BUCKINGHAM MFG.

BuckLimiter™ INSTRUCTIONS / WARNINGS

SELF-RETRACTING LANYARDS (SRL) / Personal Fall Limiters (PFL)

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.

The Buckingham BuckLimiter™ Self-Retracting Lanyard (SRL) / Personal Fall Limiter (PFL) has the versatility to be attached directly to the harness dorsal fall arrest attachment or suitable anchor point and designed to be used where fall hazards exist. These units are intended to extend as the user moves away from the housing and to retract automatically when the user moves back towards it. This retracting feature helps to minimize the potential for tripping hazards and long falls that may be associated with standard energy absorbing lanyards.

Buckingham offers a number of models that meet the various needs of the worker Products, as indicated, meet the requirements of the ANSI Z359.14-14 Standard:

Buckingham Self-Retracting Lanyards (SRL) and Personal Fall Limiters (PFL) are not designed or manufactured to meet the Leading Edge requirements of ANSI Z359.14. Only Self-Retracting Lanyards (SRL) and Personal Fall Limiters (PFL) qualified to ANSI Z359.14 (current edition) and labeled by the manufacture for such use may be used for Leading / Beveled edge applications.

Class A Device: Arrest Distance shall not exceed 24" (610 mm) and Arrest Force shall not exceed an average of 1,350 lbf. (6kN) or a maximum of 1,800 lbf. (8kN).

Class B Device: Arrest Distance shall not exceed 54" (1,372 mm) and Arrest Force shall not exceed an average of 900 lbf. (4kN) or a maximum of 1,800 lbf. (8kN).

5008 Series

(Variable lengths 6-10 ft. (1.8 - 3 m)); 1.75" (44.5mm) x .046" (1.17mm) approx. Nylon Web
Maximum free fall permitted 2' (.61 m)

6005 Series

30' (9 m) length; 1" (25.4mm) x .063" (1.6mm) approx. Dyneema Web
Maximum free fall permitted 2' (.61 m)

6005K Series

25' (9 7.6 m) length; 1" (25.4mm) x .088" (2.1mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)
(Note up to 2' of webbing may extend from housing to make up 25' length)

6006 Series

11' (9 m) length; 1" (25.4mm) x .063" (1.6mm) approx. Dyneema Web
Maximum free fall permitted 2' (.61 m)

6006K Series

11' (9 m) length; 1" (25.4mm) x .088" (2.1mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)

6007 Series

16' (4.9 m) length; 1" (25.4mm) x .063" (1.6mm) approx. Dyneema Web
Maximum free fall permitted 2' (.61 m)

6007K Series

16' (4.87 m) length; 1" (25.4mm) x .088" (2.1mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)
(Note: up to 2' of webbing may extend from housing to make up 15' length)

6008 Series

7' (2.1 m) length; 1" (25.4mm) x .063" (1.6mm) approx. Dyneema Web
Maximum free fall permitted 2' (.61 m)

6008K Series

7' (2.1 m) length; 1" (25.4mm) x .088" (2.1mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)
(Note: up to 2' of webbing may extend from housing to make up 7' length)

6008K +Z1 Series [420lb rated]

7' (2.1 m) length; 1" (25.4mm) x .088" (2.1mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)

D6008 Series

7' (2.1 m) length; 1" (25.4mm) x .063" (2.1mm) approx. Dyneema Web
Maximum free fall permitted 2' (.61 m)

D6008K Series

7' (2.1 m) length; 1" (25.4mm) x .088" (2.1mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)
(Note: up to 2' of webbing may extend from housing to make up 15' length)

T6008K Series

7' (2.1 m) length; 1" (25.4mm) x .088" (2.1mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)
(Note: up to 2' of webbing may extend from housing to make up 7' length)

6009 Series

6' (1.8 m) length; .75" (19.1mm) x .056" (1.4mm) approx. Dyneema We
Maximum free fall permitted 2' (.61 m) 6009 Series

