance / Distance
LL = Lanyard Length
EL = Elongation Length
UH = User's Height
SF = Safety Factor (accounts for harness stretch)

BuckSorber 1
Example: With a BuckSorber 1 with a Lanyard Length of 2' attached to a Fall Arrester with 4' Elongation Length used by a 6' tall person.
FC = LL+ EL +UH+SF
FC = 2'+4'+6'+3' = 15'

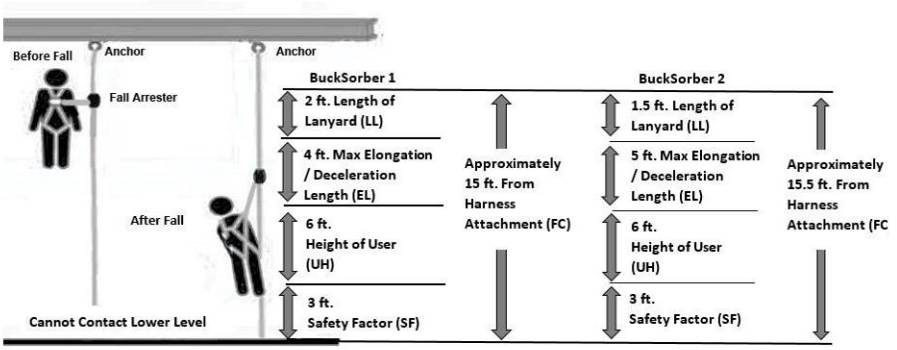


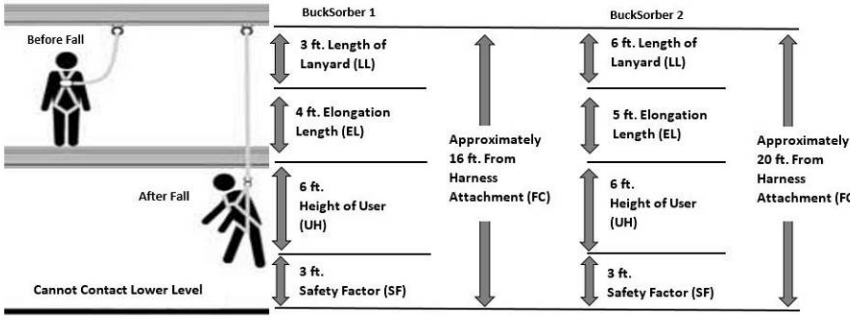
Figure 1

BuckSorber 2
Example: With a BuckSorber 2 with a Lanyard Length of 1.5' attached to a Fall Arrester with 5' Elongation Length used by a 6' tall person.
FC = LL+ EL +UH+SF
FC = 1.5'+5'+6'+3' = 15.5'

BuckSorbers when used as Energy Absorbing Lanyards
FC = Fall Clearance / Distance
LL = Lanyard Length
EL = Elongation Length
UH = User's Height
SF = Safety Factor (accounts for harness stretch)

BuckSorber 1
Example: With a 3' Lanyard with 4' Elongation Length used by a 6' tall person.

FC = LL+ EL +UH+SF
FC = 3'+4'+6'+3' = 16'



NOTE: This application requires a BuckSorber 2 energy absorbing lanyard.
Lanyard product number must be suffixed with X12.

Figure 2

BuckSorber 2
Example: With a 6' Lanyard (suffixed X12) with 5' Elongation Length used by a 6' tall person.

FC = LL+ EL +UH+SF
FC = 6'+5'+6'+3' = 20'

- Always work directly under the fall arrest anchor point to avoid swing fall injuries (pendulum effect).
- For a 6 ft. free fall energy absorbing lanyard, ANSI Z359.13 allows for a 6 foot free fall, with a 48 inch maximum extension. and for a 12 ft. free fall energy absorbing lanyard, ANSI Z359.13 allows for a 12 foot free fall with a 60 inch maximum extension.
- Never wrap a unit around a sharp structural member or abrasive surface, as the material could be cut or damaged.

