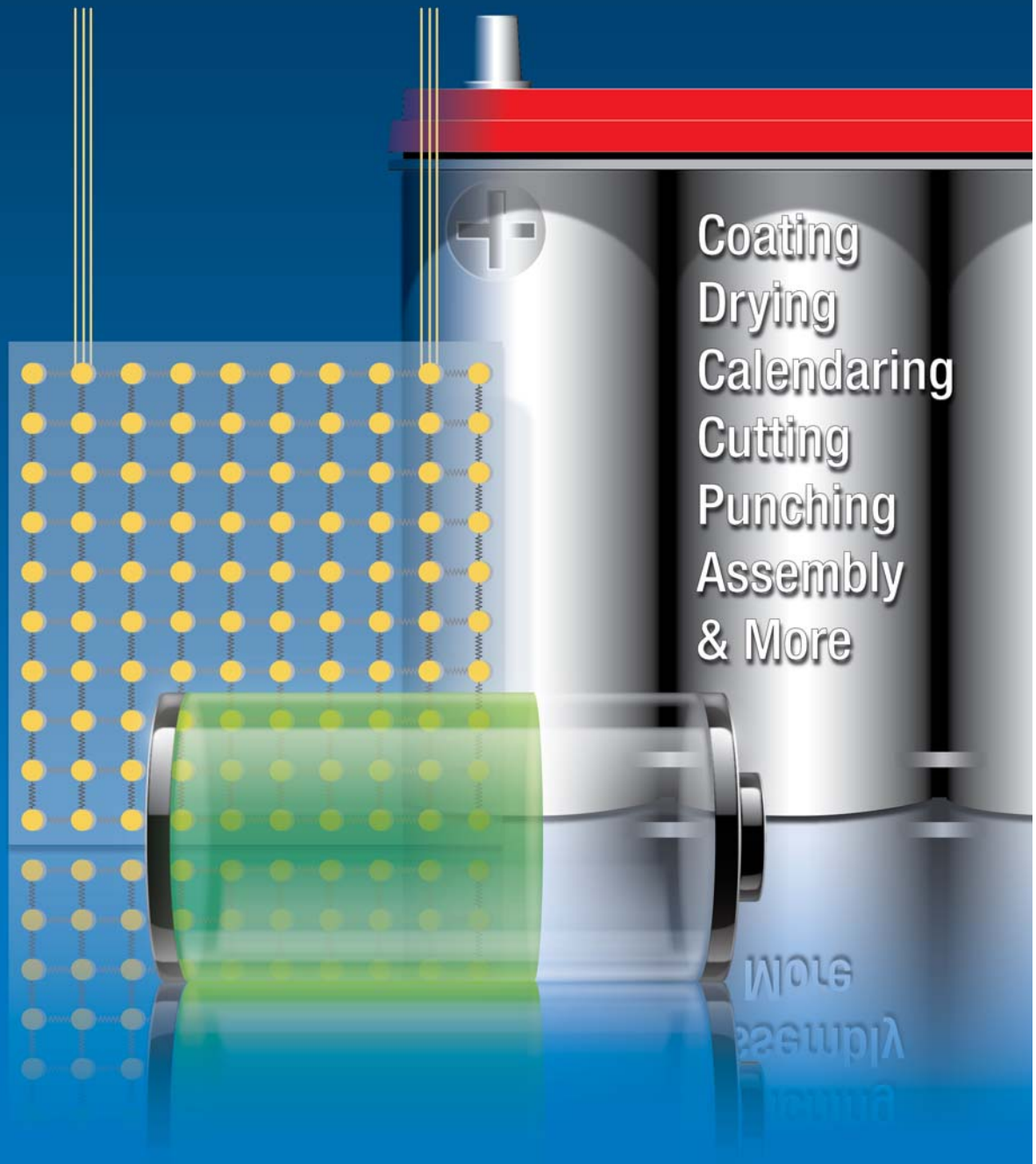


BATTERY

Tension Control



EST. 1947

montalvo

Better Web Control®

Tension Control Specialists



From the battery in a car to the one around your wrist, today's battery manufacturers rely on Montalvo tension control components to ensure higher quality end product, less waste, and greater productivity.

Montalvo provides the tension control components you require to ensure consistent, efficient, and higher quality manufacturing. Montalvo Better Web Control gives you the capability to make Better Batteries and Achieve More!

Check out some of the battery manufacturing processes and applications where Montalvo has provided Better Web Control.

