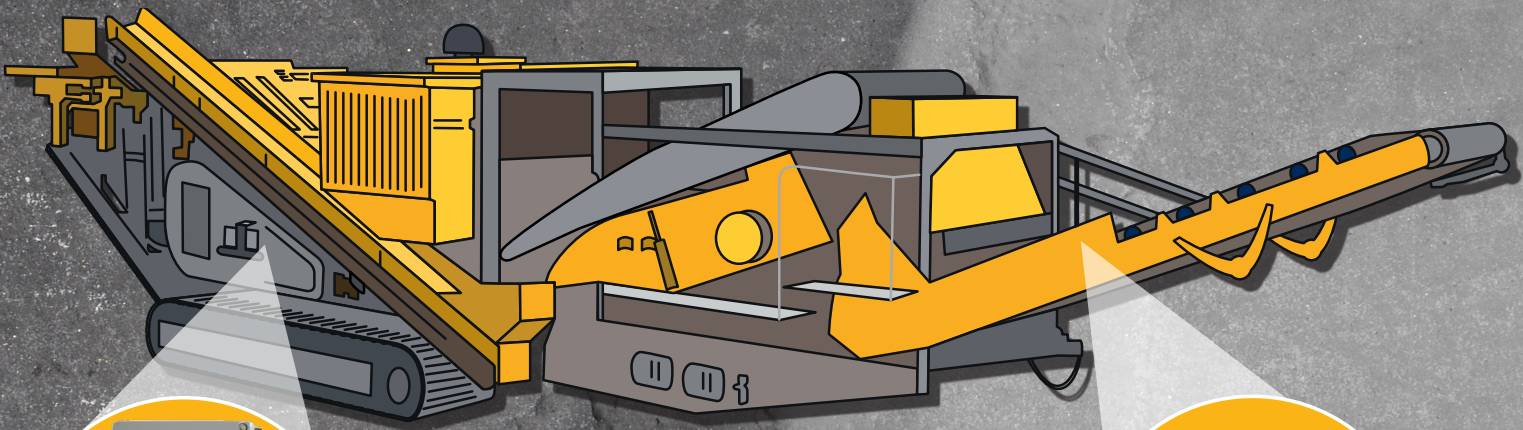


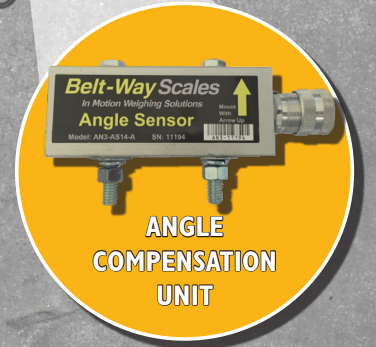
Mechtronics Ltd.

Belt Conveyor Scales

IF IT'S WORTH CONVEYING, IT'S WORTH WEIGHING



**BELT WAY
INTEGRATOR**



**ANGLE
COMPENSATION
UNIT**

ACCURATE, EASY TO USE BELT SCALES



MODEL BS350



MODEL BS1000 SUSP



ROLLER BELT SCALE

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BELT-WAY INTEGRATOR

Cast Aluminum Enclosure

Tough, Impact resistant Weather Resistant Enclosure.

Standard On Board Ethernet

- Modbus TCP
- Wireless Communication
- Production Reports On line

Display

State of the art Large Colour Graphic Display

Accuracy

$\pm 1/2$ percent to 1 percent when using a single idler scale with belt loads from 25 percent to 100 percent of the rated scale capacity. Optimum scale performance requires conformance to installation and calibration guidelines detailed in the Installation / Operation Manual.

Two RS232 Serial Outputs

Simultaneously connect printer and scoreboard Display.

7 Live Totals

Keep track of daily monthly, quarterly, or yearly totals Job Total and Master Total

Auto Zero

This feature automatically tracks the empty weight of the belt and idler to compensate for material build-up on the belt.

