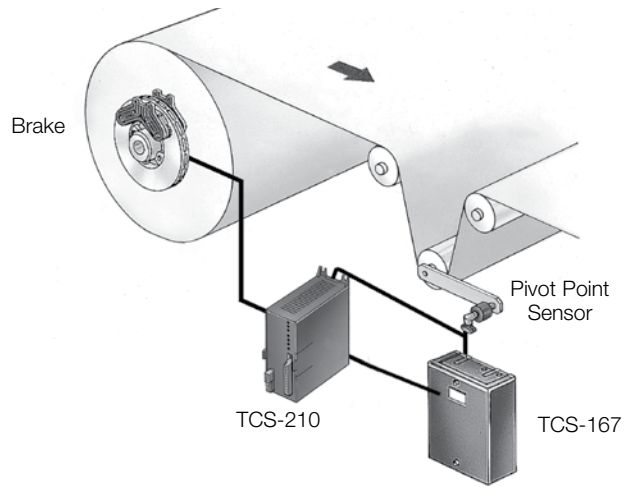


Tension Control Systems

Application Examples

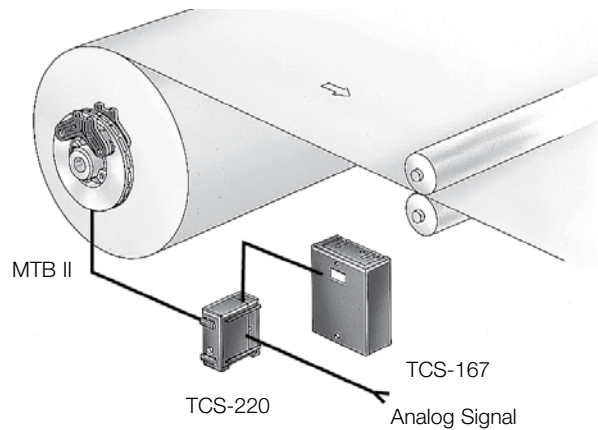
Dancer Control

The dancer control system consists of a power supply, dancer control, pivot point sensor, and controlling element, i.e., tension brake or clutch. Dancers provide the web tension while the control and controlling element stabilize dancer operation for unwind, intermediate zone or rewind tensioning.



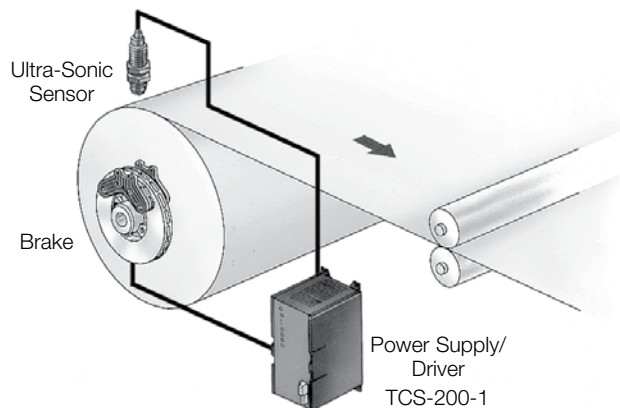
Analog Control

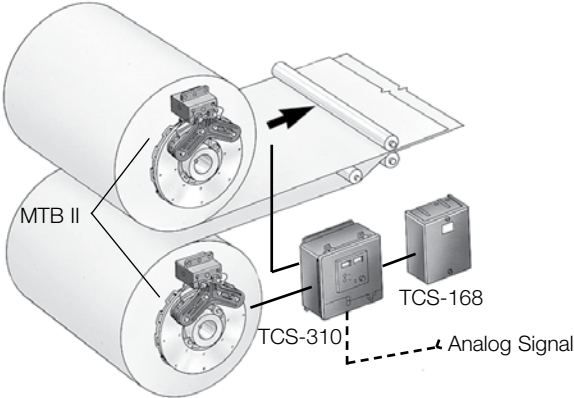
The analog system consists of a control module, power supply, and a controlling element, i.e., tension brake or clutch. The analog controller provides output proportional to the input signal for use in unwind, intermediate zone or rewind tensioning.



Electronic Control

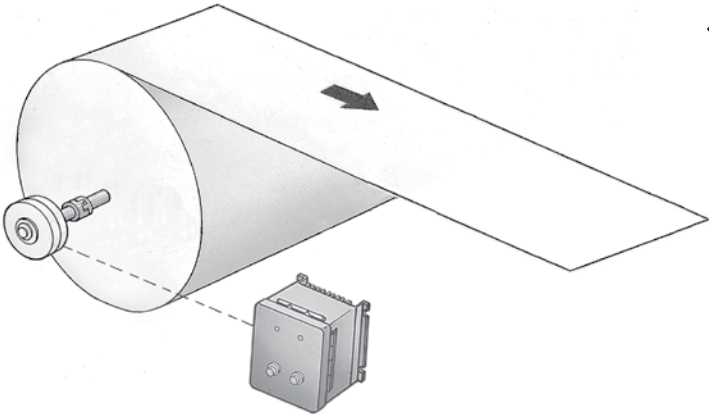
Electronic control systems are very similar to analog control systems with the exception of using an electronic sensing element such as an ultrasonic or photoelectric sensor. The sensor monitors diameter change in either the unwind or rewind rolls, and provides a corresponding change in output.





Dual Brake Unwind

Dual brake unwind incorporates modular tension brakes and an analog control system. The brakes retard the unwind roll, creating tension in the web. An external, customer-provided signal adjusts the output current to the brakes to maintain the proper tension. The dual channel controller controls each brake independently or simultaneously.



Single Roll Magnetic Particle Brake Unwind

The magnetic particle brake retards the unwind roll, maintaining tension provided by the dancer roll's weight. The pivot point sensor signals the controller to vary the current to the brake.