- Avoid contact of this equipment with high temperature surfaces, welding, or other heat sources, electrical hazards, or moving machinery.
- Avoid contact of this equipment with chemicals, which may damage the material. If in doubt, contact supplier or Buckingham Mfg. Co.
- Use PPE only for the specific purpose for which it is designed and intended.
- If this product is used as a tie back type unit, assure it is equipped with tie back type snaphooks / carabiners. If tying back, ensure the tie back snaphook / carabiner is properly connected to the webbing section of the lanyard as shown in Fig. 2. Never tie back around the energy absorbing pack as this will result in altering its energy absorption / extension properties.
- Always visually check that the snap hook / carabiner freely engages D-ring or anchor point and the keeper / gate is completely closed with each use. Never rely solely on the feel or sound of the snap hook/carabiner engaging.
- Use this product only with harness compliant to applicable regulations / standards (e.g. OSHA / ANSI Z359.11 / ASTM F-887).

Fig 2

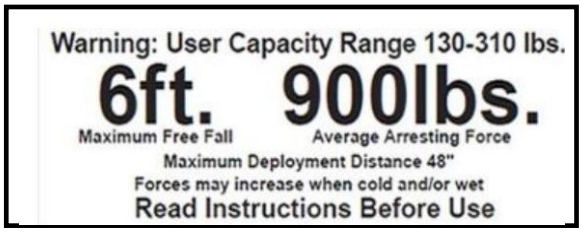
- Before each use and additionally, by a competent person other than the user at intervals of no more than one year, check that: 1) unit is free of burns, cuts, abrasions, kinks, knots, broken strands, and excessive wear. 2) snap hooks, carabiners and D-rings are not distorted or cracked. 3) snap hook / carabiner keepers / gates are not bent, free of burrs, clean and functioning properly. 4) outer cover has no broken stitches, tears, stretch marks or other evidence of impact loading. 5) The BuckSorber does not indicate any type of activation. If the unit does not pass this inspection, mark it as “unusable”, remove it from service, destroy, discard and replace immediately.
- Ensure each snap hook/carabiner is positioned so that its keeper / gate is never load bearing.
- For personal use only. NOT for towing or hoisting.
- Unless the snap hook is a locking type and designed for the following connections, snap hooks shall not be engaged:
  - directly to webbing, rope or wire rope,
  - to each other - they are not intended to be used that way and could twist apart,
  - to a D-ring to which another snap hook or other connector is attached,
  - to a horizontal lifeline,
  - to any object which is incompatibly shaped or dimensioned in relation to the snap hook such that the connected object could depress the snap hook keeper a sufficient amount to cause it to release. (see illustration).

Incompatibly Dimensioned Incompatibly Shaped

- <u>Before each use</u> ensure snap hook/carabiner locking mechanism is functioning properly.
- Lubricate lock mechanism and keeper on both sides of snap hook at least weekly or as often as required to maintain smooth operation (no binding) with light weight lubricant such as WD-40®.
- Never disable locking mechanism of the snap hook/carabiner, punch holes in or alter a connecting device in any way.
- Ensure there is no pressure on the snap hook locking mechanism sufficient to depress it as this will, due to its length, render it incompatible with currently designed D-rings and make it very susceptible to rollout.
- Never work without independent fall-arrest protection if there is danger of a fall.
- Product covered under these instructions / warnings should not be resold / redistributed or re-used after use by original user.

<u>Product Identification Labels</u> (Not To Scale)

Product may vary from that shown (energy absorber, hardware, etc.). P/N, Length, S/N and Date of Mfg. may vary from product labels shown.



