

As in any electronic belt scale system, the accuracy and reliability are dependent on the mechanical section's input to the electronics. Outputs can be no better than the inputs. The inherent features of the MTS Belt Scale design efficiently assure accurate, reliable inputs.

The heart of the belt scale design is a stainless steel torque shaft that acts as a frictionless pivot. Torque shaft suspension provides instantaneous sensing of the belt loading variations. Its mechanical tare capability eliminates the need for electronic dampening or counter weights for tare compensation. Torque shaft suspension eliminates knife edges, bearings, wear points and "stiction", reducing maintenance costs.

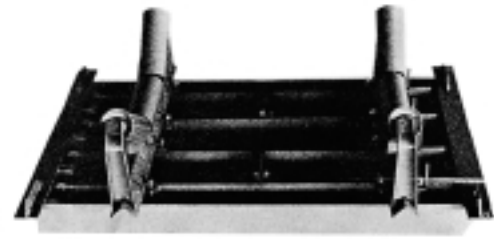
The load cells are constructed of stainless steel, completely encapsulated and sealed against dust, dirt and moisture, and are impervious to corrosion and harsh environments. With full scale deflection of less than 0.003", the MTS Belt Scale load cells are instantly responsive to the slightest variation in belt loading. This speed of response provides for accurate linear weighing over the scale's full operating range.

All MTS Belt Scales are factory tested and are protected against overload to better than 1000% of their rated capacity.

MTS Belt Scale Model Selection Chart

Model	Accuracy	Idlers	Weigh Bridge	Belt Width	Load Cells
2400	±0.5% from 0.25 to 1.25 of design capacity	2	1	Up to 1000 mm (42")	1
2800	±0.5% from 0.25 to 1.25 of design capacity	2	1	915 to 2000 mm (36 to 84")	2
4000	±0.25% from 0.25 to 1.25 of design capacity	4	2	Up to 1000 mm (42")	2
8000	±0.25% from 0.25 to 1.25 of design capacity	4	2	915 to 2000 mm (36 to 84")	4

Available in single idler format for special applications.



Product Features

- Unique design allows taring out of dead load
- Load cell(s) and torque shaft are impervious to corrosion and harsh environments
- Weigh bridge comes fully assembled to fit each application and ready to install
- Narrow profiles eliminate material build-up
- Proven record of reliability and accuracy
- Rugged industrial design

Technical Specifications

Accuracy

- ±0.5% to ±0.25% of totalization over 5 to 1 operating range

Belt Width

- 18" to 60" in CEMA sizes 500 to 1600 mm in metric sizes refer to Outline and Dimensions

Belt Speed

- up to 4 m/s (800 fpm)

Capacity

- up to 6000 TPH at maximum belt speed

Conveyor Incline

- 20° from horizontal, fixed incline
- up to 30° with reduced accuracy

Conveyor Idler

- flat to 35°, up to 45° with reduced accuracy

Idler Diameter

- 50 to 180 mm (2 to 7")

Idler Spacing

- 0.5 to 1.16 m (1.5 to 5.0 ft)

Load Cell

- construction: stainless steel encapsulated
- excitation: 10 Vdc nominal, 15 Vdc maximum
- output: 2 mV / V excitation at rated load cell capacity
- non-linearity: 0.02% of rated output
- hysteresis: 0.02% of rated output
- non-repeatability: 0.01% of rated output
- capacity: maximum ranges: 75, 150, 300, 500, 750, 1000 lbs.
- overload: safe 150% of rated capacity
- ultimate 1000% of rated capacity
- temperature:
 - 20 to 85 °C (– 40 to 185 °F) operating range
 - 18 to 40 °C (0 to 150 °F) compensated
- mounting dimensions: identical for all capacities

Hazardous Locations

- with the use of approved intrinsically safe barrier strips

Weight

- see chart, Outline and Dimensions

Approvals

- CE compliant

