Designers, Manufacturers and Suppliers of
Quality Height Safety & Rescue Equipment, Training & Consultancy

# Users Manual

English Version

## P&P Energy Absorbing Lanyards

To

EN355:2002

Thank you for purchasing this **Lanyard**. Please take time to familiarize yourself with the correct use and operation.
It is imperative that this **Lanyard** is only used for its intended purpose and that it is subject to a periodic recorded detailed inspection by a competent person.
To avoid personal injury, prior to using this **Lanyard** or training others to use it, CAREFULLY READ and understand these instructions.
If there is anything you do not understand DO NOT use the **Lanyard**, contact the supplier or **P&P** for further details.
Certain information in this manual is governed by law and is subject to change without prior notice. Great care has been taken to ensure that the information is correct at the time of publication. However, it is the user's sole responsibility to ensure that they fully comply with all legal requirements. **P&P** will not accept liability for any inaccuracy or incorrectly stated legal requirements.
**P&P** operate a policy of continual improvement and reserve the right to change specifications without notice. The Manufacturer and / or their recognised agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in the connection with or by reason of or the inability to use the **Lanyard** for any other purpose.

Note; training should only be delivered by a suitably qualified and competent person, i.e. a **P&P** products trainer.

## Description

All of the following Lanyards are made incorporating either a 'Chunkie' or 'Shortie' polyester/nylon energy absorbing pack. They are all Fall Arrest Lanyards to BS EN 355 for arresting a potential fall, and are designed for use as part of a fall arrest system comprising a Lanyard and compatible BS EN 361 harness. **P&P** manufacture a standard range of Lanyards fitted with connectors and links to meet most user requirements. When required users may specify Lanyards with different connector/link configurations - in this case all connectors will comply with BS EN 362 and links will be CE marked.
Contact your supplier or **P&P** if you require further information.

## Before Using

**P&P** recommend that users are trained in the proper use and practical/physical limitations of this **Lanyard**, before undertaking any tasks requiring its use. Equipment specifiers / users must ensure this device is used with compatible equipment and connectors. Failure to ensure compatibility may result in an unsafe condition or even connector/link failure.
**It is strongly recommended that users are trained in its proper use and practical/physical limitations.**

Warning
All work at height including the use of Personal Protective Equipment (PPE) as a control measure is subject to a suitable and sufficient risk assessment.

## Usage

Prior to use, a full visual inspection of every part of the fall arrest system must be carried out by the user as detailed in this **P&P** user manual.
This item of fall arrest system is for personal use only. Only use EN362 connectors (hooks, karabiners etc.) approved and recommended by **P&P**.
Check the inspection record for this Lanyard to ensure that regular inspections have been correctly recorded. It is strongly recommended that the user is given adequate practical training prior to using this Lanyard or any other **P&P** product.

DO NOT use this Lanyard until you have read and fully understood these instructions.

IF IN DOUBT, CHECK BACK WITH THE SUPPLIER OR **P&P**.

## Important

DO NOT

- Do not anchor to a structure that itself can fall i.e. freestanding ladder or any loose structure.
- Do not use an anchorage point that will not take a peak load of 12kN.
- Do not use an anchorage point that is located below the point of attachment to your harness, unless you have no other choice.
- Do not tie a knot in a lanyard to make it shorter, it can reduce the lanyard strength by 50%
- Do not use waist connection points on a harness for Fall Arrest. Waist connection points are for work positioning or restraint only.
- Do not loop standard Lanyards around obstructions with sharp edges. If a Lanyard is to be looped around a structure (choked), a protection sleeve should be fitted.
- Do not extend the length of your Lanyard.

IF IN DOUBT, CONTACT YOUR SUPPLIER OR **P&P** FOR ADVICE.

DO

- Connect the energy absorber end of the Lanyard to the harness and the free end to the fall arrest anchorage point.
- Connect the lanyard at a level which will result in the minimum free-fall and least total fall distance consistent with the user's ability to carry out work tasks.
- Ensure that this Lanyard is connected to the correct fall arrest attachment point of an EN361 full body harness (either front sternum point or rear dorsal 'D' ring), usually marked by a letter '**A**'.

