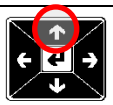
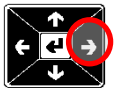
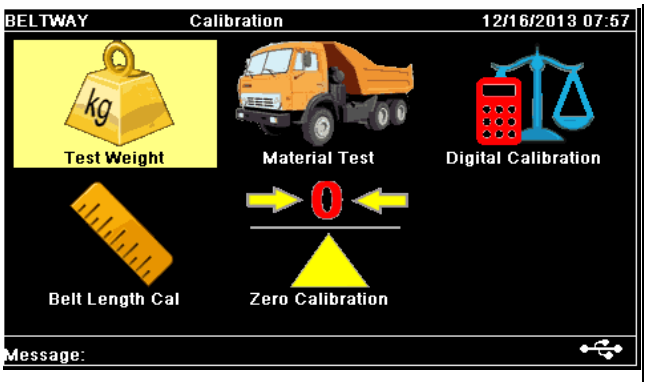
Calibration

The calibration menu is available to go to a specific type of calibration you would like to perform. Each calibration can be performed independently for a specific purpose. For more information on each calibration please continue reading.

SELECTION OPTIONS DURING AND AFTER THE CALIBRATIONS PROCEDURES

	Press the **Up Arrow** to go to the PREVIOUS screen
	Press the **Left Arrow** to CANCEL
	Press **Right Arrow** to CHANGE THE VALUE
	Press the **ENTER** key to ACCEPT / ACKNOWLEDGE.

The different types of calibration that can be performed from this menu are:



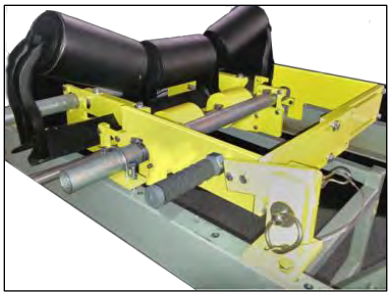
1) Test Weight Calibration
2) Material Test Calibration
3) Digital Calibration
4) Belt Length Calibration
5) Zero Calibration (Initial)

6) Zero Calibration (Routine)
Started by pressing the Zero Key
On the keypad in Run Mode.

A report of all calibration activity is stored on the USB flash drive.
Make sure the USB drive is installed before performing a calibration.

Test Weight Calibration

The Test Weight Calibration requires the user to hang static weights from the load cell assemblies. A common method is to use test weights and a test bar as shown in the picture. Stop the belt and be sure to follow all safety procedures when placing test weights in position on the scale for the test weight.



Belt-Way now offers a self Storing Test Weight kit that safely holds the test weight on the scale. This system makes calibration very easy and safe. The test weight requires one person to drop the weight onto the load cells. There is no need for a man lift to hang weights even when the conveyor only has access on one side.

No matter the method, the total weight including the bar must be entered before proceeding with the calibration.

The weight value must be entered in Pounds (lbs.) or Kilograms (kg's)

Suggested test weight amounts are as follows:

Model 45 or Model 50	Model 100 or Model 150	Model 200	Model 350	Model 500	Model 1000
25-50 lbs.	50-100 lbs.	50-100 lbs.	100-200 lbs.	200+ lbs.	200+ lbs.

Navigation Tip	
	Press the **MENU** key.
	Navigate to the CALIBRATION icon and press **ENTER** key
	Navigate to the TEST WEIGHT menu. Then press **ENTER** key.

Check the New Trim Factor upon completion of the test weight calibration. The Trim Factor of a properly calibrated scale should be close to 1. (.950, 1.025, etc) There may be a problem if the result is not close to 1. Recheck all settings, then repeat the zero and test weight calibrations to check for repeatability.

You may also view the Live Weight screen when test weights are installed on the scale. Navigate to Totals & Diagnostics > Live Weight. This screen shows the current weight on the scale. It should closely match the test weight value.

Material Test Calibration

The Material Test Calibration is one method that can be used to calibrate the scale and is based on the weight measured by the **Belt scale and a Certified scale (typically a truck scale).**

Navigation Tip	
	Press the **MENU** key.
	Navigate to the CALIBRATION icon and press **ENTER** key
	Navigate to the MATERIAL TEST menu. Then press **ENTER** key.

These two weights are entered into the scale and after acknowledging the entries, the scale will adjust the TRIM factor so that the belt scale will read very close to the certified scale.

