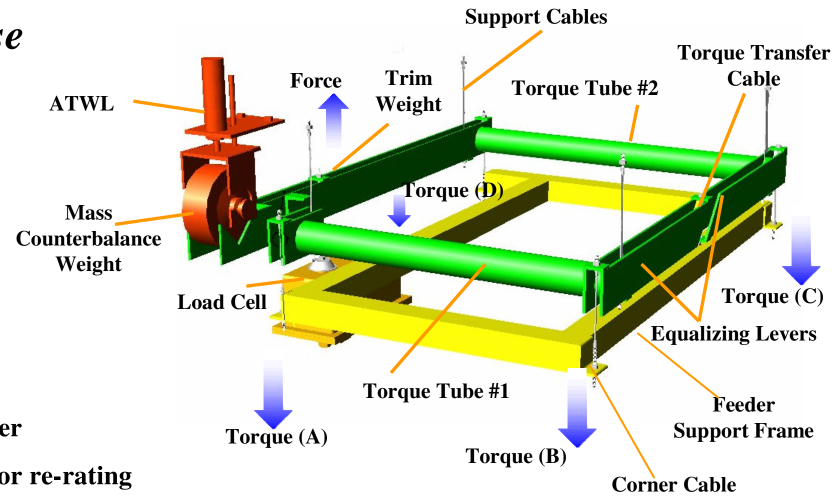
BUILT *SMART*
BUILT TO *SURVIVE*

The Basic THAYER Cable Leverage System

No scale can take more abuse

- Sustained sensitivity without maintenance
- Inherently self aligning to gravity
- Nullifies heavy tare loads
- Adapts to all mounting arrangement
- Tolerates heavy overloading
- Withstands extraneous lateral shocks
- Permits 90+% Load Cell Utilization
- Easily accepts Automatic Test Weight Lifter
- Load cell accessible for easy replace mentor re-rating



The Basic THAYER Load Cell Cable Suspension system has ***no equal*** when it comes to its ability to tolerate the unintentional operator abuse that accompanies frequent equipment cleanout, setup changeovers, equipment re-positioning, and mechanical repair if necessary. This patented system utilizes a series of stainless steel cables in conjunction with Torque Transfer Tubes to accurately focus a force to a tension-type load cell, which is completely independent of load position and precisely proportional to net rather than gross load. The system is adaptable to most load cells whether they are of the strain gauge or linear variable differential transformer type. Because the system utilizes only static components, there are no active elements to maintain, even under severe operating conditions. The cable suspension system is inherently self-aligning to the direction of gravity, and therefore, is not affected by building or foundation strains. It can be hung from the ceiling or mounted on wheels without concern . A final lever with true mass counterbalancing of tare loads permits load cell selection on net rather than gross weight requirements, thereby optimizing system accuracy, sensitivity and stability.

Theory of operation:

1. The sum of the torques generated by each pair of corner cables is proportional to total scale loading, independent of its lateral position .
2. Torque A is added to torque B via torque tube #1.
3. The sum of torque A and torque B is added to torque C through the torque transfer cable and equalizing levers.
4. The sum of torques A, B, and C are added to torque D via torque tube #2.
5. A counterbalance weight is placed on the load cell extension lever and positioned so as to oppose that portion of the summed torques attributable to dead load (tare).
6. The remaining torque is proportional to the net loading and is opposed by the load cell.

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