- Use approved permanent anchorage points that have been built or installed by approved installers.
- Ensure that the karabiner, scaffold hook or snap hook is correctly loaded. A connector must only be attached to a compatible anchorage point or harness fall arrest point that loads the Lanyard connector along its major axis. There must be no tendency for the Lanyard connector to twist or trap in such a way that an arrest force will be applied across its gate.
- Ensure that the closing mechanism on the connector is locked shut. 'Kwiklok', 'Locksafe' and 'Double Action' hook types do this automatically, but should still be checked. 'Screwgate' types must be screwed home manually and checked by applying pressure against the closing mechanism.
- Ensure the connector, karabiner or snap-hook is loaded along its major axis. Be aware of 'cross gate loading'. A karabiner is engineered to 'direct' force along its major axis – but still check!

## Connector Loading

✓ Correct loading with gate mechanism secured shut.

✗ Incorrect loading.

- A site risk assessment before using this PPE. Although not exhaustive it should include identification of the following potential hazards, e.g Safe access and egress, falling objects, extremes of heat, (hot or cold) Sources of energy, example; electricity, lightning or radio frequency energy, provision of emergency communications, provision of rescue equipment, trailing lanyards or lines, cutting, abrasion or sharp edges.
- Ensure that your anchorage is located directly above the working position to help prevent a 'pendulum' fall and that you have sufficient free space with no hazards or protrusions beneath you. SEE MINIMUM FREE SPACE SECTION.

## **P&P** TWIN TAILS WARNING NOTICE

In common with all 'Two Tails' / 'Twin Tailed' Lanyards Users must be aware of the following. If one of the tails is not in use the un-used tail MUST NOT BE 'parked up' / 'back-hooked' / 'stowed' by being attached to the primary strap of the User's harness or anyone of the attachment 'D' rings of the harness.

This is due to the fact that should a fall occur and be arrested by the other tail, the attached 'parked up' / 'stowed' Lanyard may prevent the energy absorber from deploying fully and hence subject the user to a greater arrest force than permitted by the European Fall Protection standard.

**P&P** would therefore strongly recommend the user keeps both tails attached to the structure at all times or parks the un-used tail of the Lanyard onto the welded ring or 'D' ring that makes the connection between the energy absorber and 'tails' of the Lanyard. Alternatively, a sacrificial point such as a **P&P** breakaway parking point may be used to 'park up' / 'back-hook' / 'stow' an un-used Lanyard tail.

Should you require further information or an explanation of this potential problem please do not hesitate to contact the supplier or **P&P** for further detail?

## Minimum Free Space (MFS)

Fall arrest systems are designed to arrest a person's fall in as short a distance as possible and limit the arrest force to below 6kN. This is achieved by absorbing the energy generated in the fall by applying an arresting force to the user over a distance, i.e. the 'arrest distance'. In order to prevent the possibility of a collision, there must be sufficient free space directly under the user for the fall to be arrested in, i.e. the free space must be greater than the arrest distance. Free space means that the path of the fall is free from obstacles.

MFS is defined as the vertical distance measured from the anchorage, (where the Lanyard attaches to the structure), to the ground level, the next lower substantive platform, or the nearest significant obstacle, depending upon the application. Application of the MFS ensures the safe arrest of a faller and avoids the possibility of a collision.

When using a **P&P** Energy Absorber Lanyard with a Fall Arrest Safety Harness, the MFS is determined by adding together the original length of the Lanyard, the potential deployment of the energy absorber Lanyard, the height of the user (normally taken as 2m, due to harness stretch and feet hanging down) and safety clearance of at least 0.5m.

