

MODEL NAR THE WORLDS MOST RELIABLE and ACCURATE BELT SCALE

1 "Rocking Flexure" Platform Supports
Non-wearing, self aligning "Rocking Flexure" platform supports in Approach-Retreat configuration (front and rear) for higher accuracy and greater immunity to inclined conveyor errors.

2 Approach-Retreat Weigh Bridge
Weight sensing is sensitive, deflection is low and the scale is isolated from error-inducing effects of uneven belt tracking, overloading, belt lifting and other common conditions.

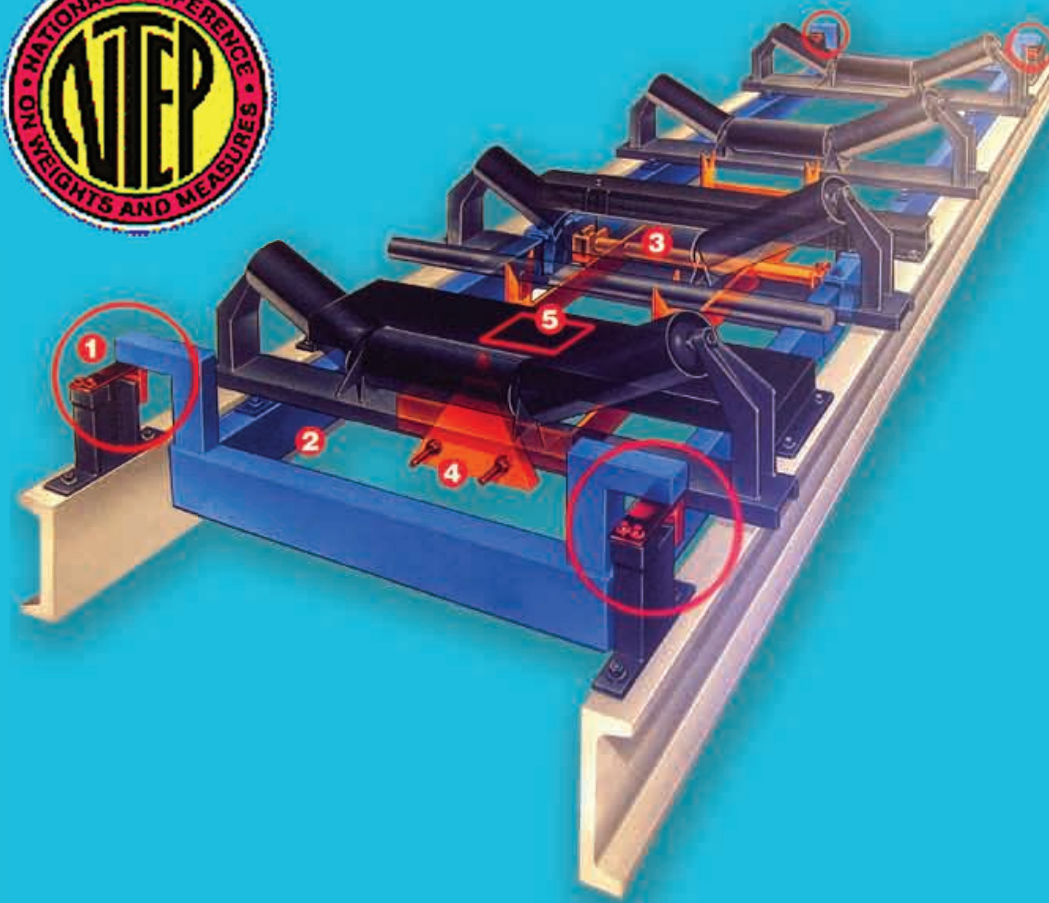
3 Isolation Lever
Provides long term stability by protecting load cell from extraneous horizontal force vectors which can affect repeatability.

4 Mass-counterbalance
Tare weight is mass counterbalanced. Load cell is sized for actual net weight, resulting in superior signal to noise ratio, higher sensitivity and reliable accuracy.

5 Load Cell
Load cell is covered and protected from the environment. With mass-counterbalancing, only net material weight is directed to the sensor, for superior accuracy and repeatability.



6 Belt Speed Measurement
Precision device is located near the weigh bridge and in contact with the load carrying strands of belt. Provides high accuracy with immunity to belt strength errors.



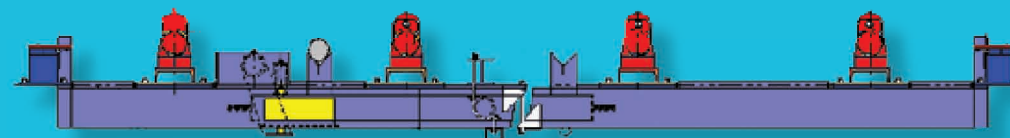
Patented Calibration Method

A belt scale should be thought of as a precision instrument and its performance should be quickly and easily checked. Thayer Scale can provide an accurate reliable calibration using a calibrating weight instead of test chains for all scale capacities. Thayer Scale developed and patented the first automatic calibration system in 1971.

The NAR uses a test weight in the form of a round bar which resides in one of two positions ("V" notches) on an intermediate lever between the approach-retreat suspension and the load cell itself. This bar provides tare counterbalance in its "zero" position, and simulated calibration loading in its "span" position. This method of "test weight" application is referred to as the "moveable-poise" method, in contrast to the additive weight method.

Key advantages:

- Test Weight more manageable. One man operation.
- Loading effect independent of conveyor incline.
- Longitudinal restraining elements not falsely loaded.



MODEL NAR 4 IDLER



MODEL NAR 6 IDLER

The **THAYER NAR Belt Scales** are designed to deliver exceptional stability and accuracy for use in applications requiring verifiable accuracy. They are recommended for applications requiring commercial certification for billing purposes. These Belt Scales have been proven in service demanding $\pm 0.125\%$ accuracy through independent certification. The weigh bridge features exclusive rocking flexure suspension in the approach-retreat configuration. Measurement sensitivity is high, deflection is low, and the load cell is isolated from the error-inducing effects of extraneous lateral forces, off-center loading, foundation distortion, inclination hold-back forces, and high sporadic shocks and overloads. Tare load is mass counterbalanced to create superior signal to noise ratio in weight sensing, orders of magnitude better than belt scale designs supporting full tare load on the load sensor.



THAYER SERIES 5200 INTEGRATOR

The simplest high precision Belt Scale Integrator in industry today, the SERIES 5200 is the product of a careful, well thought-out program to eliminate the fears of many scale users that electronic instruments are too complex for the average plant maintenance man.

- The SERIES 5200 Thayer Scale's new generation of operator interface for control and monitoring of any process weighing and flow control equipment.
- For use with any Strain Gauge or LVDT type load cell.
- Powerful internal 24 bit (1 part in 4,000,000) load resolution produces unparalleled system accuracy.
- Minimal customer wiring. The Scale Unit (SU-5200) mounted at the conveyor gathers load, speed and temperature data and communicates this information to the central processor (CPU) through a 2-wire RS422/485 connection.

*The "NATIONAL TYPE EVALUATION PROGRAM" (NTEP) is a program of cooperation between the NATIONAL CONFERENCE ON WEIGHTS & MEASURES (NCWM), the NATIONAL INSTITUTE FOR STANDARDS AND TECHNOLOGY (NIST), State Weights & Measures Officials, and the private sector for determining conformance of weighing equipment with the provisions of Handbook 44. NTEP provides the testing procedures for each type of device, oversees its testing, and issues a Certificate of Conformance (CC) upon acceptance. The range of operating parameters that a family of devices covered by a single CC can have is restricted and noted on the certificate.



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