**Understanding Carbineers & Snap Hooks Used in Fall Protection**

Carabiners are a vital component of the mechanical connection between a proper anchor point and the individual user. Incorrect use of Carabiners may result in serious injury to the user of the fall protection system, in the event of a fall.

All carabiners designed for use in fall protection systems have a double action opening mechanism to reduce the chances of accidental opening during use. Carabiners must always be used closed, with the closing system locked and without any other external force or physical contact acting upon them. When making a connection using a snap hook or Carabiners, the mating connector must be compatible in size and shape.

**What is a kN Rating on the unit for fall protection?**

When checking Carabiners the locking device must be operated and checked visually. All carabineers and snap hooks should come with a kN, or kilo-Newton rating engraved into the spine. If you have carabineers without a kN rating DO NOT use them for fall protection!

A kilo-Newton is equal to about 225 lbs., which is a force of gravity rating, not static weight or mass. If you remember back to algebra class, force is equal to mass times acceleration.

Everything you use as a component in a fall protection system climbing, rope, webbing, carabineers, anchors and protection is designed to absorb the force (or shock) that’s generated by a fall. All this equipment has a certain rating of force it can withstand, and that rating is typically referred to as a kN rating.

Since 2007, the newest ANSI standard requires all fall protection hardware to have a minimum of a 16 kN (3,600 pounds) rating for the gate and 22.5 kN, (5,000 pounds) tensile load, (ANSI Z359.1-2007, Section 3.2.1.4.) **Note:** this is a **16.3 times** increase in the required ratings from the prior ANSI standard.

Upgrade your hardware to that meeting the 2007 standard; do not use equipment bearing the older rating. The ANSI rating doesn’t take into account wear and tear on your gear, so always check everything before use, and replace anything with excessive wear.

Snap hooks and Carabiners are designed for use by persons with a combined weight (person, clothing, tools, etc.) of no more than **420 lbs**.