



Advanced digital web tension controllers, providing closed-loop control with tension transducer (load cell) feedback

- Easily configured to accommodate a wide variety of web tension control applications, including unwind (brake and motor), intermediate, and winders (surface, clutch and center).
- Suitable for all types of tension transducers (load cells).
- Displays digital and analog tension values simultaneously.
- Left-total-right display with "center zero" display and dual range.
- Large, bright, easy to read, high contrast LCD graphics display with CCFL back-light.
- Durable, waterproof, and dustproof keypad.
- Tension can be displayed in pounds, newtons, kilograms or as a percent.
- Multi-language text capabilities.
- CE compliant

### Performance Benefits

Cleveland Motion Controls WebPro™ Advanced Web Tension Controller is an important part of the Cleveland-Kidder® Family of tension controllers and tension transducers. By providing closed-loop tension control and tension transducer feedback on a wide range of application requirements, the WebPro sets the standard for providing optimal machine performance, for either new machinery or as a retrofit.

The WebPro Advanced Tension Controller accommodates almost any tension transducer (load cell). It can also be easily configured to accommodate a wide range of web tension application requirements, including unwind brakes (pneumatic or electric), the unwind motor, intermediate tension requirements (between motor driven nips), the surface winder, the clutch winder, and the center winder with taper tension.

The WebPro Advanced Tension Controller is operator-friendly, incorporating a large, bright, easy-to-read display and a durable keypad that is dustproof and waterproof.

### Design Features

Cleveland Motion Controls WebPro Advanced Tension Controller utilizes a 32-bit microprocessor for enhanced closed-loop control with tension transducer feedback. It displays measured tensions in digital and analog simultaneously. It incorporates a left-total-right display with "center zero." (The WebPro Controller displays total tension as well as separate tensions from either of the two transducers on either end of the roller).

The high contrast 240 X 64 LCD pixel graphics display with CCFL back-light is designed for a wide viewing area. Bright LEDs indicate the status of critical functions. The display and all text can be selected by the user in English, German, French, Italian or Spanish. On-screen prompts are also shown in the selected language. The tension can also be shown in pounds, as a per cent, in kilograms, or in newtons. For repeatability and versatility, twenty product menus can be recalled from non-volatile product memory.

The WebPro Advanced Tension Controller is durably constructed. It is available in an enclosure and for panel-mount installations. It is supported with a comprehensive instruction manual.

# ADVANCED DIGITAL TENSION CONTROLLER



Advanced digital web tension controllers, providing closed-loop control with tension transducer feedback

**Simultaneous Digital and Analog Display (with bargraph)**

- Provides true measured tensions (pounds, newtons, kilograms, or percent).
- Provides other essential information such as output %, reel diameter %, tension and taper % set points.

**Left-Total-Right Display**

- Measures tension with a 'center zero' meter for tight and slack edge indication.

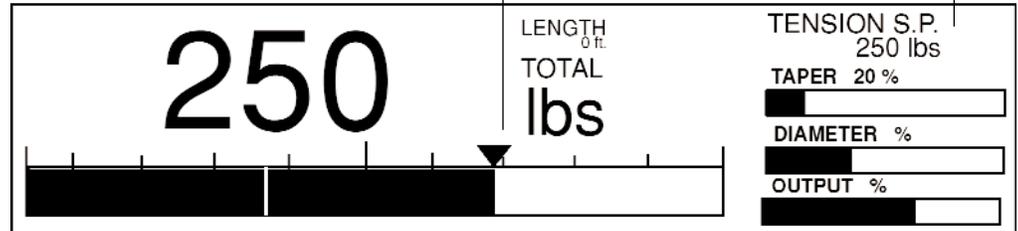
## EASILY CONFIGURED AS AN UNWIND CONTROLLER