6009K Series

6' (1.8 m) length; .67" (17 mm) x .077" (1.9 mm) approx. Kevlar Web
Maximum free fall permitted 2' (.61 m)
(Note: up to 2' of webbing may extend from housing to make up 6' length)

ALL UNITS FOR USE BY ONE PERSON ONLY - NOT FOR MULTIPLE USER CONNECTION

NOTES: * Hardware, options, colors may vary from that shown in photos above.
* The above listed units are supplied with a product label specifying the users maximum weight limit to be used with that unit. Users weights as labeled are when fully equipped (clothing and all related equipment and tools).
* Buckingham Mfg. Personal Fall Limiters suffixed with +Z1 (and or labeled to 420 lbs.) are designed to be used by a person with a maximum weight of 420 lbs. when fully equipped and only when used with an equivalently weight rated harness / accessories.
* Units limited to a maximum permitted free fall of 2': Never climb to a height so that your fall arrest attachment is above your anchorage connection.

INSPECTION

- Inspect the entire assembly prior to each use as outlined in ANSI Z359.14-14. The inspection should include, but not be limited to, inspecting for any sign of excessive wear, damage, malfunction, cracked housing, absence or illegibility of markings. If any evidence of wear or deterioration as outlined in this document is observed, immediately cease use, destroy the product, and replace it with new equipment. Should any unusual conditions not outlined be observed, or you have reasonable doubt about a particular condition, remove the equipment from service and notify your Supervisor, Safety Director, or contact Buckingham Mfg. for clarification (1-800-937-2825).
- An additional inspection shall be performed by a competent person, other than the user, at an interval of no more than one year.
- The frequency of periodic inspection by a competent person shall be established by the user's organization based on careful consideration of relevant factors. Such factors include, the nature and severity of workplace conditions affecting the equipment and the modes of use and exposure time of the equipment.
- An inspection recording chart has been provided at the end of these instructions for your convenience.
- Before each use, test the locking mechanism of the retractor by steadily and sharply jerking on the webbing at varying intervals and over its full length, making sure the mechanism locks. Maintain the locked position and then release the tension, making sure all the webbing retracts back into the retractor housing. Do not use a device if it does not lock or retract.
- Before each use, pull out the entire length of webbing and inspect for any defects such as cuts, kinks, knots, abrasions, burns, broken fibers, chemical or physical exposures, cracks, charring, excessive wear, discoloration, swelling, loose, cut, or missing stitching (fig. 7). Do not use a device that exhibits any defects such as those noted.
- Inspect all hardware for correct function and to ensure against cracks, distortion, corrosion, nicks, or excessive wear. Also, ensure that locking mechanisms and gates are not bent, are free of burrs, clean and are working freely and smoothly. Snaphook rivets should be checked to ensure that cracks and broken, loose, or bent connections do not exist. If any of the mentioned issues exist, do not use the product, and tag it out of service.
- Ensure that the webbing of the unit retracts evenly into the unit housing and without any twists.
- Before each use, inspect to ensure the breakaway jacket of energy absorbing pack (if included), has no broken stitches, tears, stretch marks, or other evidence of impact loading.
- Before each use, inspect that the impact load indicator has NOT been activated. If visible, remove product from service.
- If using the 5008 series with the Self - Retracting Lanyard Bracket Assembly, check the nuts of the bracket assembly for tightness before each use. The four small nuts (10-32 threads) used for the attachment bracket should be tightened such that the bolts ends are even with the tops of the nyloc inserts of the nuts. NOTE: It is recommended that nyloc nuts as a minimum, be replaced after being twice removed. The large (½" Centerlock) nut should be tightened until the bolt end is protruding approximately 1/8" from the top of the nut. Once tightened ensure that the U-bracket freely rotates. If the U-bracket does not rotate, back the nut off slightly until the U-bracket will freely rotate.
  NOTE: Centerlock nuts are not reusable. Discard and replace a centerlock nut once removed.
- The 6005, 6006, 6007, 6008, D6008 and 6009 series devices equipped with a swivel must be mounted to the attachment points in a way to avoid any exposure of the swivel to transverse or bending loads. This is EXTREMELY important in the case of a fall.
- Remove from service, destroy, and discard unit if it does not pass the aforementioned inspection criteria and replace immediately.