Wiring Versatility

Belt-Way scales are supplied with a 120 VAC or 220 VAC power supply. They may also be operated on 12VDC or 24VDC from a battery. Removable connectors make wiring easy.

Self-diagnostics

- Independently view signal status from up to 8 load cells
- Digital Speed Sensor Frequency
- Current Angle Sensor Readings
- Scale Configuration setup parameters
- I/O Settings
- Calibration Parameters and Values

Password Protection

Stops unwanted interference



STANDARD BELT-WAY SCALE

Easy to Install

Unique modular design makes Belt-Way Scales very simple to install. Our load cells simply bolt to your existing idler. This eliminates removing the idler, jacking up the belt, or making any other mechanical alterations to your conveyor. The speed sensor installs in a couple of minutes on the pipe mounting scale support system.

Adjustable Widths

The Belt-Way modular design uses mounting pipes that span the width of the conveyor to support the scale. If you should decide to move your scale to another width conveyor, only the lengths of the pipes would change. The standard 1-1/4" pipe is available anywhere.



Flexible Capacities

Five Standard Models are available covering an application range of 1 – 12,000 tons per hour.

Inexpensive

Low cost is the result of the versatility and simplicity of our modular design.

Strain Gauge Load Cells

Our load cells comply with Bureau of Weights and Measures accuracy, linearity, and temperature range specification. Single point suspension load cells used in our patented design eliminate the effects of external side loading and belt frictional forces which can cause inaccurate readings.

Self-Aligning Load Cells

Belt-Way scales use two single point suspension load cell assemblies that align automatically. Non-linearity associated with levers and torsion tubes, used in other scales, is eliminated.

Simple, Rugged Design

Our load cell and speed sensor assemblies are fabricated using heavy wall steel tubing. All steel parts are cleaned, painted and baked to provide years of service.

Very Low Maintenance

Material build-up on the scale results in problems with accuracy. The low-profile Belt-Way modular design reduces the potential for material build-up.

Low Shipping Cost

The compact modular Belt-Way design is shipped worldwide at low cost.

Fast Delivery

All Belt-Way Scales can ship from stock. Overnight delivery is available. The Custom Built Scales can ship in 2 weeks from order.

OPTIONAL EXTRAS

The 2 Channel I/O Board (Shown Below)

Up to four analog outputs are available using 4 to 20 mA or 0 to 5 VDC output signals. Use the pulse output to a PLC or remote counter to integrate Belt-Way scales with your existing system. Quadrature waveform is included.

Low-Speed Alarm/Speed Interlock (Requires I/O Board)

When used as a low-speed alarm, this output will turn on if the belt speed falls below the programmed value. When used as a speed interlock, this output will turn on when the belt speed is above the programmed value.

Drive a Chart Recorder (Requires I/O Board)

Use one of the analog outputs to record the actual rate crossing the scale on a chart recorder.

Control the Feed Rate (Requires I/O Board)

Use the PID control feature to program a desired flow rate. The scale will control the flow rate using one of the analog outputs.



Open Loop Blending (Requires I/O Board)

Use up to four analog outputs to control up to four ingredients added to the material crossing the belt scale. In open loop blending the scale controls the feed rate of each additive but the additives are not actually weighed or measured.

Closed Loop Blending (Requires I/O Board)

Closed loop blending uses a scale or flow meter to measure each additive being blended with the material crossing the main scale. The main scale can use the PID control feature to control the feed rate of the main ingredient if desired. The main scale will send the actual flow rate of the main ingredient to each additive controller. You program the appropriate percentage for each additive ingredient into each additive controller. Then, using the PID control, each additive feeder will be controlled to maintain an accurate blend.

