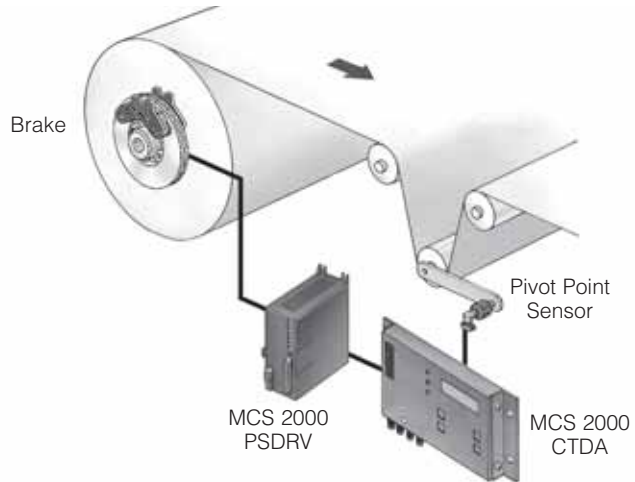


Tension Control Systems

Application Examples

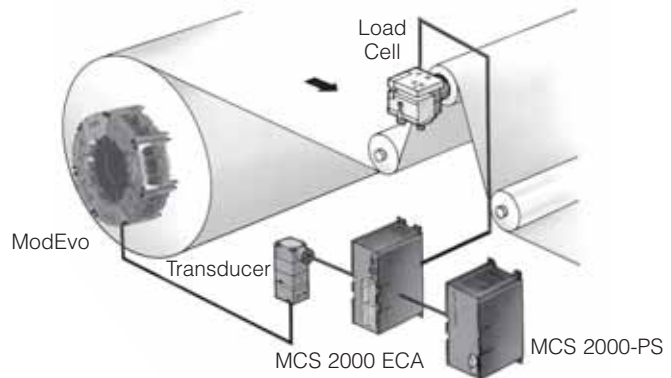
Dancer Control

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 tension.



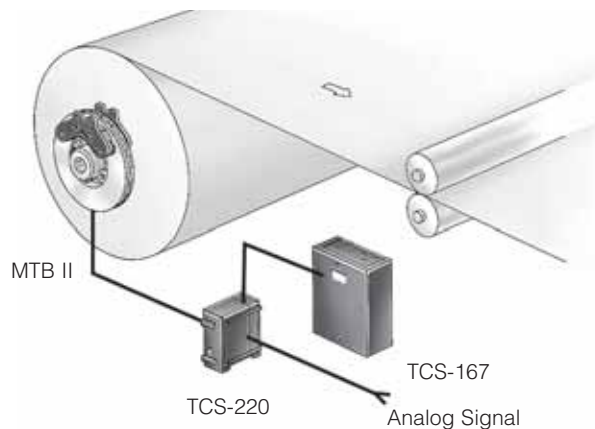
Load Cell Control

Load cell control system consists of the load cell controller, power supply, load cells and controlling element, i.e., tension brake or clutch. Load cells measure the pull force on the web and compare that force to the set point tension in the control. The control increases or decreases the retarding force. Load cells are used for unwind, intermediate zone or rewind tension control.



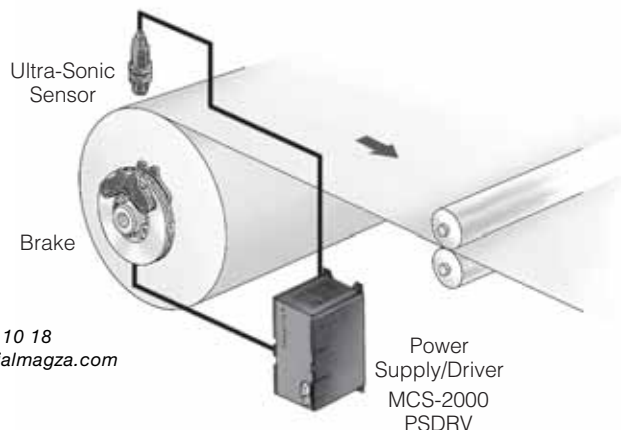
Analog Control

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.

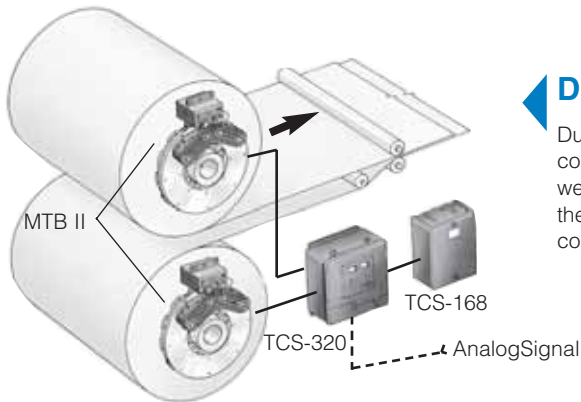


Electronic Control

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.



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com

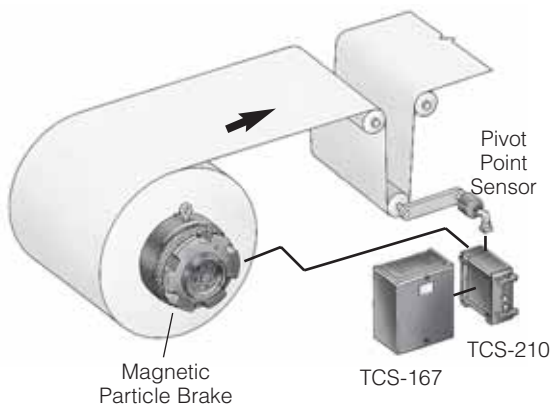
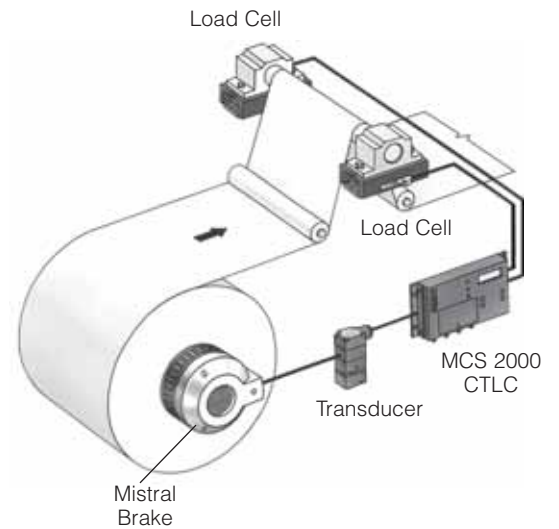


Dual Brake Unwind

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 Pneumatic Brake Unwind

Pneumatic brake retards the rewind roll, providing the required tension. Tension is set by the loading force applied to the load cells, which send a signal to the controller. The controller signal to the electric/pneumatic transducer controls the air pressure to the brake.



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.