- Soft-start feature prevents web breaks on start-up.
- Adjustable stop-delay-time maintains control as machine slows to rest.
- Smooth and bumpless transfer between auto and manual.
- Calculates reel diameter without the need for additional input signals and uses this self-calculated diameter to automatically adjust the PI stability settings for optimum performance.
- Novel 'BATCH' feature for winding small rolls from a large parent reel. When this feature is enabled, the output level is held on slowdown and used on restart to avoid a dip in tension. A line speed tachometer or encoder can enhance the performance during rapid acceleration and deceleration by compensating for reel inertia. If a line speed encoder is used, the unwind controllers have (as standard) a length counter which may be used to stop the machine at a preset length or enable the 'BATCH' feature.
- Electro-Pneumatic Converter for pneumatic brakes or High Current Driver for electric brakes can be provided as an option.
- A dual-range feature allows two tension set-points (normal and low) to be selected. When the low set point is selected, the controller low output may be used to disconnect pads from a multi-pad brake for optimum performance.

# Cleveland-Kidder®



**SCREEN DISPLAY (SHOWN FULL SIZE)**



**Numerical Keys & Up/Down Buttons**

- For setting desired tensions as an exact value.

**Tension Set Point or Manual Level**

**Measured Tension**

**Analog Set Point Triangle**

**Left Tension**

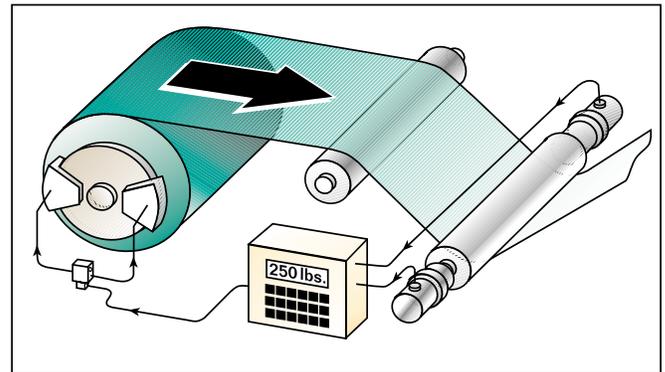
**Right Tension**

**Center Zero Mark**

**LCD Graphics Display**

- 240 X 64 pixel screen
- Wide viewing angle.
- Large, clear, backlit.

- Easily seen from a distance and in high ambient light.



*An unwind system with dual range disc brake*

- Motor-powered unwind controllers use DC tachometers or encoders, or a combination of both from the line speed and reel speed to calculate the reel diameter. (These controllers may be configured by the user for torque control or speed control.)

Part Number	Description	*For Use With	Application
MWP-12662-0	WebPro Unwind Tension Controller-- Brake Type	Electro-pneumatic converter for pneumatic brakes or High Current Driver for electric brakes	Controls tension by way of brake on Center Unwind
MWP-12662-1	WebPro Unwind Tension Controller Speed/ Torque	Regenerative AC or DC industrial or servo drives & motors	Controls tension by way of drives and motors on Center Unwind

\*See "How To Order" on back page.

## INDUSTRIAL PRODUCTS

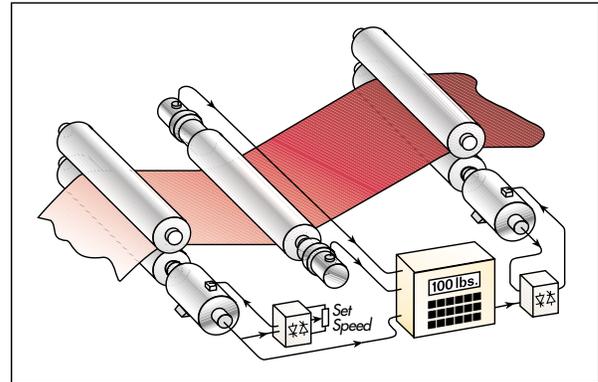
7550 Hub Parkway  
Cleveland, Oh 44125-5794  
Tel: 216-524-8800 or (800) 321-8072  
Fax: 216-642-2100  
www.CMCcontrols.com



### EASILY CONFIGURED AS AN INTERMEDIATE CONTROLLER



- Easily used in conjunction with motor drives, either DC or AC four-quadrant regenerative types.
- Provides accurate tension control between process sections on any converting machine by using speed trim methods.
- Compares desired tension with measured tension to give an error signal which is then multiplied by the line speed signal to give optimum performance from stall to maximum speed. Line speed signal may be from a DC tachometer or an encoder. (If an encoder is used, a length counter may be used to stop the machine at a preset length.)