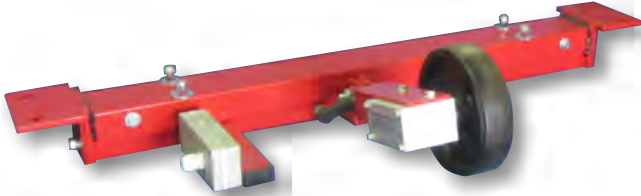
The Automatic Angle Compensator

This unique option will maintain the scale calibration when installed on a conveyor that is being raised or lowered on a regular basis. It is bolted onto the conveyor frame and wired to the control. It reads the angle of incline and makes necessary changes to our internal logic to maintain proper calibration. This option is most useful when a scale is mounted on a stacker or on portable equipment. It can be added at any time.



TAILOR-MADE DESIGNS BY MECHTRONICS LTD

Model BS350



Model BS350

Different sizes of this scale get used mainly on Crushers and Screeners from

- TESAB
- Terex
- Sandvik
- Powerscreen
- McCloskey International

Model BS 500

Different sizes of this scale get used mainly on Crushers and Screeners from

- Kleeman Reiner
- GIPO

Model BS 500



Model BS Model 100Z Dual



Model BS 100Z Dual

Different sizes of this scale get used on machines where the wing rollers have been replaced with sheet steel, leaving only the Middle rollers. Not common but a drop in solution

Model BS 1000 SUSP

These scales pick up the weight by monitoring the load imposed on the conveyor from supporting the Garland Roller Set. They get used mainly on Crushers and Screeners from

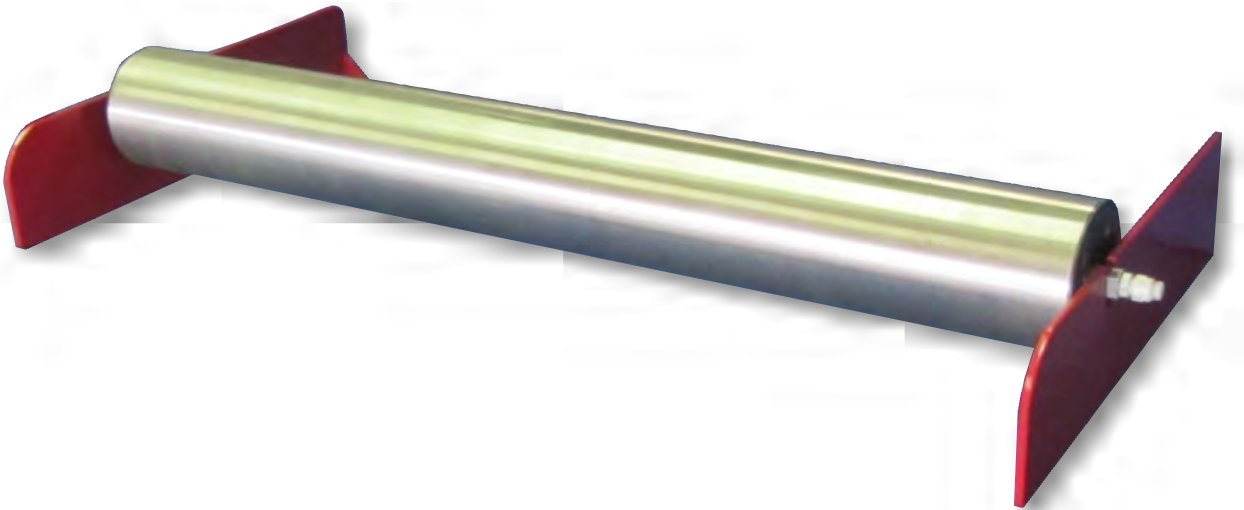
- Metso Minerals
- Terex

Model BS 1000 SUSP



Roller Belt Scale

- The Roller Belt scale is a whole new way of weighing on a Crusher conveyor.
- The Patented design in incorporates the weighing and the speed pickup all into the roller.
- With no modifications necessary to the conveyor, the existing middle roller can be substituted by the Roller Belt Scale

