

Winders

Application Overview

Winders are commonly used in several industries including paper, plastic film, printing, wire & cable and metals. Precise speed/tension control is crucial to achieving accurate web thickness, product composition and smooth winding in a winder application. Common winder configurations are center wind, surface wind, turret wind and traverse wind. Control Techniques offers a wide range of AC Variable Frequency Drives (VFDs), Servo & DC Drives with options to meet the control needs of different winder configurations.

Application requirements

Control & Connectivity

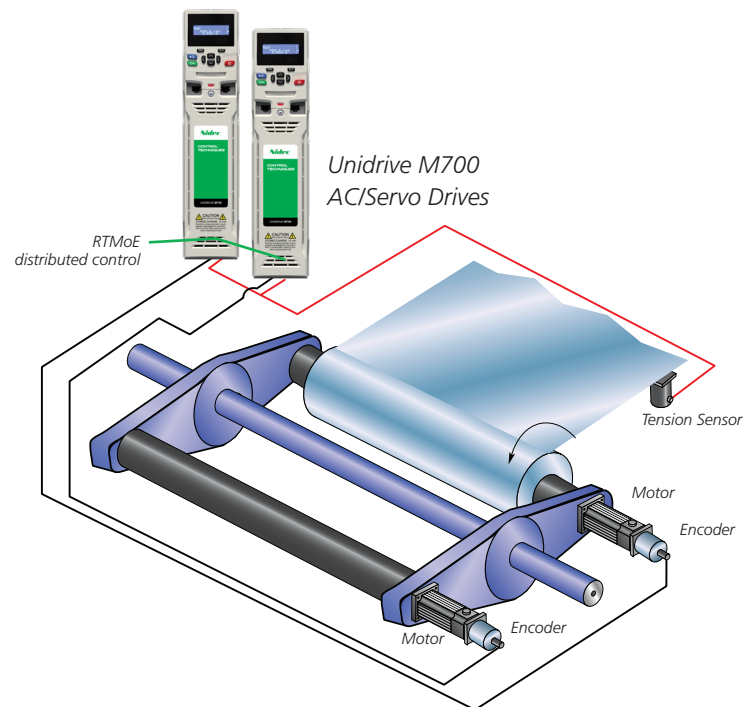
- Velocity & torque based winding control
- Diameter build up ratio to 10:1
- Inertia compensation
- Taper tension
- Dancer or load cell feedback
- Analog pressure regulation for dancer air loading
- Peer to peer drive communication
- Fieldbus connectivity to PLC

Protection

- Motor, machine and system protection
- Web break or slack detection

Minimize Operating Costs

- High reliability
- Ease of setup—Flexible control
- Intuitive diagnostics



Control Techniques' Solutions VFDs, DC & Servo drives

- Power range up to 4,200 HP
- Global voltage ratings:
115 V | 208-240 V | 380-480 V | 575 V | 690 V
- Global standards (UL/cUL/CE/C-Tick/ISO2015)
- On-board PLC functionality (cost & space savings)
- Wide variety of I/O, fieldbus, and Ethernet option modules
- All major fieldbus connectivity options including EtherNet/IP, DeviceNet, PROFINET RT, PROFIBUS DP, EtherCAT, and more
- Optional HMI operator interfaces
- Standard onboard Ethernet (EtherNet/IP and Modbus TCP) or RS-485 (Modbus RTU) connections (drive dependent)
- Complimentary, intuitive commissioning software
- Industry leading warranties

Winder Solutions

Control Techniques' Performance Advantages

Control

- Plug-in PLC/winder functionality
– much faster than external control
- Automatic adjustment to suit both constant torque and constant power motors
- Tension control using Torque Mode or Speed Mode
- Inertia & frictional torque compensation
- Tension profiling to achieve Taper with adjustable taper start point
- Built-in PID trim in conjunction with load cell or dancer feedback
- Wind—Unwind modes
- Turret—Flying splice control
- Analog output for dancer pressure regulation
- Diameter calculation using Speed ratio or Lap count
- Constant torque—Constant HP region control for wide speed range
- Built in encoder port
- Common bus connectivity (energy savings)
- Non-volatile storage of diameter on power down
- Universal drive for induction & servo motor control

Total System Protection

- All Data entry for set up in Engineering Units
- Built-in diagnostics
- Intelligent thermal motor protection
- Safe torque off user interlock option
- Web break detection

Maximum uptime

- Very high quality—Product reliability
- Easy setup—User guide available
- Auto tune—Static and rotational
- Last 10 trips logged as standard with optional Real Time Clock keypad for timestamp functions

** Due to the complex and varied nature of winders applications all winder solution sales are reviewed by Control Techniques applications engineering. We also strongly recommend that Control Techniques experienced service engineers are contracted for start up.*

World Class Products & Support

- Worldwide Application & Field Service Network
- 24/7 support line +1 800 893-2321



Unidrive M700
AC/Servo Drives



Mentor MP
DC Drives