The actual absorber pack deployment length depends upon freefall distance before initial arrest and mass of the user. **Below is a table showing deployment lengths based on a 2m version of the P&P 'Chunkie' and 'Shortie' Lanyard with a 100 kg solid rigid test mass.**

(Note the **'Shortie'** lanyard has greater energy absorbing capability and hence 'expands' less for a given mass)

The data is based on the **P&P** Energy Absorbing Lanyard being used in 3 different Fall Factors (FF) - FF 0.5 (1m free fall), FF 1 (2m free fall) and FF 2 (4m free fall).

| Lanyard | FF 0.5<br>1m Free Fall | FF 1<br>2m Free Fall | FF 2<br>4m Free Fall |
|---|---|---|---|
| 2.0m Chunkie | 0.4m | 0.8m | 1.5m |
| 2.0m Shortie | 0.3m | 0.6m | 1.2m |

These figures are specific to the **P&P** range of products – it should be noted that other manufacturers' energy absorbers may deploy up to 1.75m.

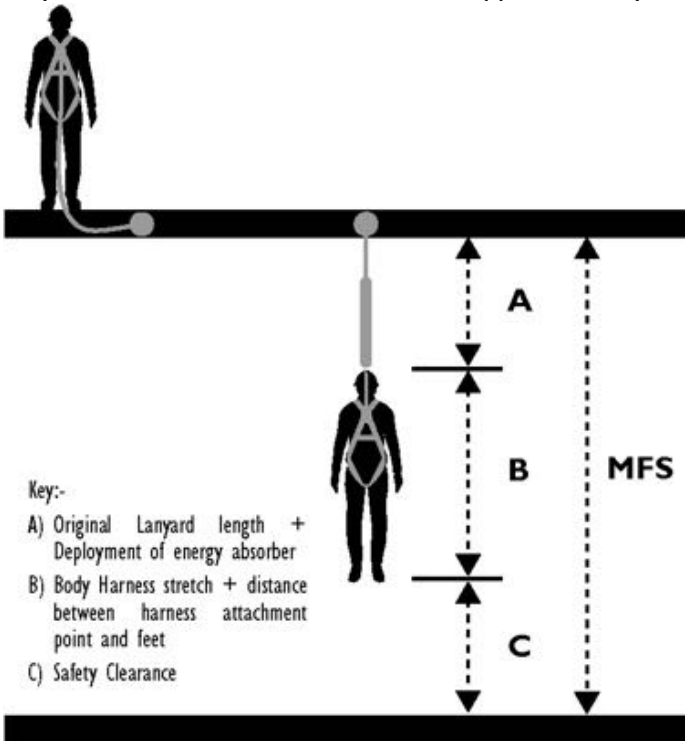
## Explanation of Fall Factors

**Fall Factor 0.5 - FF 0.5** means that the Lanyard would be connected above the user and you would fall half the length of the Lanyard before arrest.

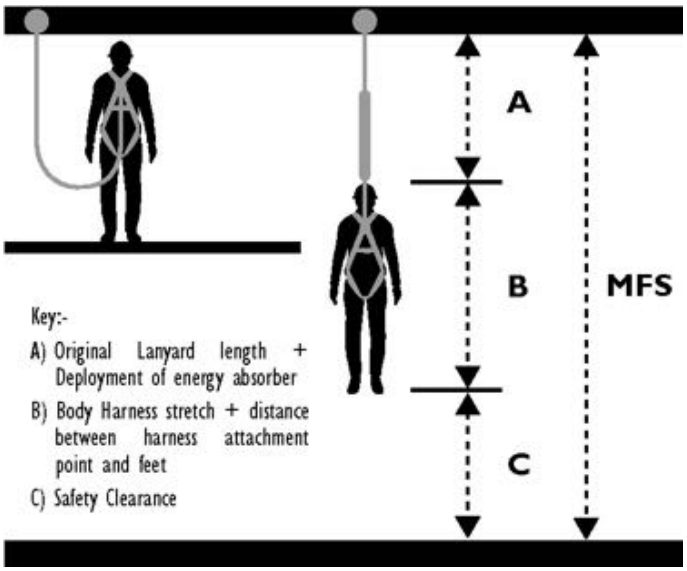
**Fall Factor 1 - FF 1** means that the Lanyard would be connected around chest height of the user and you would fall the length of the Lanyard before arrest.

