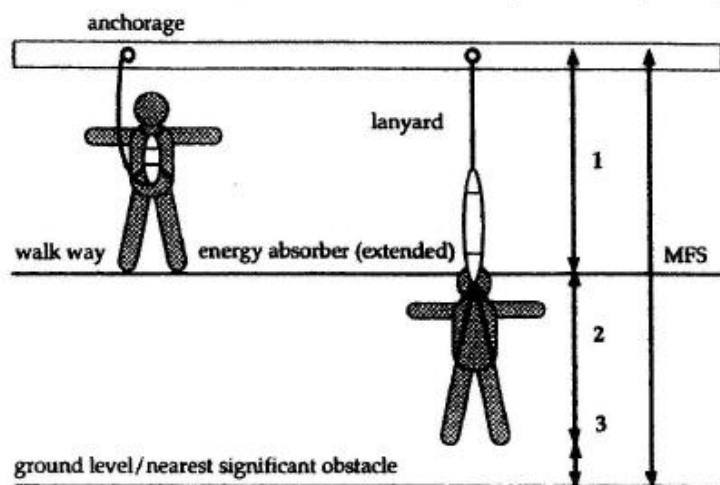


MFS Example 2: Preferred case: 0.5m free fall, (anchorage point above user)

Position A (at the onset to the fall)

Position B (post-fall suspension)



KEY:

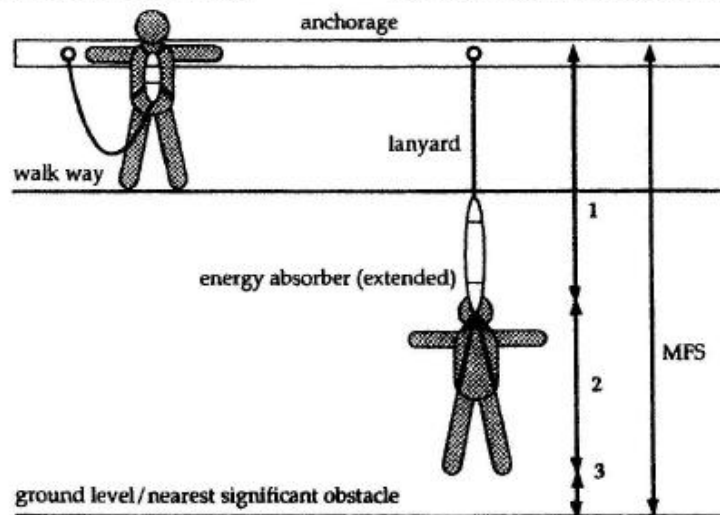
ground level/nearest significant obstacle

- | | | |
|----|--|----------------|
| 1) | Lanyard length + maximum possible energy absorber extension | = 2.25 m |
| 2) | Harness stretch + distance between harness attachment point and feet | = 2.00m |
| 3) | Safety clearance | = 0.50m |
| | Minimum Free Space (1 + 2 + 3) | = 4.75m |

MFS Example 3: Intermediate case: 2.0 m free fall, (anchorage point level with user's shoulders)

Position A (at the onset to the fall)

Position B (post-fall suspension)



KEY:

ground level/nearest significant obstacle

- | | | |
|----|--|----------------|
| 1) | Lanyard length + maximum possible energy absorber extension. | = 2.90 m |
| 2) | Harness stretch + distance between harness attachment point and feet | = 2.00m |
| 3) | Safety clearance | = 0.50m |
| | Minimum Free Space (1 + 2 + 3) | = 5.40m |

50/50

Designers, Manufacturers and Suppliers of Personal Protective Equipment

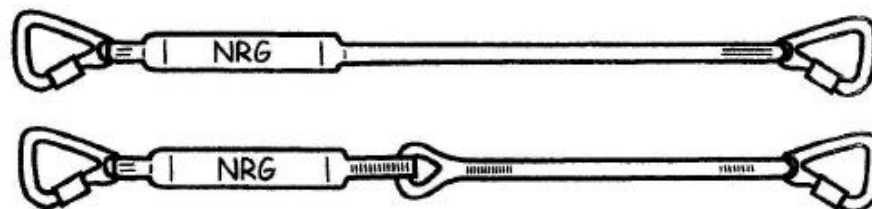
“NRG” User Instructions

ENERGY ABSORBER LANYARDS EN355

An energy absorbing lanyard (safety line) is used to connect a safety harness to an anchorage point and in the event of a fall, limit the force applied to a user's body to a maximum of 6kN.

1) “NRG” ENERGY ABSORBER LANYARD

Maximum length 2 metre polyester webbing or 12m/ m nylon rope lanyard with integral polyester webbing “NRG” energy absorber.



IMPORTANT

- * Prior to use, a full visual inspection of every part of the fall arrest system must be carried out by the user
- * This item of the fall arrest system is for personal use only.
- * Only use connectors (hooks or karabiners etc.) approved and recommended
- * This lanyard is for use only with compatible ancillary equipment.
- * Check the record card 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
- * DO NOT use this lanyard until you have read and fully understood both these instructions and the User Manual for Restraint Belts, Harnesses and ancillary Equipment' issued with each individual lanyard.

