

These recommendations should be used when a cut length of rope is needed:

- > If a reliable rope length counter is available, it should be used as indicated by the manufacturer's instructions, while adding back-tension of approximately 10 lbs.
- > In the absence of a length counter, the recommended methods are identified in ISO standards 2307:2005 and CI 1500:2006. These recommendations state that the rope sample should be laid out straight on a flat surface with slight hand force or lightly tensioned by hand to measure the length. The rope should not be curved or twisted at any point along its length.



*Do not allow the length of rope being measured to be curved or twisted.*

### Length Tolerance at Samson

In order to meet Samson quality standards and practices, all high-performance products made in whole or in part from high-modulus fibers such as Dyneema®, Technora®, Vectran®, etc., are measured with a length tolerance of +5% / -0%. Other ropes made with olefin, nylon, or polyester fibers are measured with a length tolerance of +/-5%. These are determined during the reeling process, as described below:



*A rope is run over an elevated roller, or through two horizontal breaker bars that add back-tension to control the rope as it is pulled through the reeling system. The rope is then looped around a number of capstans that are controlled to a tension of 10 lb. The rope finally passes through a length counter as it is wound on to the final reel and cut at the required length. The back-tension on the rope as it moves through the counter assists in providing a consistent length measurement and a solidly wound reel.*

### Length Measurement Accuracy

The length counters are checked for accuracy weekly using a reference standard. The standard used is a predetermined rope sample with a firm shape and very low stretch that is run through the counters to verify the length readout. A 100' length of 20 mm Duravet is used as the reference standard.

