

VTC-Series

Multi-Tow Tension Controller

New for 2020



VTC Operator Interface

VTC Controller

Montalvo VTC Multi-Tow Tension Controller

The all new Vanguard Multi-Tow Tension Controller - VTC (a component of the Montalvo Vanguard System works in conjunction with VLC Load Cells and VCB Creel Brakes. It provides precise, repeatable tension control of individual ends. Capable of controlling each position in your process from an easy to utilize interface including 24 tow tension indication capability.

Offering a robust line up of features and functions (ex: soft start, break detection, inertia compensation, etc.) to maintain high quality production from start to finish, the VTC is easy to set up and operate, providing consistent results. Achieve precise tension measurement from start to finish for higher quality end product and less scrap.

Features and Benefits

- ▶ High End Count Capacity
- ▶ Selectable Simultaneous 24 Tow Tension Indication and Control
- ▶ Individual, Group and/or Global Settings
- ▶ Single Interface for Managing Every Tow in Your Process
- ▶ Alarms for High Tension, Low Tension and No Signal (Break Detection)
- ▶ Data Logging for Process Analysis
- ▶ Used for Providing Continuous Tension Indication or Connect to a Control Scheme to Produce Automated, Continuous Closed Loop Tension Control System



The Interface

The interface is a web-based control panel for a Multi-Tow Tension Controller. It features a top navigation bar with buttons for Home, Bank Setup, Channel Setup, Controller Setup, and Alarms. The main area is divided into several sections:

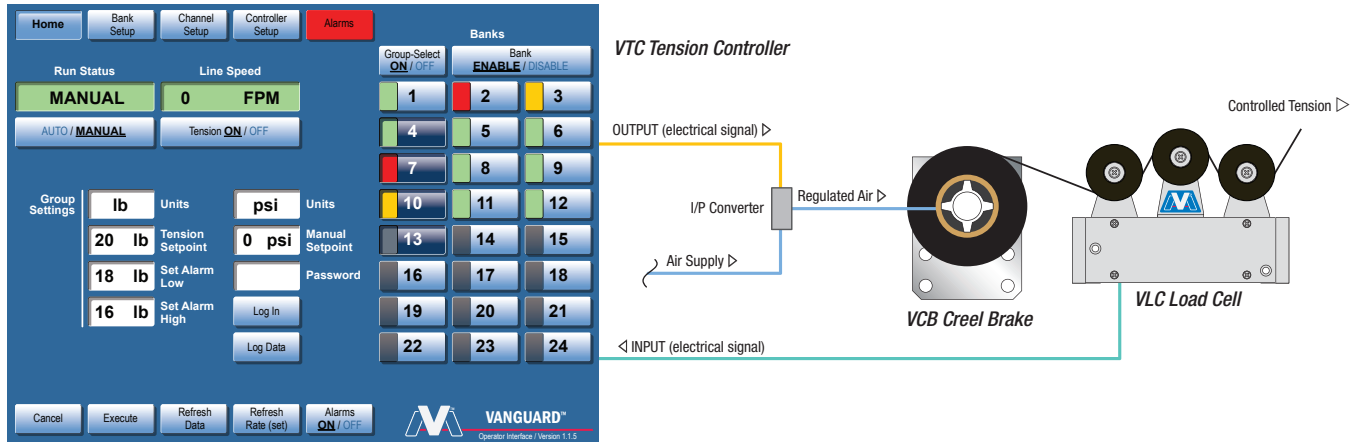
- Run Status:** Shows the current mode as **MANUAL** (with **AUTO / MANUAL** toggle) and **Line Speed** as **0 FPM** (with **Tension ON / OFF** toggle).
- Group Settings:** Includes input fields for units (**lb** and **psi**), Tension Setpoint (**20 lb**), Set Alarm Low (**18 lb**), and Set Alarm High (**16 lb**). It also has **Manual Setpoint** (**0 psi**) and a **Password** field.
- Alarms:** A section with **Log In** and **Log Data** buttons, and an **Alarms ON / OFF** toggle.
- Banks:** A grid of 24 bank buttons (1-24). Each bank has a **Group-Select ON / OFF** indicator and a **Bank ENABLE / DISABLE** indicator. Banks 1-10 are highlighted in various colors (green, red, yellow, grey).