Manufacturing Processes

- ➔ Coating
- ➔ Rolling
- ➔ Slitting
- ➔ Die Cutting
- ➔ Winding
- ➔ Converting



Tighter Process Control



Whether its lithium-ion, thin-film, printed, laminated, solid-state, micro, stretchable, and many more, batteries are moving to new form factors and the market is seeing tremendous demand and investment. Despite the rapidly changing market and investment, every manufacturing process and type of battery product requires higher quality tension control for greater results and scalability.

Below are some of the battery manufacturing applications Montalvo has provided Better Web Control on

Manufacturing Applications

- ➔ Coating
- ➔ Rolling and Striping
- ➔ Electrode Striping
- ➔ Separator Striping
- ➔ Tab Forming
- ➔ Electrode Forming
- ➔ Winding



Drop In Solutions

Montalvo's battery tension controls are designed to be drop in solutions for your machine. Our equipment can be specified into your new machine or fit within existing applications to UPGRADE or ADD tension control to your machine delivering a quick return on investment.

Built with Quality. Built to Perform

Montalvo offers a complete range of high quality, high performance tension control components for both closed loop and open loop tension control.

Battery manufacturing machines require high quality tension control components to ensure higher accuracy, higher quality, tighter process control and maximum repeatability, all while being easy to install, set-up and operate.

Controls

Provide process & tension control

From PLC Controls to Standalone Dedicated Control Units, Montalvo produces the industry's leading controls technology for Better Battery Tension Control. They are easy to set-up, run, and operate and can be integrated into your existing platform if required. Montalvo Tension Controllers give you greater precision, consistency, and quality.



Load Cells

Provide direct web tension measurement

A superior process relies on a superior tension measurement. Montalvo's manufactures a wide range of load cell styles with multiple load ratings, sensitive to detect even the slightest changes in tension giving your process the superior tension signal it requires for superior production.



Amplifiers

Provide measurement signal amplification

Combining performance and functionality, Montalvo's load cell amplifiers ensure a quality tension signal for your application. Montalvo manufactures a wide range of amplifiers compatible with all Montalvo load cells and other market technologies.



Magnetic Particle Brakes and Clutches

Provide torque output & control

Smooth, repeatable, high quality performance with no dust. Ideal for clean room environments, the MP-Series Magnetic Particle Brakes and Brushless Clutches provide the precise torque control you require from full roll to core, maximizing your process capabilities.



More Total Tension Control Solutions

Battery manufacturing machines require high quality tension control components to ensure increased machine capabilities, wider operating ranges, and better process control, all while being easy to install, set-up and operate. Montalvo manufactures the high quality, high performance tension control components you depend on.

Dancer Designs & Controls

Provides solutions for applications utilizing dancers



Load Cell Rollers

Provides direct web tension measurement



Tension Brakes & Clutches

Provides torque output & control



Web Guides

Provides web alignment



Features

- ✓ Superior Signal Sensitivity
- ✓ Repeatable, Reliable Measurement
- ✓ Direct Web Tension Feedback
- ✓ Smooth, Linear Torque from Full Roll to Core
- ✓ Full Range of Functions & Features to Maximize Productivity
- ✓ Multiple Styles, Models, and Packages to Meet Your Specific Requirements
- ✓ Easy to Install, Set-Up and Operate

Range Expansion

Separate the overall torque range of your brake into individual ranges for smoother, more precise tension control when running multiple materials on the same machine with differing tension requirements. Gain greater control at lower torque ranges, run high mass rolls at lighter tensions (i.e. films and foils), and run low torque and tension applications that require high torque to stop (i.e. sheeters).



