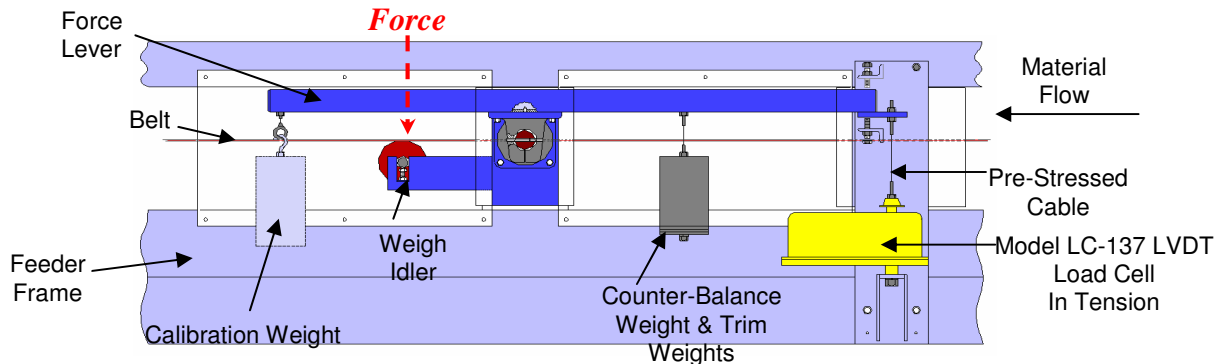




**BUILT SMART  
BUILT TO SURVIVE**

## THAYER "D" Scale System

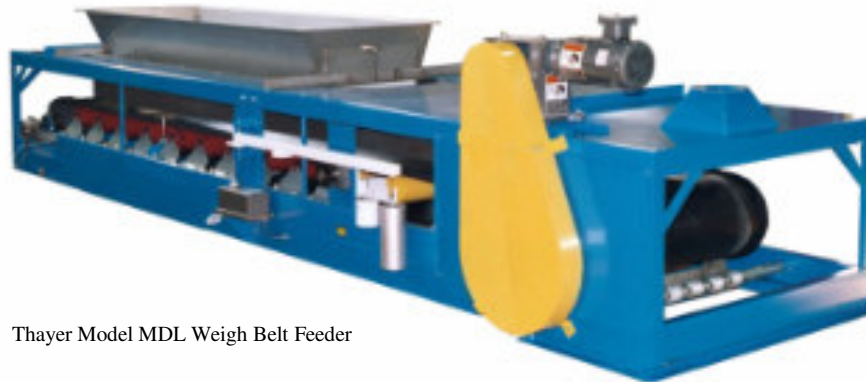


The Thayer Scale Series "D" was first developed for the cement industry where Weighbelt Feeders must operate reliably and accurately around the clock, week after week without encountering opportunity for routine zeroing procedures to be performed. Since the belts remain loaded at all times, the Automatic Zeroing provision is of no use here. During these long periods of continuously loaded belts, the scale is subject to steady material build up on all structural elements and load cells located under or near the belt, as well as the periodic overloads of uncertain magnitude that accompany skirt board pinching in the weighing region of the belt. Conventional conveyor scales have no place in this world of feeding "hard" and lumpy" material during long unattended periods of continuous operation.

### Design Principle:

The "D" Scale System measures the Load Moment as opposed to Load Forces. The load moment is transferred by the *Torque Transfer Shaft* through the feeder enclosure to a load cell and force lever located completely away from and outside of the material handling area. The main structural element of the "D" Scale is a hefty *Torque Tube*, that lies in an axis directly parallel to, and directly below the axis of the *Torque Transfer Shaft*. This unique positioning of the *Torque Tube* is what accounts for the scale insensitivity to material build-up on its only structural element of significant size. The elevation of the Weigh Idler in relation to the *Torque Transfer Shaft* is also positioned for cancellation of idler friction forces. The Load Cell used with the "D" Scale is the Thayer LC-137 (LVDT Type) or the LC-174 NTEP approved Strain Gauge.

Locating the Load Cell and Force Lever outside of the feeder enclosure provides significant advantages as well. The load cell is easy to test, repair, or replace if necessary without disturbing the well aligned idlers. The application of an externally located automatic test weight application and storage device for routine calibration validation is a popular and time saving feature. The "D" Scale is extremely easy to re-rate in the field to accommodate growing processing needs.



Thayer Model MDL Weigh Belt Feeder

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