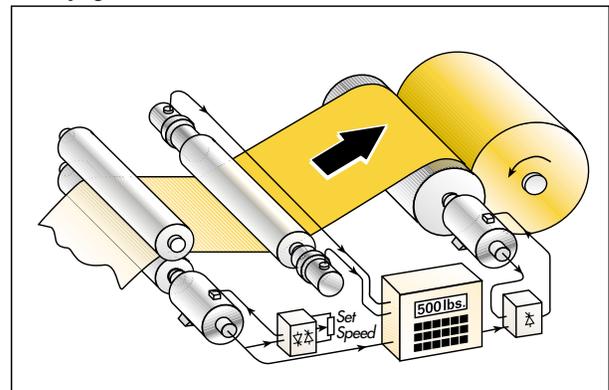
An intermediate system with 4 quadrant drives

Part Number	Description	*For Use With	Application
MWP-12663	WebPro Intermediate Tension Controller	Regenerative AC or DC industrial or servo drives	Controls tension via drives and motors on Intermediate Section

\*See "How To Order" on back page.

### EASILY CONFIGURED AS A WINDER CONTROLLER

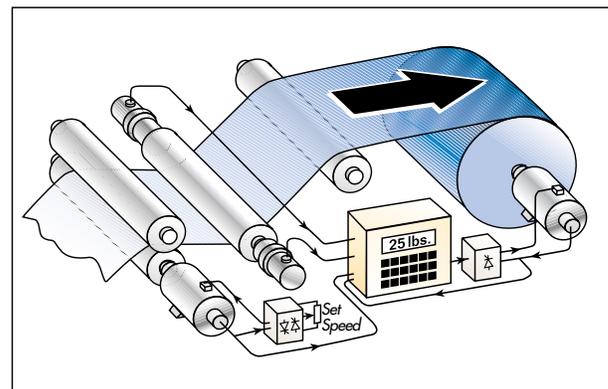
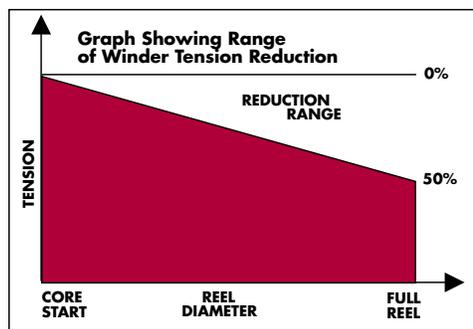
- Can operate as a Surface Winder, Clutch Winder, or Motor-Driven Center Winder, with each model offering different control strategies.
- Surface Winders are controlled by speed trim methods and operate at constant tensions.
- Clutch Winders are usually driven by constant speed motors and operate at constant tension.
- Center Winder Controllers use DC tachometers or encoders, or a combination of both, from the line speed and reel speed to calculate the reel diameter. (If an encoder is used for the line speed input, Winder Controllers provide a length counter which may be used to stop the machine at a preset length.)
- Center Winder Controllers may be configured by the user to operate in torque control or speed control mode.
- Webs of a slippery nature or uneven thickness often cause problems when center winding. Center Winder Controllers have a taper tension feature which reduces the tension set point as the reel diameter increases. The maximum taper is 50%.



A surface winder

Part Number	Description	*For Use With	Application
MWP-12664	WebPro Winder Tension Controller	Regenerative AC or DC industrial or servo drives and Motors--Clutch	Controls tension on Center or Surface Winders via drives and motors or clutch

\*See "How To Order" on back page.