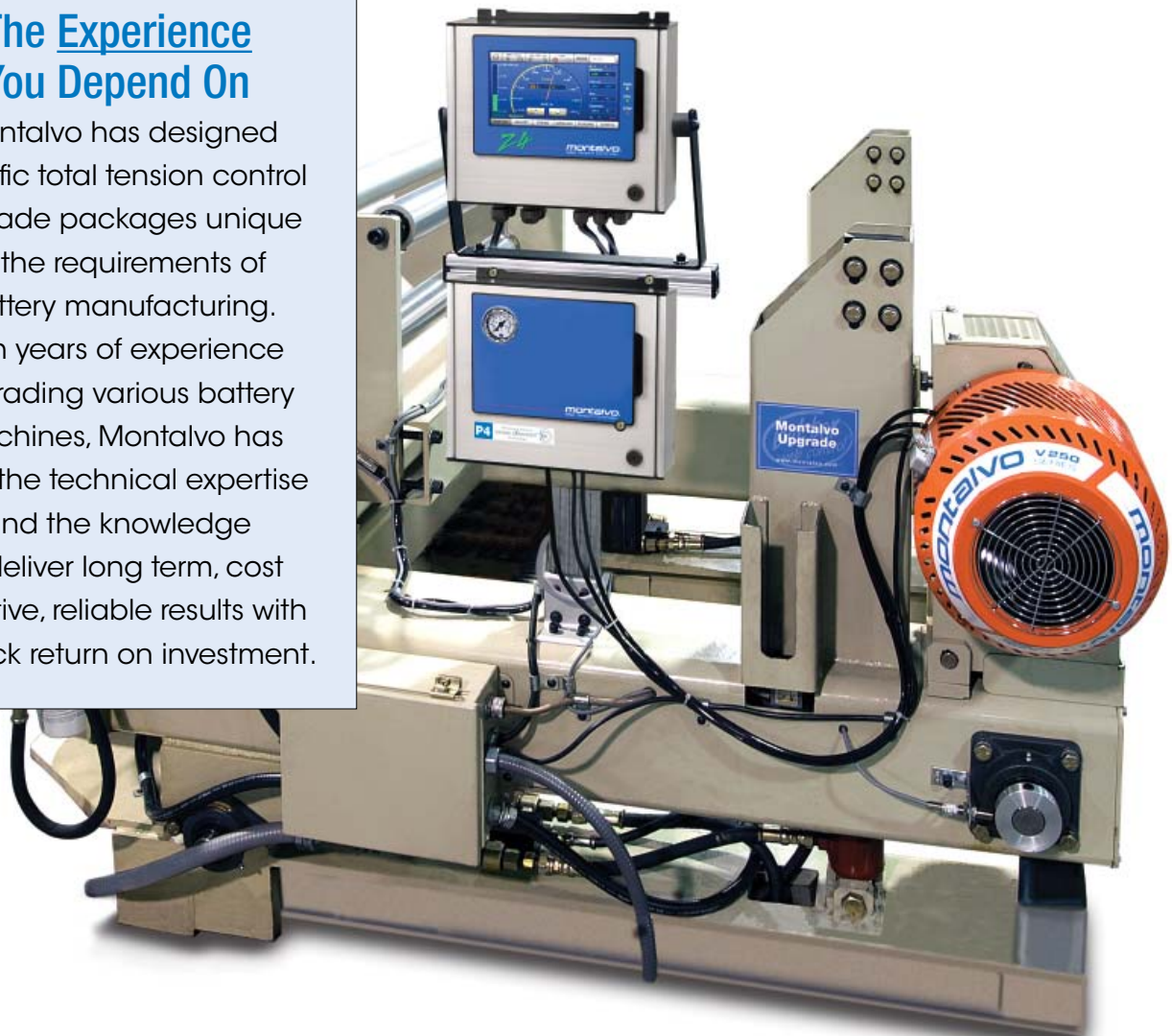
Increase, Expand, Add

Retrofit to Effectively Compete with Newer Machines

In order to compete with today's new machines, older machines need increased performance, expanded capability, and added functionality. Typically, all the benefits of a new machine can be achieved through a strategic upgrade of the tension control components of your existing machine. For a fraction of the cost of a new machine, Montalvo makes your current machine run like new, giving you the productivity and profitability increases you require.

The Experience You Depend On

Montalvo has designed specific total tension control upgrade packages unique to the requirements of battery manufacturing. With years of experience upgrading various battery machines, Montalvo has both the technical expertise and the knowledge to deliver long term, cost effective, reliable results with a quick return on investment.



Complimentary Upgrade Assessment

Montalvo Applications Specialists are available to assess your application and will let you know what would be involved in completing an upgrade and what type of performance upgrades you can expect to achieve. Contact us today to learn more.

Here For You



BACK to BETTER WEB CONTROL

Things happen. And when they do, our first priority is to get you back up and running as quickly as possible. We want your machine running.



LOCAL ACCESS

In Person, Phone, E-mail, or Online. With five worldwide offices (USA, Germany, United Kingdom Denmark, China) and an authorized licensee & representative network throughout five continents, we give you the local dependability you rely on.



UNCOMPROMISING SERVICE & SUPPORT

Whether you have a single question, need a tension control consultation, require technical support or service, we are committed to you for the entire life of your Montalvo products and beyond. We are here for you.



EXPERTISE

Since 1947 Montalvo has differentiated itself by offering more than just high quality & high performance tension control products. We are your resource for the tension control expertise required to expand the capabilities of your machinery & production line.

**THE STANDARD FOR
RELIABILITY - DEPENDABILITY - PERFORMANCE**

YOU CAN HAVE IT ALL!

*Reliable, Repeatable, Consistent,
High Quality Results*

These are the pillars of Montalvo's automated tension control systems. Whether it be new battery production equipment or upgrading the tension control components of your existing machine, our components give you the productivity increases you require.



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