IF IN DOUBT, CHECK BACK WITH THE SUPPLIER OR P+P



DO NOT

- * Do not anchor to a structure that itself can fall i.e a free standing ladder or any other loose structure.
- * Do not use an anchorage point that will not take a shock load of 1000kg.
- * Do not use an anchorage point that is located below the point of the attachment to your harness.
- * 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 lanyards around structures with sharp edges. Never if less than 5mm or 7/32" radius edge.
- * Do not extend the length of your lanyard beyond 2M. For greater working distances use a Fall Arrester Block.

DO

- * Ensure that this lanyard is connected to the correct fall arrest attachment point of the full body harness.
- * Connect the energy absorber end of the lanyard to the harness and the free end to the fall arrest anchorage point.
- * Use approved permanent anchorage points that have been built or installed by professionals.
- * Always ensure that the closing bar on the karabiner hook is locked shut. Kwiklok types do this automatically but should still be checked. Screwgate types must be screwed home manually and checked by applying pressure against the closing bar.
- * Ensure that your harness is fitted as close to your body as is comfortable to prevent its upward movement in the event of a fall.
- * Use an anchorage that is located directly above the working position and make sure that the space you would travel through in the event of a fall is free from protrusions and hazards. SEE FOLLOWING SECTION

MINIMUM FREE SPACE (MFS)

Fall arrest systems are designed to limit the extent of a person's fall. This is achieved by absorbing the energy generated in the fall by applying an arresting force to the faller 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.

This free space is called the MFS and 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 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.

Using the "NRG" Energy Absorber Lanyard and Safety Harness fall arrest system, the MFS is determined by considering a number of factors. It is mainly dependent upon the length of the free fall, (the distance a faller could fall through before the lanyard becomes taut and operates the energy absorber), and to a lesser extent, the mass of the faller.

The following diagrams illustrate different examples of the "NRG" Energy Absorber Lanyard and Safety Harness system applications, with their corresponding MFS. They are all based upon a lanyard length of 2 metres (the maximum allowable) and a faller's mass of 100 kg, (220 lbs weight).

- Example 1:* Worst Case: 4 metre free fall (maximum distance), anchorage point below the user's feet
- Example 2:* Preferred Usage: 0.5 metre free fall, anchorage point above the user
- Example 3:* Intermediate Case: 2.0 metre free fall, anchorage point level with the user's shoulders

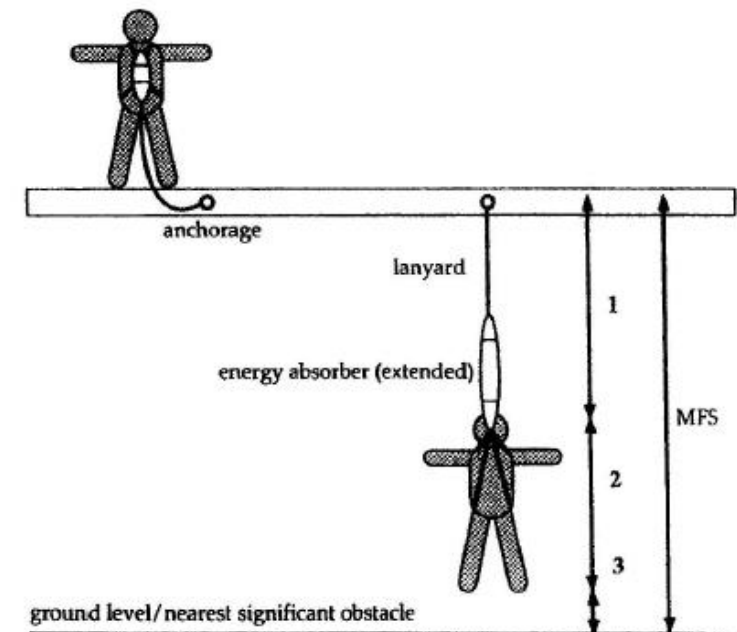
For fall criteria lying between the three examples given, the MFS will vary with the original length of the energy absorber lanyard, the amount of free fall and the user's weight, but will never exceed 6.25 metres. If original lanyard lengths of less than 2 metres are used, the corresponding examples of MFS values will decrease.

Every effort should be made to minimise the length of an accidental fall by connecting the free end of the energy absorber lanyard to an anchorage point as far as possible above the user. (Example 2).

IF IN DOUBT, CHECK WITH THE SUPPLIER

MFS Example 1: Worst case: 4 m (maximum distance) free fall, (anchorage point below user's feet)

Position A (at the onset to the fall) Position B (post-fall suspension)



KEY:

- | | | |
|----|--|----------------|
| 1) | Lanyard length + energy absorber extension | = 3.75 m |
| 2) | Harness stretch + distance between harness attachment point and feet | = 2.00m |
| 3) | Safety clearance | = 0.50m |
| | Minimum Free Space (1 + 2 + 3) | = 6.25m |