A center winder with taper tension

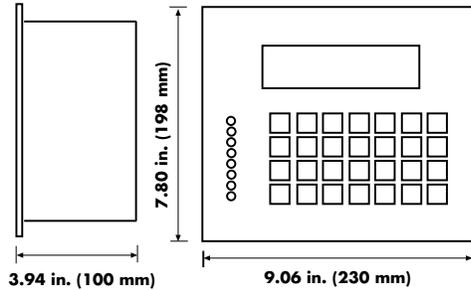
### INDUSTRIAL PRODUCTS

7550 Hub Parkway  
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# ADVANCED DIGITAL TENSION CONTROLLER

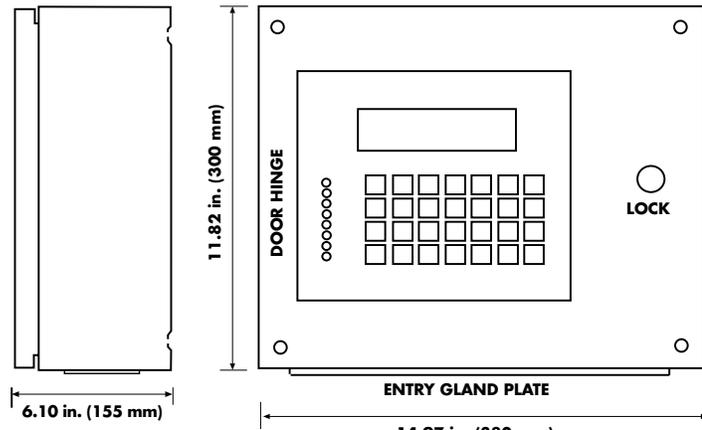
# Cleveland-Kidder®

## WEB PRO



**Standard Mounting Cut-Out**  
8.27 in. (210 mm) X 7.01 in. (178 mm)

## DIMENSIONAL DATA



**Cabinet-Mounted**

## TECHNICAL SPECIFICATIONS

Transducer Types:	Single half bridge, two half bridges, single full bridge, two full bridges
Transducer Excitation:	5.6V DC or 10V DC (60 mA maximum).
In-built Sense Circuit:	Ensures that transducer excitation voltage is correct for Intrinsically Safe Systems, regardless of zener barrier series resistance.
Transducer Input:	1mV/V to 40mV/V DC.
Auto Zero:	For sensing roller weight up to the maximum transducer input level. Auto calibrate range 1:5.
External Set-Point Input:	0 to +10V DC analog. Set point output: 0 to +10 V DC analog.
Opto-Isolated Sequence Switching I/O:	By contact closure, 0 V or logic level between +5V and +24 V DC.
Opto Isolated Pre-length and Full-length Mosfet Outputs:	Opto isolated controller 'Ready' mosfet output.
Opto-Isolated Low Tension Mosfet Output:	For automatic unwind brake pad selection.
Tachometer Inputs:	+10V DC maximum, 100K ohms impedance, for line speed and reel speed.
Encoder Inputs:	Quadrature with compliments, 100,000 pulses per second maximum opto isolated.
Encoder Supply:	+5V or +24V DC at 100 mA maximum.
Control Outputs:	0 to +10V DC at 1mA and 0-50mA, 0-20mA or 4-20mA.
Total Measured Tension Output:	0 to +10V DC at 1mA.
Twenty Product Menus:	All settings stored in non-volatile memory with password protection.
Languages For Full Text and Screen Display:	English, German, French, Italian, and Spanish; selectable by the user.
Power:	115/230V AC 50/60 Hz or +24V DC at 15VA.
CE Compliant:	For all controller applications.

## HOW TO ORDER

- Specify WebPro Controller part numbers identified in this document. They are for panel-mounted controllers only.
- WebPro Controllers can also be provided mounted in an enclosure, and accessory kits such as I/P converters can be provided, loose or mounted in the enclosure. Consult the factory for these options.
- All converters, high current drivers, electric brakes, AC or DC industrial or servo drives, motors, clutches, etc. mentioned in this document are not provided with the WebPro Controller but can be provided as accessories or in accessory kits.

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