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BUCKINGHAM
BUCKSORBER 1
ENERGY-ABSORBING LANYARD
P/N:
ANSI Z359.13 CAPACITY: 130-310LBS. LENGTH:
S/N: MAX. CAPACITY : 350 lbs.
ANSI Z359.13-13 ASTMF887-23
MFG. DATE: MATERIAL: KEVLAR/NYLON
*AVG. ARREST FORCE: 900 lbs. (130-310 lbs.CAPACITY)
MAXIMUM ARREST FORCE 1800 lbs.(350 lbs. CAPACITY)
ANSI Z359.13 DESIGN ELONGATION: 48" (1.22m)
www.buckinghammfg.com
ATTACH PACK / SINGLE END TO HARNESS
CAUTION: INSPECT BEFORE EACH USE
WARNING
* BEFORE EACH USE, AS A MINIMUM, READ, UNDERSTAND & FOLLOW INSTRUCTIONS/WARNINGS SUPPLIED WITH AND ATTACHED TO THIS PRODUCT AT THE TIME OF SHIPMENT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH. CONTACT BUCKINGHAM MFG. AT 1-800-937-2825 IF ADDITIONAL COPY IS NEEDED.
* REMOVE THIS PRODUCT FROM SERVICE IF:
1) ENERGY ABSORBER PACK AND/OR IMPACT LOADED LABEL IS DEPLOYED.
2) PRODUCT DOES NOT PASS INSPECTION.
* OSHA REQUIRES THAT MAXIMUM LENGTH OF ENERGY ABSORBING LANYARDS PROVIDE FOR A FALL OF NO GREATER THAN SIX (6) FEET, ALLOW NO CONTACT WITH ANY LOWER LEVEL AND UNIT ELONGATION NOT EXCEED 3.5 FEET.
* AVOID CONTACT W/ SHARP EDGES & ABRASIVE SURFACES.
ASSEMBLED IN USA
WARNING: Cancer and Reproductive Harm-
www.P65Warnings.ca.gov

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BUCKINGHAM
BUCKSORBER 2
ENERGY-ABSORBING LANYARD
P/N:
ANSI Z359.13 CAPACITY: 130-310LBS. LENGTH:
S/N: . MAX. CAPACITY : 350 lbs.
ANSI Z359.13-13 ASTMF887-23
MFG. DATE: 10/24 MATERIAL: KEVLAR/NYLON
*AVG. ARREST FORCE: 1350 lbs. (130-310 lbs.CAPACITY)
MAXIMUM ARREST FORCE 1800 lbs.(350 lbs. CAPACITY)
ANSI Z359.13 DESIGN ELONGATION: 60" (1.524m)
www.buckinghammfg.com
ATTACH PACK / SINGLE END TO HARNESS
CAUTION: INSPECT BEFORE EACH USE
WARNING
* BEFORE EACH USE, AS A MINIMUM, READ, UNDERSTAND & FOLLOW INSTRUCTIONS/WARNINGS SUPPLIED WITH AND ATTACHED TO THIS PRODUCT AT THE TIME OF SHIPMENT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH. CONTACT BUCKINGHAM MFG. AT 1-800-937-2825 IF ADDITIONAL COPY IS NEEDED.
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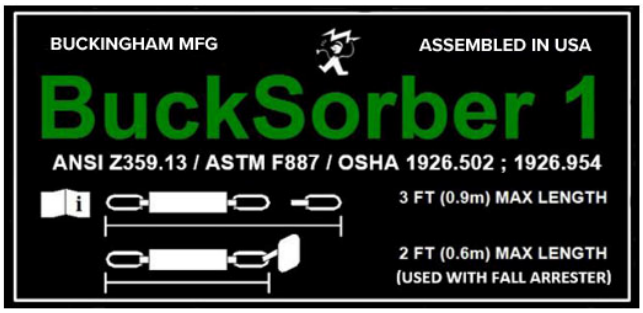
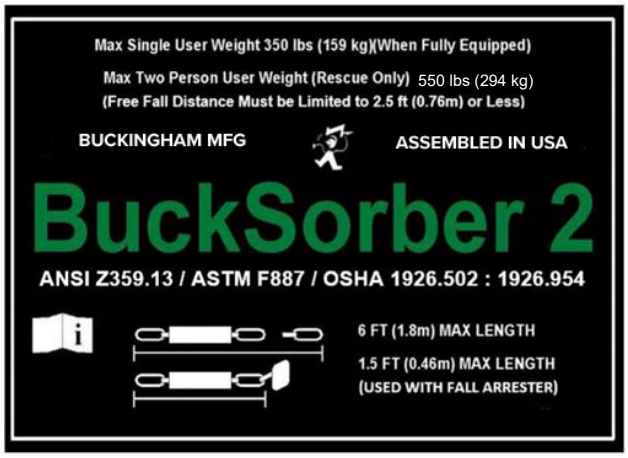
* AVOID CONTACT W/ SHARP EDGES & ABRASIVE SURFACES.
ASSEMBLED IN USA
WARNING: Cancer and Reproductive Harm-
www.P65Warnings.ca.gov





