

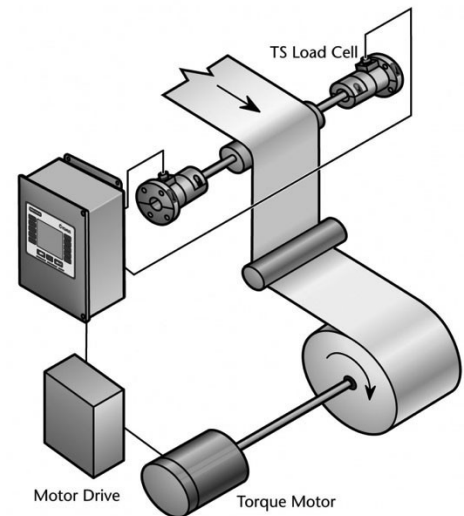
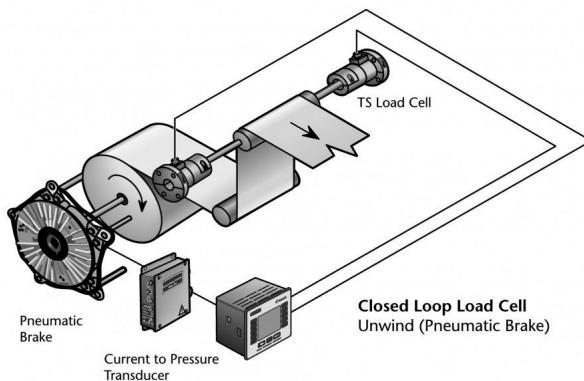


## NONWOVEN TERMS

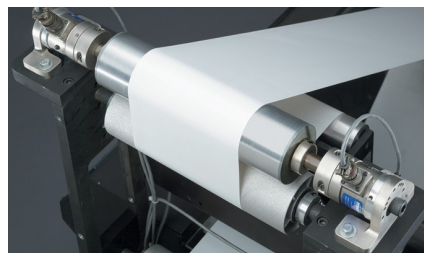
For the informed employee

# Tension Roll

Maintaining consistent tension on nonwoven fabric is essential to keep the width of the material constant. If the fabric width varies, it can run out from under knives in a slitting application or make a roll with uneven edges and uneven within roll tensions on a rewind application. The best method for maintaining consistent web tensions is with a tension sensing roll and a control system that will respond to variations in tension. The tension sensing roll is mounted on load cells that respond very quickly to small variations in web tension. In an unwind application (as shown in the picture on the left) the electrical signals from the load cells go to an electronic controller. The amount of tension in lbs per linear inch is set in the controller. If the tension sensed varies, a signal is sent to a transducer that varies the air pressure to the brake on the unwind stand, with the intent to keep the web tension constant. In a rewind application, (as shown in the picture on the right) the signal from the controller is sent to a motor drive to vary the torque of the motor doing the rewinding. Some tension controllers have the ability to detect web breakage, to store settings for various types of fabric, and to communicate with other electronic devices using common bus protocols.



Pictures courtesy of MagPower



**“To dare is to lose one's footing momentarily. To not dare is to lose oneself.”**

**Soren Kierkegaard**

Training tools by Nonwoven Tools LLC  
Visit us at [nonwoventools.com](http://nonwoventools.com)  
Copyright Nonwoven Tools LLC 2010