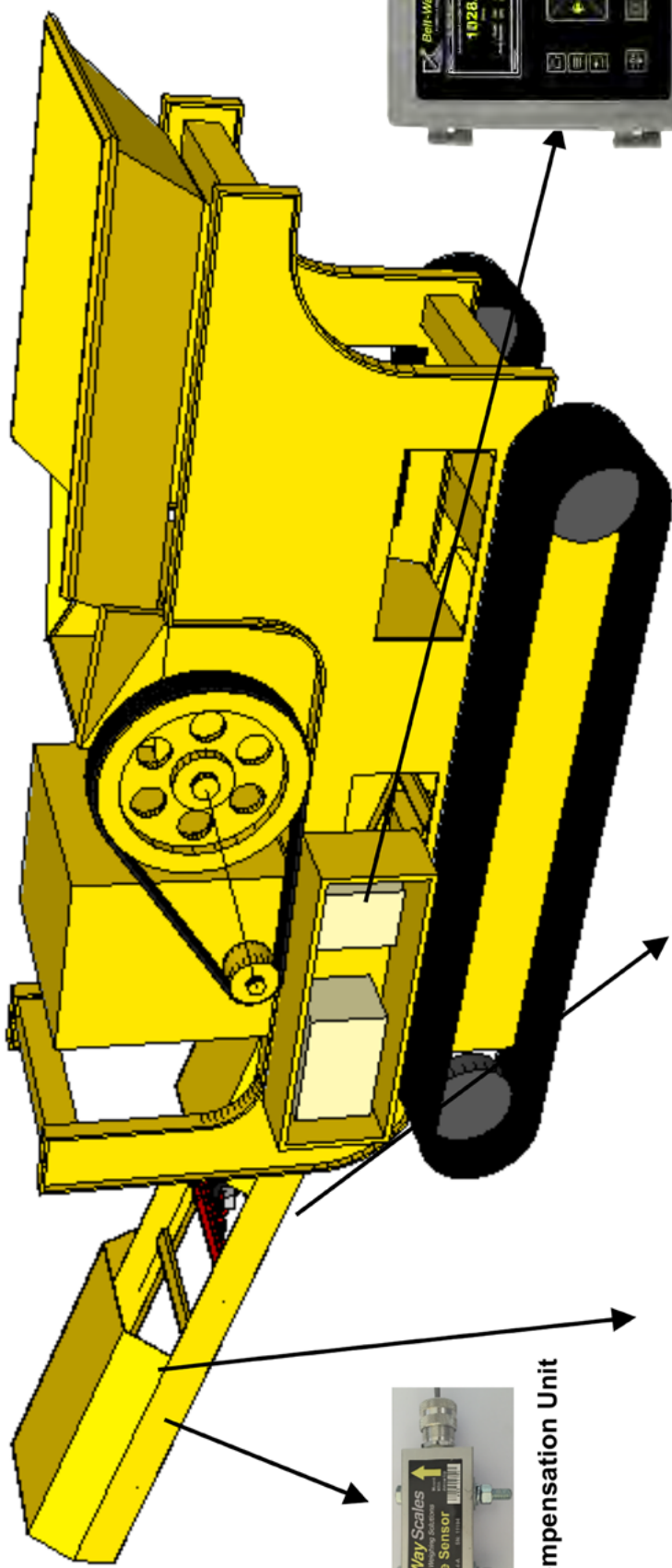


- Custom built to any required length from 4-inch Stainless tube. With more and more mobile plant dispensing with wing rollers and using slider beds instead, it makes the Roller belt scale the obvious choice of Belt scale
- Works with any Integrator Mechtronics has sold in the past



Mechtronics Ltd.

Belt Conveyor Scales



Angle Compensation Unit



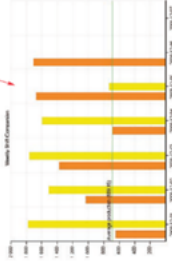
Model BS 350 Weighframe



Modem



Cloud Based Production Data



Belt Way Integrator

THE OFFSITE / ONLINE DATA LOGGING CHOICES

Monitor Production Modems to a Website reporting system





These systems are highly suitable for collecting data from Belt-Way scales on plant in remote locations.