**Fall Factor 2 – FF 2** means that the Lanyard would be connected below the user and you would fall twice the length of the Lanyard before arrest.
The following pictograms illustrate the calculations needed to be done before using an Energy Absorbing Lanyard. 'C' always equals a minimum safety clearance of 0.5m, 'B' always equals height of user, normally taken at 2m, 'A' is the variable specific to your application depending upon original Lanyard length and fall factor situation you are working in.

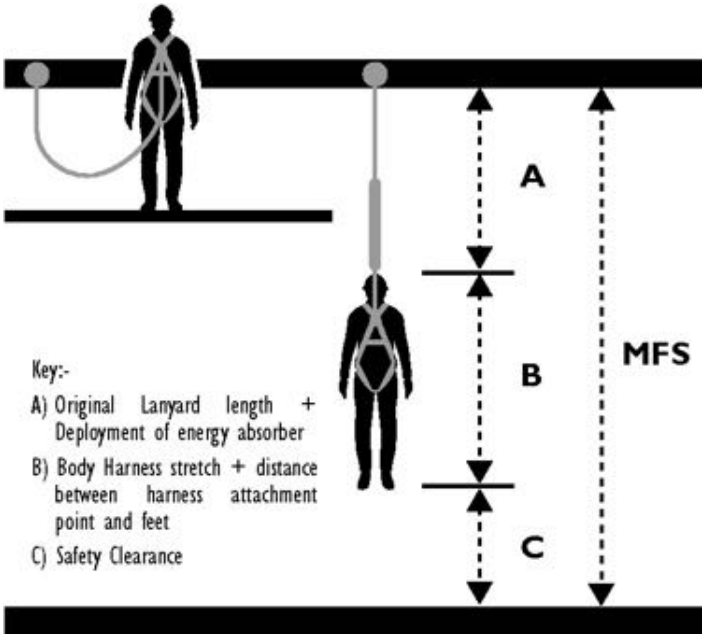
**Example 1** 4m Free Fall - using a 2m Energy Absorbing Lanyard in a fall factor 2 situation ie. clipped below your




**Example 2**
1m Free Fall - using a 2m energy absorbing Lanyard in a fall factor 0.5 situation ie. clipped above your head.




**Example 3**
2m Free Fall - using a 2m energy absorbing Lanyard in a fall factor 1 situation ie. clipped at the same height as your chest.




As all testing of energy absorbing Lanyards is based on a 100kg mass, we offer the following guidance for users over 100kg.
The data is based on the **P&P** Energy Absorbing Lanyard being used in a potential fall factor 2 situation (clipped to a suitable solid rigid anchor below the user's feet - not recommended!)

| CHUNKIE | 60kg | 100kg | 120kg | 130kg | 140kg |
|---|---|---|---|---|---|
| 2.0m | ✓ | ✓ | ✓ | ✗ | ✗ |
| 1.75m | ✓ | ✓ | ✓ | ✓ | ✗ |
| 1.50m | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1.25m | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1.00m | ✓ | ✓ | ✓ | ✓ | ✓ |

| SHORTIE | 45kg | 60kg | 100kg | 120 | 130 | 140kg |
|---|---|---|---|---|---|---|
| 2.0m | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ |
| 1.75m | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1.50m | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1.25m | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1.00m | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

**Key:**

✓ Arrest Force below 6kN as required by European Fall Protection Standards.

✗ Do Not Use in fall factor 2 situations arrest forces will exceed 6kN.

Based on the above information what can be concluded is that both the 'Chunkie' and 'Shortie' absorber lanyards fully comply with the BS EN 355 standard, but that the Shortie lanyard has a greater energy absorbing capability and can be used with a longer lanyard for a given user mass.

## Modifications and Repairs

No repairs, modifications, additions or alterations are to be carried out on this **Lanyard.**

## Marking of PPE

Textile products including webbing and rope **must not** be marked using ink or paint. Marker pens and paint will contaminate textile fibres leading to potential damage from material stiffening or even chemical attack.
Plastic or Metal casings of components **must not** be marked by stamping, etching or engraving. These processes may weaken the material or damage protective coatings.

