

TRAVERSE TAKE UP WINDING

Independent Machine Co.
Fairfield, NJ

Spooling is the most effective way to provide convenient packaging for materials of exceptionally long length. Typically spooling material is fed at a certain rate while the material traverses back and forth corresponding to the desired pattern.



An example of Independent Machine's winder that uses SmartMotor™

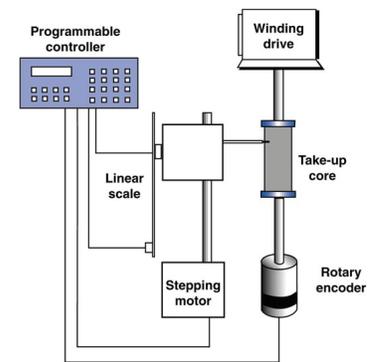
The traversing position accuracy of a winder is best maintained when it's linked to the rotational velocity of the winding spool and SmartMotor™ technology makes perfect spooling simple. While the diameter of the spool changes, a SmartMotor™ uses "electronic gearing" to ensure the winding maintains its proper shape. Common problems such as overtravel are completely eliminated with this closed loop control capability.

The Closed-loop system also delivers precision. By monitoring the position error between the encoder and PID within the SmartMotor™ servo's electronics, a critical tension level can be set. At a constant tension setting, the SmartMotor™ will automatically adjust the spool speed based on the diameter of the spool.

Multiple nodes are one of the many reasons the modular design of SmartMotor™ worked so well for this application. Some of the winders that Independent Machine Company designs have up to 26 positions! With on-board memory available for hundreds of preset programs and drivers for various HMI's, the ease of use of an Animatics SmartMotor™ becomes clear.

Advantages of the integrated nature of the SmartMotor™ are obvious when compared

to a conventional servo driven winding system, seen below. With traditional systems, several drives, controllers, motors, and extensive cabling are often needed. Conversely, the Animatics SmartMotor™ is a complete motion control solution. The controller, drive



A traditional winding setup with cabling and modules

amplifier, and encoder are all integral to a SmartMotor™.



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