The data is sent to a website which can be accessed by anything from a smartphone to a PC.

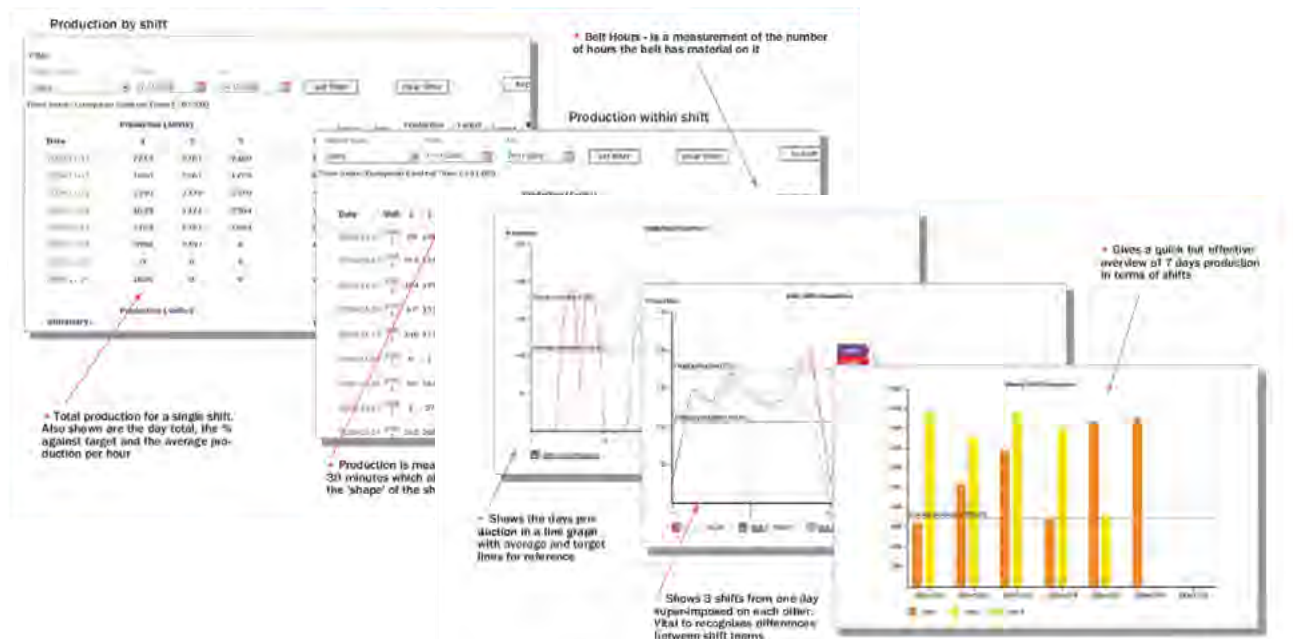
There are several layers of access rights set up so that an owner can see all scales, a manager can see data from the scales Under his control and a team leader or foreman can see the data from his particular machine or group of machines.

The choice of Modem is dependent on the quality and reliability of the cellular coverage.

If the coverage good, the basic cellular modem will be fine, If the coverage is poor then the cellular modem with buffer is needed. If there is no coverage then one of the satellite units will be needed, depending if fuel information is of interest or not.

Basic Cellular Modem	Cellular Modem with Buffer	Satellite GSM / GPRS Modem	Satellite Modem with CAN Monitor for Fuel
			
Contracts needed for Modems shown Below			
<ul style="list-style-type: none"> Cellular service provider Production Monitoring 	<ul style="list-style-type: none"> Cellular service provider Production Monitoring 	<ul style="list-style-type: none"> Cellular service provider (not vital but handy for sending upgrades) Iridium Airtime Production Monitoring 	<ul style="list-style-type: none"> Cellular service provider (not vital but handy for sending upgrades) Iridium Airtime Production Monitoring

Typical production Graphs and Reports



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