**P&P** advise that if additional identification is required a tagging system (label or electronic) should be used that does not interfere in any way with the operation of equipment or devices. Contact **P&P** or your supplier for advice on additional labelling.

## Rescue Plan

Rescue Plan

As part of your risk assessment, you MUST have in place a rescue plan to deal with any emergency, which may occur during use. Access to the user, directly or indirectly and their safe retrieval is of paramount importance, including preparations for dealing with potential Post Fall Suspension Syncope

## Inspection

This manual contains a Declaration of Conformity on the back page.
The product name, 'read manual warning pictogram', unique serial number and date of manufacture will be found on the product label either stitched into the Lanyard's webbing or captive at the end of the rope. The date of manufacture is supplied in the Month/Year MM/YY eg 09/19. The serial number is a unique six digit identification code xxxxxx e.g. 068701
Always make sure the product label is present showing both the serial number and date of manufacture and that it matches your User Manual. If the numbers are not legible on the Product Label or do not match the User Manual - DO NOT USE the Lanyard!

This Lanyard along with all your other Fall Protection PPE must be subjected to a pre-use check, each time, before use. Failure to inspect the Lanyard correctly could cost you your life. You should be trained to carry out a pre-use check. Detailed recorded inspections at a frequency of 6 months should only be carried out by a trained competent person, appointed by the employer. Additional recorded interim inspections may be required where risks from transient arduous working environments (hot/cold) exist. This should be identified through Risk Assessment.

The pre-use check must include (but is not limited to):

- Check all webbing / rope for signs of cuts, abrasions, fraying, tears, burns, mould, discolouration or chemical attack.
- Check all stitching for signs of loosening, pulling or cut thread. There must be no evidence of damaged stitching on either side of the stitch pattern.
- Check the Energy Absorber Pack for signs of exposed 'tear webbing' visible at the ends. Exposure of 'tear webbing' indicates the Lanyard may have been subject to a fall. If tear webbing is visible the lanyard must be immediately taken out of service and destroyed or returned to **P&P** for inspection.
- Check all shrink sleeving is intact and protecting rope or webbing.
- If the Lanyard has been subject to significant paint overspray, it must not be used.
- Adjusters and connectors MUST be free from rust, excessive wear, distortion or cracks.
- All connectors/links must operate correctly with no tendency for gates to stick or jam.

A detailed recorded 6 monthly inspection by a competent person must include, as a minimum, on whatever recording media is chosen. (Paper or electronic storage)

- Product model number.
- Serial number.
- Date of manufacture/first use.
- Date of inspection.
- Result of inspection. (Pass/fail)
- Comments/Actions.

- Name of inspector.

If during the pre-use check or detailed 6 monthly inspection any part is found to be, or believed to be faulty DO NOT use it. Remove ALL components from site to ensure that they cannot be used by anyone.

## Cleaning, Maintenance and Storage

Keep the **Lanyard** clean and dry. Remove excess moisture with a clean cloth then allow drying naturally in a warm room away from direct heat.

You may clean this lanyard using water but avoid getting soap/detergent into buckles. First rinse in clean cold water – if still soiled; wash in clean warm water (40°C max) using a mild detergent if necessary. Thoroughly rinse in clean cold water and dry as described above.

### Chemical Attack

Avoid contact with any chemical, which might affect the performance of this lanyard, e.g these include all acids and strong caustic substances (vehicle battery acid, bleach etc) If subject to chemical attack, you must remove it from service and check with the supplier or **P&P** for advice on the possible consequence of chemical degradation.

### Storage

After any necessary cleaning, dry completely then store in a cool dry place, which will protect it from extreme humidity and direct heat.

### Transportation

Care should be taken to protect the lanyard against risks such as those detailed under Service Life. A simple effective way is to transport the lanyard in a suitable bag or container, which prevents abrasion.

## Service Life

The **Lanyard** has a maximum life span of 10 years from date of manufacture, provided it is correctly stored and maintained. However, if the lanyard fails any inspection, it MUST be destroyed. See the Statement of Obsolescence within this manual.

## Product Standards

**P&P** Lanyards are certified to the following standards.

Lanyards carrying BSEN 355 markings are certified against the European standard.