CARE AND MAINTENANCE

- Units are factory sealed, therefore, do not attempt to dismantle for any purpose.
- Do not lubricate these units.
- Keep unit free of dirt, chemicals, or any other exposures that might render it inoperable or unsafe.
- Web material can be cleaned with a mild detergent (i.e. Dawn). Allow to air dry away from heat or direct sunlight. Never clean webbing with thinners or similar products.
- Lubricate lock mechanism and gate on both sides of snap hook or carabiner at least weekly or as often as required to maintain smooth operation (no binding) with light weight lubricant such as BuckLube™, WD-40®, etc.

STORAGE

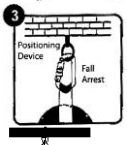
- Always store unit in a clean dry area away from heat or direct sunlight.
- Do not store near corrosive chemicals, dusty environments, oils, solvents, or at extreme temperatures.
- Store in an open area and allow to air dry if exposed to water.

WARNINGS

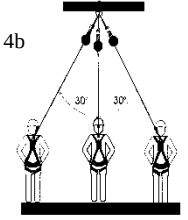
- This equipment is intended for use by properly trained professionals only.
- Anyone with a history of back or neck problems that may be aggravated or complicated by using this equipment should not do so.
- Pregnant women and minors must not use this equipment.
- Users of this equipment must be in good health and not under the influence of drugs or alcohol.
- 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.
- Selection of products should be such that they aid the worker in the performance of their job and particular work situation. Therefore, 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 questionable, always consult your supervisor, safety director, or contact Buckingham Mfg. at 1-800-937-2825 before using. Never use in violation of any applicable company, state, or federal requirement or standard (fig. 1).

- Manufacturer's instructions shall be provided to the end user. Completely read, understand, and follow these and all other related instructions, warnings, and guidelines pertaining to this and all associated equipment before use. Failure to do so could result in your serious injury or death (fig. 2).

- Correct installation, use, and maintenance of this product is essential to its performance and reliability.
- Never connect these SRL / PFL units to more than one person, as they are specifically designed as one person devices.
- As outlined by OSHA 1926.502 (e)(2) positioning devices shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 lbf. (13.3 kN), whichever is greater, versus a rigid fall arrest anchor point which must support a minimum of 5,000 lbf. (22.2 kN) per attached worker and be Independent of worker support (fig. 3).



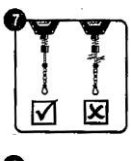
- Swing Fall Hazards: Always check for obstructions below your work area to ensure your fall path is clear. Work as directly underneath your anchorage as possible. Swing falls can be controlled in at least three of the following ways:
  a. Use an engineered fall protection system to maintain your attachment point overhead.
  b. Raise the anchorage height to reduce the angle of the arc and the force of the swing.
  c. Do not exceed 30° excursion from the vertical plane of the anchorage (fig. 4a & 4b).



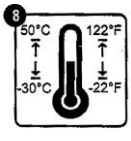
- For maximum protection, use this device in conjunction with a full body harness. Use of the 5008 series for transitioning over an obstruction on a pole / tower in conjunction with a body belt is an acceptable practice.
- When not in use, the lanyard webbing must be retracted into the housing. Failure to do so will eventually weaken the retracting mechanism and prevent the lanyard from fully retracting.
- Never interfere with the retraction capability of these units in any way. Do not tie knots, clamp, or tape webbing to keep it from retracting back into the housing. The webbing must be allowed to retract automatically; otherwise dangerous free falls, swing falls, or impacts with objects may occur.
- Ensure a functional test is carried out before each use by sharply pulling out the web. The brake mechanism must lock (fig. 5).

