# FALL ARRESTER SAFETY HARNESS

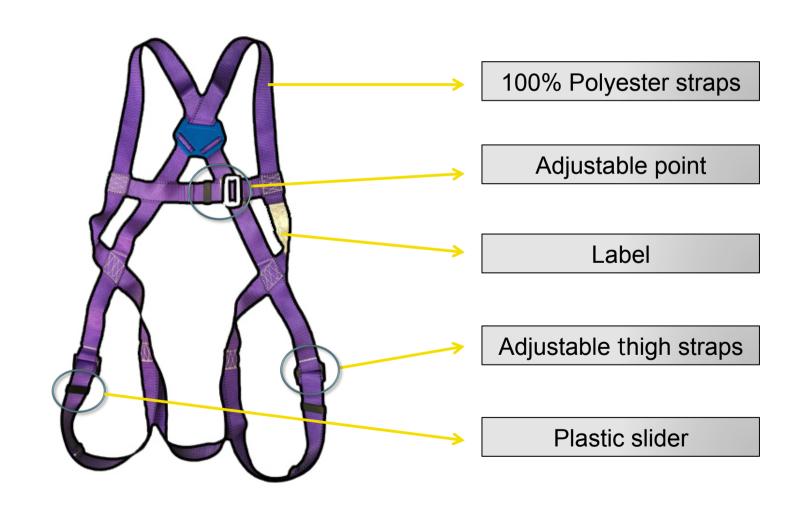
Personal Protective Equipment



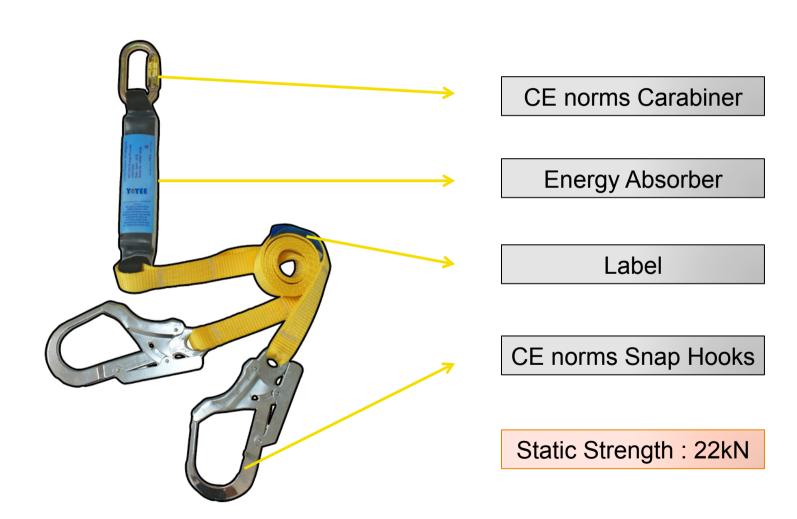
### Introduction

- **Safety Harness** is a restraint system consisting of two parts, the body harness and the lanyard with an energy absorber that can successfully prevent injury from unexpected drops from a height. This product falls in the PPE (Personal Protective Equipment) category and is used in the Building Industry and also for ones personal choice of safety at their private house hold.
- **Full body harnesses** come in many styles and setups, all conforming to their own individual situation and unique need to offer the best possible safety work environment where hazard of falling might occur.

### **Safety Harness**



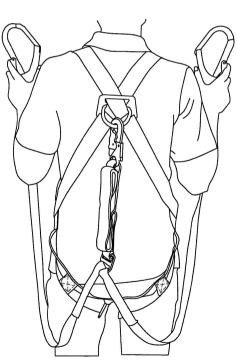
### **Double Lanyards**



### **Basic Fall Protection System**

### Full Body Harness - Design Factors

- Spread arresting forces through the human body, reducing the chances of injury when coming to a sudden stop during a fall
- Sliding back D-ring
- Color coding of top and bottom straps
- Lightweight and soft webbing material
- Connecting means are kept behind the worker
- Subject is left in a "heads up" position after a fall



### **Types of work**

#### Here are some jobs where one would wear a Harness:

- Roofers
- Bridge work
- Ladder work
- Iron worker
- Tree trimming
- Scaffolding work
- Window cleaning
- Construction framing
- Construction painters
- Work from overhead cranes



### **Fall Hazard Definitions**

- Anchorage A secure point of attachment for lifelines, lanyards or deceleration devices.
- Body harness straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.
- Buckle any device for holding the body harness closed around the employee's body.