Callouts provide additional context:

- Bank Setup:** Configure settings for each Bank (group) of load cells.
- Channel Setup:** Configure settings for each Channel (individual load cell).
- Alarms:** Configure Banks as groups. Enable or disable groups. Monitor input and quickly interact with individual ends, groups and banks.
- Log Data:** Log data for process analysis.
- Alarms ON / OFF:** Clear and Quick Alarm Indication.
- Execute:** View critical Tension and Alarm settings.

At the bottom right, the logo for **VANGUARD™** is displayed with the text "Operator Interface / Version 1.1.5".

How It Works



Specifications	
Supply Voltage	24 VDC
Power Consumption	100 VA
Load Cell Supply	24 V
Load Cell Input	1-4 V
Gain Range	1x - 64x
Regulator Output	0-10 V
Operating Temperature	32 to 122°F (0 to 50°C)
Storage Temperature	14 to 176°F (-10 to 80°C)
Degree of Protection (non-enclosed pcb version)	IP10
Certification	CE / RoHS
Functions	Manual / Auto Tension On / Off Auto Setpoint Manual Setpoint Soft Start Anti Coast
Controller Port	USB Type B
PC Recommended Requirements	Windows 10 (64 bit) Processor: Intel I5-7500 or better Ram: 8gb system memory Graphics Driver: DirectX9 or later Storage: 40 gb of available space



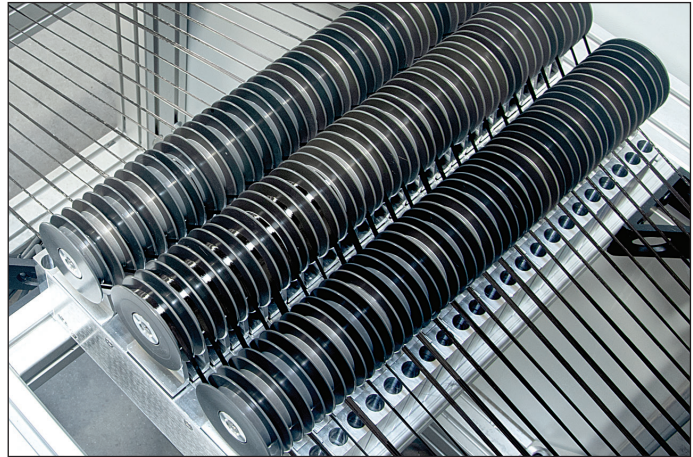
The Montalvo VANGUARD™ System (MVS)

The patented VANGUARD™ System is Montalvo's flagship closed loop tow and tape tension control technology system, leading the way in precise, uniform, consistent, automated tension control.

Tension Measurement (input)

Continuous, precise tension measurement directly from your tow. The VANGUARD Load Cells (VLC) feature Montalvo's industry-leading load cell technology for sensitivity, reliability, and repeatability.

- Wide Sensing Ranges – from 20g up to 10kg
- Pre-Calibrated (Just Install & Go)
- Built-In Amplifier for Easy Connection to Existing I/O
- High Overload Protection
- Precise Tension Measurement



Tension Control (process)

A single interface for automated control, indication, and data collection of every tow in your process. Montalvo's VANGUARD Tension Controller (VTC) is easy to set up and operate, automatically and precisely maintaining set tension from start to finish.

- Low/High Tension and Tow Break Alarms
- Pre-Configured for Your Application
- Single Interface for Managing Every Tow in Your Process
- Adjustable and Expandable Tow Counts



Torque Control (output)

Smooth, consistent, precise torque control for maximum process capability. Montalvo's VANGUARD Torque Control offers three different torque control options depending on the requirements of your application.

- Wide Torque Ranges and Tension Profiles Capable of a Wide Variety of Materials and Tensions
- Easy, Hassle-Free Installation
- Long-Lasting, High-Quality Performance
- Retrofit Capable – Upgrade Your Existing Creels



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