- Never allow the lanyard to become entwined beneath your arms or legs, or cross over those of another nearby worker.
- Never put the webbing through an opening such as a railing that may fall with you.
- The energy absorber (pack end) must always be attached to the fall arrest attachment device included on the user's equipment.
- Units are equipped with an impact load indicator (webbing). Units with activated impact load indicators must be immediately taken out of service, destroyed, and discarded (fig. 6).

- Inspection before each use should include, but not be limited to, checking that :
  1) unit is free of burns, cuts, abrasions, kinks, knots, broken strands and excessive wear 2) there is no broken or pulled stitches (fig. 7) 3) snap hooks / carabiners, D-rings, and buckles (if any) are not distorted or cracked 4) snap hook / carabiner locking mechanisms function properly 5) snap hook / carabiner gates are not bent, free of burrs, clean, and functioning properly 6) lanyard retracts properly 7) lanyard brakes when subjected to abrupt pull 8) breakaway jacket of deceleration unit (if included) ,has no broken stitches, tears, stretch marks, or other evidence of impact loading and 9) impact load indicator has not been activated. Remove from service, destroy, and discard unit if it does not pass this inspection and replace immediately.



- Units marked to the EN 360 standard can be used in the temperature range of -22° to 122°F (-30° to 50°C) (fig. 8).



- Never use these units around glass windows, other glass like panels, or wrap web around a sharp structural member or abrasive surface, that may provide a cutting edge with potentially disastrous consequences.
- Avoid contact of this equipment with extreme temperatures, harsh environments, high temperature surfaces, welding, slag, hot sparks, open flame, or other heat sources.
- These units are supplied with a product label specifying the users maximum weight limit to be used with that unit. The maximum weights listed are for the user when fully equipped (clothing and all related equipment and tools) (fig. 9).

- Keep equipment from coming into contact with excessive ultra violet rays, paint, and chemical agents which may subject the webbing to stiffening and loss of strength. Stiffening will inhibit retraction of the webbing, creating dangerous free fall producing slack which this unit has not been designed to accommodate. Loss of strength in the webbing may prevent a fall from being arrested. Therefore any use around paint, strong solvents, or certain strong acids is prohibited.
- DO NOT alter this product. Only Buckingham Mfg. Co., or those authorized in writing by Buckingham Mfg. Co., may make repairs / modifications to this equipment (fig. 10).

- DO NOT misuse this equipment.
- Do not allow the lanyard to retract into the housing freely. This may damage the retracting mechanism (fig. 11).

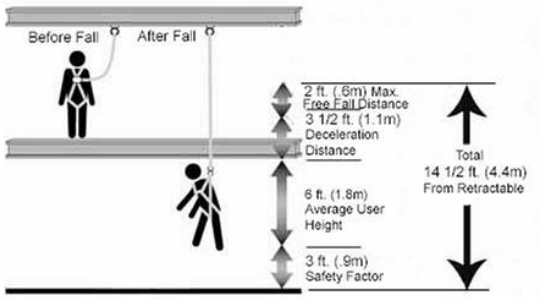
- The units webbing must always be taught to prevent excessive free fall.
- When attached with one of these units, work normally, do not jump or make sudden movements. If you move too quickly the unit will lock.
- Never use this product as a tie back type unit unless it is equipped with wear guard and tie back type snaphooks / carabiners. If tying back, ensure the tie back snaphook / carabiner is properly connected to the web to make a closed loop. Ensure the snaphook / carabiner gate is completely closed, locked, and captures the webbing of the lanyard.
- This product is not for horizontal use.
- Never use these units where contact of the webbing with sharp edges, corners or abrasive surfaces are likely. (fig. 12). Sharp and abrasive surfaces may include but not be limited to (sheet metal, steel, concrete, block, stone, laminated materials etc.)