Users/Specifiers must check the product label to identify which standard(s) their P&P lanyard is certified to:

## About This Manual

This User Manual is for English speaking countries only. If you require this manual in a different language, please Contact **P&P**. When this item is sold on, this manual must accompany it and be supplied in the language of the destination country.

## Product Details

The Product Code, Serial number and Date of Manufacture of the **Lanyard** should be entered on the back page of this manual for future reference and inspection purposes.

Warning

This **Lanyard** must be used by persons who are medically fit to do so. If you have any medical condition, are recovering from any medical condition or suffer from any physical or mental disability you must seek professional medical advice before using this **Lanyard**.

## Statement of Obsolescence

Due to the ingress of dirt and grit, chemical contamination, edge and surface damage, ultraviolet light degradation, and wear and tear, Fall Protection Equipment manufactured from synthetic fibres (webbing and/or rope) is subject to a manufacturer's statement of obsolescence, which is a requirement of BS EN 365:2004 a European Product Standard.

This item of Fall Protection Equipment manufactured by **P&P** with synthetic fibre components (webbing and/or rope) is subject to maximum life span of 10 years from date of manufacture, provided that the item has been correctly stored, maintained and subjected to regular recorded inspections by a trained and competent person. However, if the item fails any inspection, it MUST immediately be withdrawn from service and destroyed.

Any Energy Absorbing Lanyard incorporating synthetic fibre components (webbing and/or rope), manufactured by **P&P** from January 2015, which has been subject to a lifetime recorded inspection plan, may give a maximum life span of 10 years. The lifetime recorded inspection plan must be continuous from date of first use and be undertaken by a competent person appointed by the employer. Competent persons must be trained in the use and inspection of the equipment. The lifetime inspection plan must include as a minimum requirement, a pre use check and 6 monthly recorded inspections. The frequency of inspections should be determined by risk assessment, use and environmental conditions.

Reference should also be made to the British Standard BS 8437:2005 – 'The code of practice selection, use and maintenance of personal fall protection systems and equipment for use in the workplace' - clause 13.2 Lifespan, which states:

'Some equipment is given a life span or obsolescence date by the manufacturer. Equipment that has reached such a limit, which has not already been rejected for other reasons, should be withdrawn from service and not used again, unless or until confirmed by a competent person, in writing, that it is acceptable to do so.'

It should be noted that inspections carried out by a trained and competent person are only visual and tactile observations of the condition of the product; they are not testing the residual strength of the equipment. All synthetic fibres deteriorate slowly with age regardless of use and as a result, **P&P** strongly advises all users of Fall Protection Equipment to follow the manufacturer's statement of obsolescence.

For further advice on this statement, as well as training in the use and inspection of Fall Protection Equipment, please contact **P&P Safety Ltd.**

The Notified body conducting the EU Type Examination for this product is:

SATRA Technology Europe Ltd, Braceton Business Park,
Clonee, Co. Meath D15 YN2P, Ireland

EU Notified Body No 2777

This PPE is subject to the conformity assessment procedure of conformity to type based on quality assurance of the production process (Module D) PPE Regulations (EU) 2016/425 under the surveillance of the notified body:

BSI Group The Netherlands B.V.,
John M. Keynesplein 9,
1066 EP Amsterdam,
The Netherlands

EU Notified Body No 2797

The Approved body conducting the UKCA Type Examination for this product is:

SATRA Technology Centre Ltd, Wyndham Way,
Telford Way, Kettering, Northamptonshire,
NN16 8SD,United Kingdom

UKCA Approved Body No AB0321

This PPE is subject to the conformity assessment procedure of conformity to type based on quality assurance of the production process (Module D) PPE Regulation (EU) 2016/425 (as brought in UK Law and amended) under the surveillance of the Approved body:

BSI Assurance UK Limited.,
389 Chiswick High Rd.,
London,W4 4AL,
United Kingdom

UKCA Approved Body No AB0086

The EU and UKCA Declarations of Conformity for **P&P Safety Ltd**
products can be found and downloaded from our web site:
https://www.ppsafety.co.uk

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