BuckSorber 1 and BuckSorber 2 assembled onto Fall Arresters

BuckSorber 2 assembled onto a dual lanyard

Cleaning / Storage

Proper maintenance, storage, and transportation of your equipment will prolong its useful life and contribute toward its performance. BuckSorbers should be cleaned and disinfected with water and mild soap (a dish washing soap that removes grease (i.e. Dawn)) and be allowed to dry thoroughly without using excessive heat. Your equipment should be stored and transported so that it does not come into contact with but not be limited to, moisture, ultra violet rays, extreme temperatures, oil, chemical agents or their vapors, or other degrading elements. Warnings pertaining to cleaning, storage, and transportation should be strictly adhered to.

NOTE: Ensure proper fit / size of product before use. This product cannot be returned unless it is in new / unused condition.

STATEMENT of OBSOLESCENCE:

Precise “useful life expectancy” or “shelf life” for this product is not specified, as the degree of use, conditions of use, and the degree of care and storage determines useful life. All users maintain responsibility to select proper equipment for the job, be properly trained in its use, and ensure all personnel support equipment passes inspection before each use. Upon evidence of defects, damage or deterioration, all equipment shall be removed from service immediately and tagged or marked as unusable or destroyed. Additionally, all equipment shall be inspected on a regular basis not to exceed one year by a Competent Person, as defined by OSHA/ANSI, to verify that the equipment is safe for use. In the event of any question or concern regarding the condition of such equipment, users shall remove the equipment from service for further inspection. All users must comply with OSHA/ANSI/ASTM standards prior to and in using such equipment. For more information regarding safe and appropriate use of equipment, please contact Buckingham Manufacturing at 1-800-937-2825.

INTERNATIONAL USERS:

Notwithstanding the above, please know that certain international jurisdictions require manufacturers of equipment to provide customers with a maximum useful lifespan (sometimes referred to as a “Statement of Obsolescence”). To the extent required, Buckingham personal protective equipment manufactured from synthetic fiber materials including but not limited to items such as webbing and/or rope are subject to a maximum useful lifespan of ten (10) years from the date of manufacture. As stated above proper usage, storage, maintenance, and care impacts the useful lifespan of equipment. Extreme circumstances may require that product must be retired after only one use. This statement is made in conformance and compliance with BS EN 365:2004. International users must ensure that product inspections are completed by Competent Persons as defined by international standards including but not limited to British Standard (“BS”). If equipment fails any inspections, it must be immediately withdrawn from service and destroyed. For more information regarding safe and appropriate use of equipment, please contact Buckingham Manufacturing at 1-800-937-2825.

OUR GUARANTEE:

We guarantee the equipment we manufacture to be free from defects in material and workmanship. We will repair any equipment deemed to be defective which is returned to us by the original purchaser. However, this guarantee is void if any product is changed or altered in any way, or if the product is used in a manner other than for which it is intended. This express guarantee supersedes all other expressed or implied guarantees, obligations or liabilities. There are no implied warranties of merchantability or fitness for a particular purpose and as such, all implied warranties are specifically disclaimed.

LIMITATION ON LIABILITY:

In no event will Buckingham or buyer be liable to the other for lost revenues, lost profits or any other indirect, consequential, special or punitive losses or damages, however caused, whether in action for breach of contract, strict liability, tort, or otherwise, even if advised of the possibility of such losses or damages. In no event will Buckingham’s liability exceed the total amount paid by the buyer to Buckingham for the product or equipment giving rise to such claim(s).

Please see other terms and conditions relating to this product at https://buckinghammfg.com/terms-conditions/

REGISTRATION:

Before use of the product, ensure to register and confirm the product at www.buckinghammfg.com/register.

BUCKINGHAM MFG.
BINGHAMTON, NY
www.buckinghammfg.com
1-800-937-2825

Information contained in these written instructions supersedes all other information (written, audio, video etc.) produced by Buckingham Mfg. prior to the revision date of this document.