- When working around or near leading / beveled edges use only SRL that is specifically qualified by ANSI Z359.14 and marked by the manufacturer for such use (i.e. SRL-LE).
- In addition to markings required on standard SRL, units designed for leading edge applications must also be marked with minimum installation setback distance and the clearance required when falling over edge.
- Use caution when using this equipment around moving machinery and electrical hazards.
- For fall arrest, always keep anchor point above rear D-ring. If climbing above anchor point, attach to a new anchor point higher up (fig. 13). When anchor point to allow for connection above the fall arrest attachment device is not available, lanyard positioning must be such that free fall will be limited to the maximum permitted by the unit or OSHA requirement whichever is less and there will be no contact with a lower level. Use the section below to calculate fall clearance:

FC = Fall Clearance
MFFD = Maximum Free Fall Distance
DD = Deceleration Distance
AUH = Average User Height
SF = Safety Factor (accounts for harness stretch)

Example: Class A Retractable used by a 6 ft. user

FC= MFFD + DD + AUH + SF
FC = 2 ft. + 2 ft. + 6 ft. + 3 ft. = 13 ft.



NOTE: If working at a position not directly below the SRL anchorage point, the clearance required and vertical distance will be greater. OSHA requires that impact force in a fall NOT exceed an 1800 lbf. (8 kN) limit with a harness. Keep connecting device slack to a minimum or use an energy absorber to stay under these limits.

- Never use these units for fall protection when working on surfaces that may collapse such as but not limited to grain, cement, and powders in tanks or silos. These units may not sense that you are sinking /falling and you may sink in and suffocate. A working surface that is stable must be provided for such applications (fig. 14).

- Rig to avoid contact with structures below in a fall. Free-fall distance must not exceed that permitted by the unit or OSHA requirement whichever is less. If using an inline energy absorber, add stated extension due to activation to free fall distance to allow for unit extension.
- The 6005, 6006, 6007, 6008, D6008 and 6009series devices equipped with a swivel must be mounted to the attachment points in a way to avoid any exposure of the pipe hook swivel suspension to transverse or bending loads. This is EXTREMELY important in the case of a fall.
- Always work directly under fall arrest anchor point to prevent the webbing from contacting an edge and to avoid swing falls (pendulum effect) that can abrade and cut the webbing.
- When used in conjunction with a Full Body Harness for fall arrest purposes, the unit must be connected with no obstructions, directly from an approved anchor point to the fall arrest attachment of the users harness (fig. 15).
- Equipment that has arrested a fall must be removed from service, destroyed, and replaced. (Note: When using the 5008 series for transitioning (fig 16) and an impact is induced on the unit, the unit as a minimum must be inspected by a qualified person, in accordance to the inspection section outlined above before allowing the unit back into service.
- OSHA regulations state that unless the snap hook / carabiner is a locking type and designed for the following connections, they, as a minimum shall not be engaged directly to webbing, rope, wire rope, or to each other.
- Never attach multiple lanyards together.
- Never use combinations of components or sub systems, or both, which may affect or interfere with the safe function of each other.