 Snap Hook — shall be of locking type designed and used to prevent disengagement of the snap hook by contact of the keeper by the connected member.

- **Connector** any device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of a system, such as a carabiner, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).
- **Lanyard** a flexible line of rope, wire of strap which generally has a connector at each end for connecting the harness to a deceleration device, lifeline or anchorage.

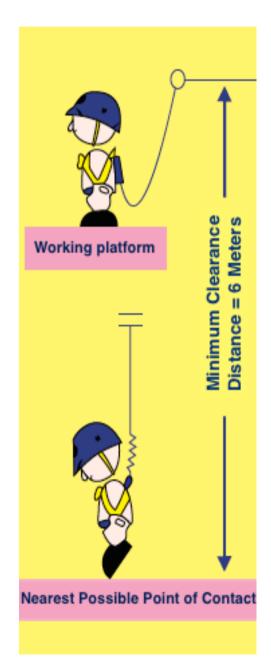
- Deceleration Device any mechanism such as a rope grab, specially-woven lanyard, tearing or deforming lanyards, etc, which serves to dissipate a substantial amount of energy during a fall arrest or otherwise limit the energy imposed on an employee during fall arrest.
- Personal fall arrest system a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body harness and may include a lanyard, deceleration device, lifeline or suitable combinations of these.

#### Fall Protection:

• The prevention of injury through the use of planned, active and protective systems.

#### Freefall Distance:

• The vertical displacement of the fall arrest attachment point on the employee's body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance and lifeline / lanyard elongation but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.



#### Acceleration:

 An airborne body will accelerate at 32 feet / second during a free fall. If the free fall distance can be reduced the injury can be reduced.

#### **Deceleration Distance:**

 The additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance before stopping, from the point at which the deceleration device begins to operate. Measured as the distance between the location of an employee's harness attachment point at the moment of activation of the deceleration device during a fall and the location of that attachment point after the employee comes to a stop.

### Arresting Force:

 The amount of force that a worker would be subjected to from the fall protection system arresting the fall.

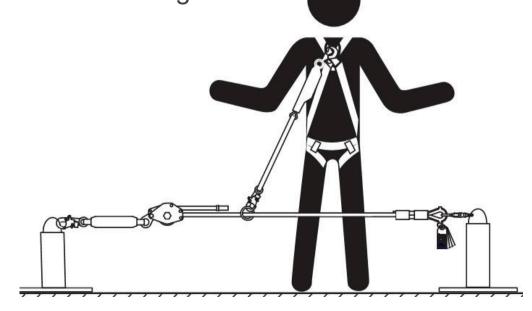
#### Fall Arrester:

 A device which travels on a lifeline and will automatically engage the lifeline and lock to arrest a fall of an individual. A fall arrester usually employs the principle of internal locking, cantilever locking or both. A "Rope Grab" is an example of a fall arrester.



#### Lifelines:

 A lifeline is a component consisting of a flexible line for connection to an anchorage or anchorage connector at one end (vertical lifeline) or for connection to anchorages at both ends (horizontal lifeline) and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.



### **Inspection and Care of PPE**

### Key points:

- Inspect equipment before each use
- Employee's must inspect their own equipment
- Discard this product if cuts, abrasions or color fading on polyester straps are found during inspection.
- Defective components must be removed from service if their function or strength has been adversely affected.

## Inspection and Care of PPE (continued)

#### Impact Loading:

 Equipment subject to impact loading or an actual fall must be immediately <u>Removed</u> from service and not used again unless inspected and determined by a competent person to be undamaged and suitable for reuse.



### The End

Please contact me, should you have any queries regarding this product.