The **CERTIFIED** scale units entered is selectable and does not need to be the same as the belt scale units because the scale will convert and adjust the scale as needed based on the units selected for the certified. The CERTIFIED scale unit choices are:

- **Tons (Equal to 2000lbs)**
- **Long Ton (Equal to 2240lbs)**
- **Pounds (lbs.)**
- **Metric Tons (Tonne)**
- **Kilograms (KG)**

Recommended steps to follow:

1. Weigh the truck **EMPTY** to get a good tare weight.
2. Make sure the scale **ZERO** Calibration is good. Zero Calibrate the scale if needed.
3. Clear the **TOTAL** weight on the belt scale.
4. Run the material to start test
5. **Complete 3 tests. We recommend a minimum of 15 tons per test if possible**
6. Compare the results to prove the scale is repeatable **BEFORE** adjusting the scale calibration.
7. If all tests are reasonably consistent, take an average of the belt scale and truck scale tests, or simply add the tests up and enter the total weight for the belt scale and truck scale, instead of a single load. Either of these methods will result in a more accurate calibration.

The Trim Factor of a properly calibrated scale should be close to 1.000. (.950, 1.100, etc.)
If your result is not close to 1 recheck all settings and perform the calibration again!

Digital Calibration

The **Digital Calibration** method resets the **Trim Factor** back to the default of 1.000.

Belt Length Calibration

The **Belt Length Calibration** calculates the length of the belt. This must be performed before other **Zero Calibration** methods will work properly.

Navigation Tip	
	Press the **MENU** key.
	Navigate to the CALIBRATION icon and press the **ENTER** key
	Navigate to the BELT LENGTH CALIBRATION. Then press the **ENTER** key.

You have various options when doing this calibration:

1. **Length and Zero**
   This calibration measures the length of the belt while also conducting an Initial Zero calibration while the belt is running and empty. When this calibration is completed the scale will know how long the belt is in Meters (m) or Feet (Ft) depending on the units selected during setup. The scale will also be zero calibrated.

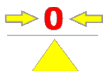
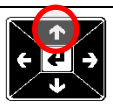
   The belt must be **RUNNING** and **EMPTY** to perform this calibration.

2. **Auto Belt length**
   This calibration is performed while the belt is running empty and only measures the length of the belt.
   You need to do the following steps to complete this calibration:
   1. Mark the belt
   2. Mark a point on the conveyor
   3. Start the conveyor
   4. Follow the prompts on the display. To **START** measuring the length press the ENTER key when the belt mark passes the conveyor frame mark. To **END** the measurement press the ENTER key when the belt mark passes the conveyor mark after **1** revolution.

3. **Manual Belt length**
   You may enter an exact belt length (in Feet or Meters) if the belt can't be run.

Zero Calibration (from the Calibration Menu)

The **Zero Calibration** must be performed when the scale is first installed or if a significant change has occurred to the scale or conveyor. This does not measure the belt length, it only re-weighs the empty belt to establish a new zero value.

Navigation Tip	
	Press the **MENU** key.
	Navigate to the CALIBRATION icon and press the **ENTER** key
	Navigate to the ZERO CALIBRATION. Then press the **ENTER** key.
OPTIONS AVAILABLE BEFORE ACCEPTING THE CALIBRATION PROCEDURE	
	Press the Up Arrow to REJECT and REPEAT the calibration
	Press the Left Arrow to REJECT and CANCEL
	Press Right Arrow to ACCEPT and REPEAT
	Press the ENTER key to ACCEPT / ACKNOWLEDGE.

There are 2 options when doing the Initial Zero Calibration.

1. **Dynamic –** This calibration is done when the belt is Running Empty

The Dynamic Initial Calibration is also accessible through the Setup Wizard or it can be done simultaneously when doing Length and Zero Calibration during the Belt Length Calibration.

You will also notice that this calibration requires the conveyor to complete 3 revolutions of the belt.

2. **Static –** This option is used when you are unable to start the belt and need to complete a quick zero Calibration.

The belt must be **STOPPED** and **EMPTY** when doing this calibration.

Zero Calibration – (from the Keypad)

This is the primary method for performing a **ZERO CALIBRATION**. We recommend repeating this process daily or as frequently as required by your application. Run the belt **EMPTY** and press the **ZERO CALIBRATION** button on the keypad. You can cancel the calibration at any time by pressing the **BACK** or **HOME** buttons. Follow the on screen instructions to save the new zero number.

Some factors that the Routine or Daily zero calibration will help compensate for are:

- Material build up on the scale
- Material build up on the belt
- Ambient Temperature changes
- Belt temperature changes
- Added belt splices and vulcanizing
- Misalignment of the belt (belt tracking)

The zero calibration will overcome some of these issues but is not a replacement for routine maintenance.