- Always visually check that: 1) snap hook / carabiner freely engages anchor point, 2) keeper / gate is completely closed with each use and 3) snap hook / carabiner is positioned so that its keeper / gate is never load bearing. Never rely solely on the feel or sound of a hook / carabiner engaging
- For personal use only. NOT for towing or hoisting applications.
- Before use, ensure snap hook / carabiner locking mechanism is functioning properly.
- Never disable locking gate on snap hook / carabiner, punch holes in, or alter a connecting device in any way.
- Never join two hooks together. They are NOT intended for that use, and may twist apart.
- 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 tie knots in lanyards. Knots can reduce the strength of the lanyard up to 50%.
- Never work without independent fall-arrest protection if there is danger of a fall.
- Employer - instruct employee as to proper use and warnings before use of equipment.
- Do not attempt to use any fall protection system without a full understanding of how to use all components, and without adequate training in the specific application to which it is being applied.
- When using this equipment, the employee must have a written rescue plan and a means at hand to implement it.
- As a user, you assume complete liability if you fail to follow these instructions and are injured.
- Product covered under these instructions / warnings should not be resold / redistributed or re-used after use by original user.
- **Special Instructions pertaining to Dual Lanyards:** The Dual Lanyard is designed to provide continuous fall protection, by means of one lanyard leg always being connected to an anchor point while a position is being changed. A dual lanyard (D6008 series) is for single person use ONLY. Connect to a new fall arrest anchor point with one lanyard leg, while staying connected to the original fall arrest anchor point with the adjacent lanyard leg. Once connected to the new anchor point, disconnect from the original anchor point and repeat this procedure until the desired work position is reached.

NOTE: ANSI Z359.12 rating is applicable to product manufactured with 3600 lbf gate rated hardware only. Hardware manufactured to the ANSI Z359.12 standard gate rating requirement must have the gate rating stamped or permanently marked on the components gate mechanism. Product manufactured without 3600 lbf gate rated hardware will not carry the ANSI rating on the product.

NOTE2: Ensure proper fit / size of product before use. This product cannot be returned unless it is in new unused condition

Example of a Fall Arrest Application

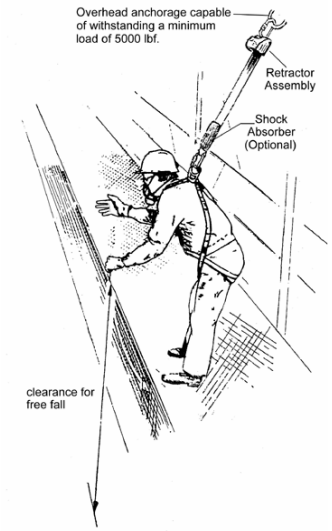


Fig. 15

Example of a Transitioning Application

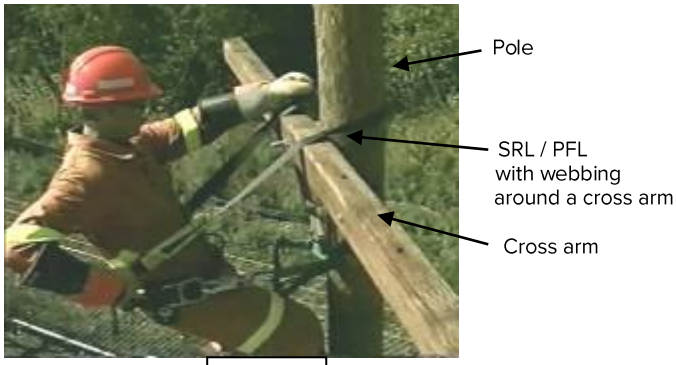


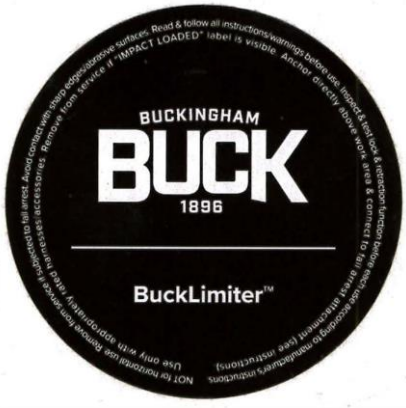
Fig. 16

Product Labels:

5008 series sample label:

6009KQ series sample label:

6005, 6006, 6007, 6008, D6008 series sample labels:



6009 series sample labels:

Product Number	Employee Name	Date of Manufacture	Date Put in Service	Inspection Date	Inspection By	Pass	Fail

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 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. CO., INC.
BINGHAMTON, NY
1-800-937-2825
www.buckinghammfg.com

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.