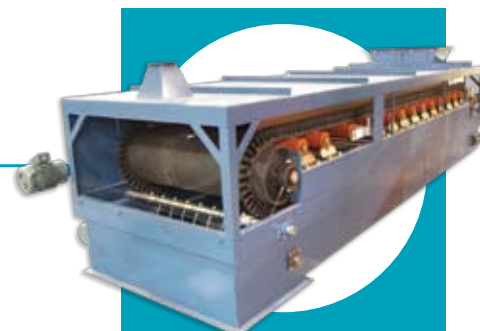


THAYER SCALE

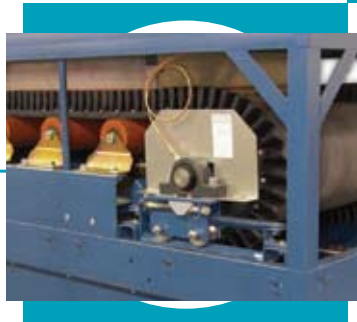
PROCESS MEASUREMENT & CONTROL EQUIPMENT

Heavy Industry Model MDH Weigh Belt

*HIGH ACCURACY
PRECISE MEASUREMENT*



*EXTREMELY RUGGED
DURABLE
RELIABLE*



*EASY TO MAINTAIN
LOW MAINTENANCE*



*SIMPLE OPERATION
EASY CALIBRATION*



MODEL MDH HEAVY INDUSTRY WEIGH BELT FEEDER

Originally designed for steel mill service, Thayer's Weigh Belt Model MDH benefits put it into a class by itself. The Model MDH offers an extremely robust design with an intense commitment to quality and attention to detail. With over 50 years of weigh belt experience THAYER produces a weigh belt that is highly accurate, rugged and dependable. THAYER feeders are built to endure the rigors of high capacity feeding and heavy density materials ranging in particles sizes from fines to 6" lumps. The bottom line of using a THAYER Model "MDH" in your process translates into reduced operating downtime, lower overall cost and quick return on your investment.



BELT TRAVEL PULSER:

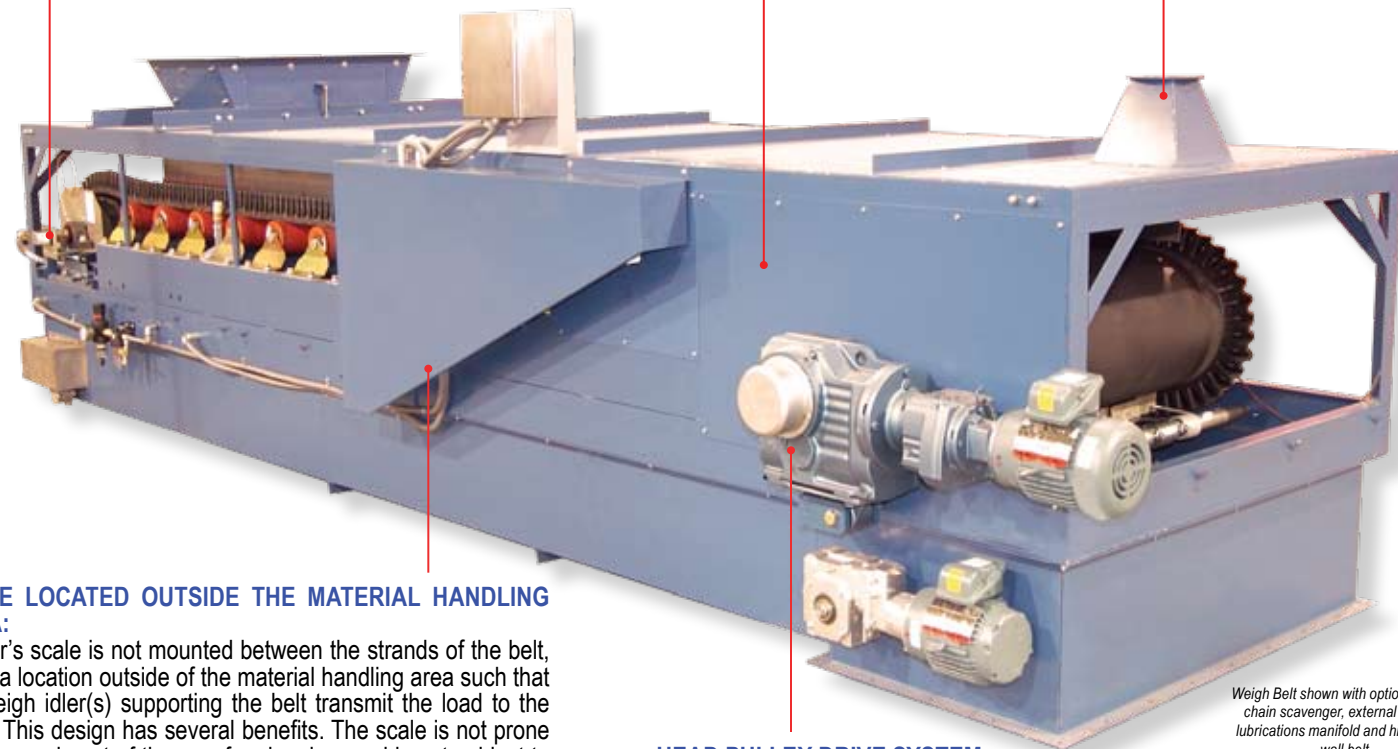
Speed sensing is digital and accurate over an infinite speed range. Rugged speed sensor is coupled directly to the feeder tail pulley not the drive pulley and measures belt speed or belt travel.

WELDED FRAME, QUICK REMOVAL ACCESS PANELS:

THAYER weigh belts are of welded, not bolted, construction. A rigid, welded and box frame construction resists deflection and deformation under heavy loads. Frame distortion adversely affects scale measurement performance. Easy removable covers for access, designed to meet EPA and OSHA standards. Side panels, if included, are removed with quick-release fasteners (no tools required).



Standard Dust Pick-Up



SCALE LOCATED OUTSIDE THE MATERIAL HANDLING AREA:

Thayer's scale is not mounted between the strands of the belt, but in a location outside of the material handling area such that the weigh idler(s) supporting the belt transmit the load to the scale. This design has several benefits. The scale is not prone to damage, is out of the way for cleaning, and is not subject to tare build-up that would change the weight, causing incorrect calibration. Thayer's scales can take high load direct overloads that are caused by operating personnel or by the occasional particle pinching that can occur between the conveyor and the side skirt.

OPTIONAL AUTOMATED TEST WEIGHT LIFTER:

Thayer's Automated Test Weight Lifter (ATWL) mechanism provides a means for applying a known test weight to allow completely automatic calibration. The calibration sequence can be initiated via the weigh belt instrument keypad or via a contact closure. A self-checking software algorithm in the weigh belt instrumentation prevents erroneous calibration. Test weight calibration eliminates the need for test chains.



HEAD PULLEY DRIVE SYSTEM:

Horse power requirement calculations are performed by computer. Also computerized is the selection of shafts, drive chain, gear box and motor. Head and tail pulley are selected in accordance with CEMA standards, with lagging as required. Drive types varies depending on application. Direct shaft mount or chain drives are available. AC or DC motors.

Weigh Belt shown with optional drag chain scavenger, external pulley lubrications manifold and high side wall belt.

PRECISION HEAVY-DUTY IDLERS:

CEMA C, flat precision idlers with maximum eccentricity of ± 0.015 TIR. Precision scale idlers are mounted on individual CEMA brackets, permitting removal to either side without major framework disassembly or belt removal. Idler alignment is critical to minimize transmission of any belt tension force to the scale.

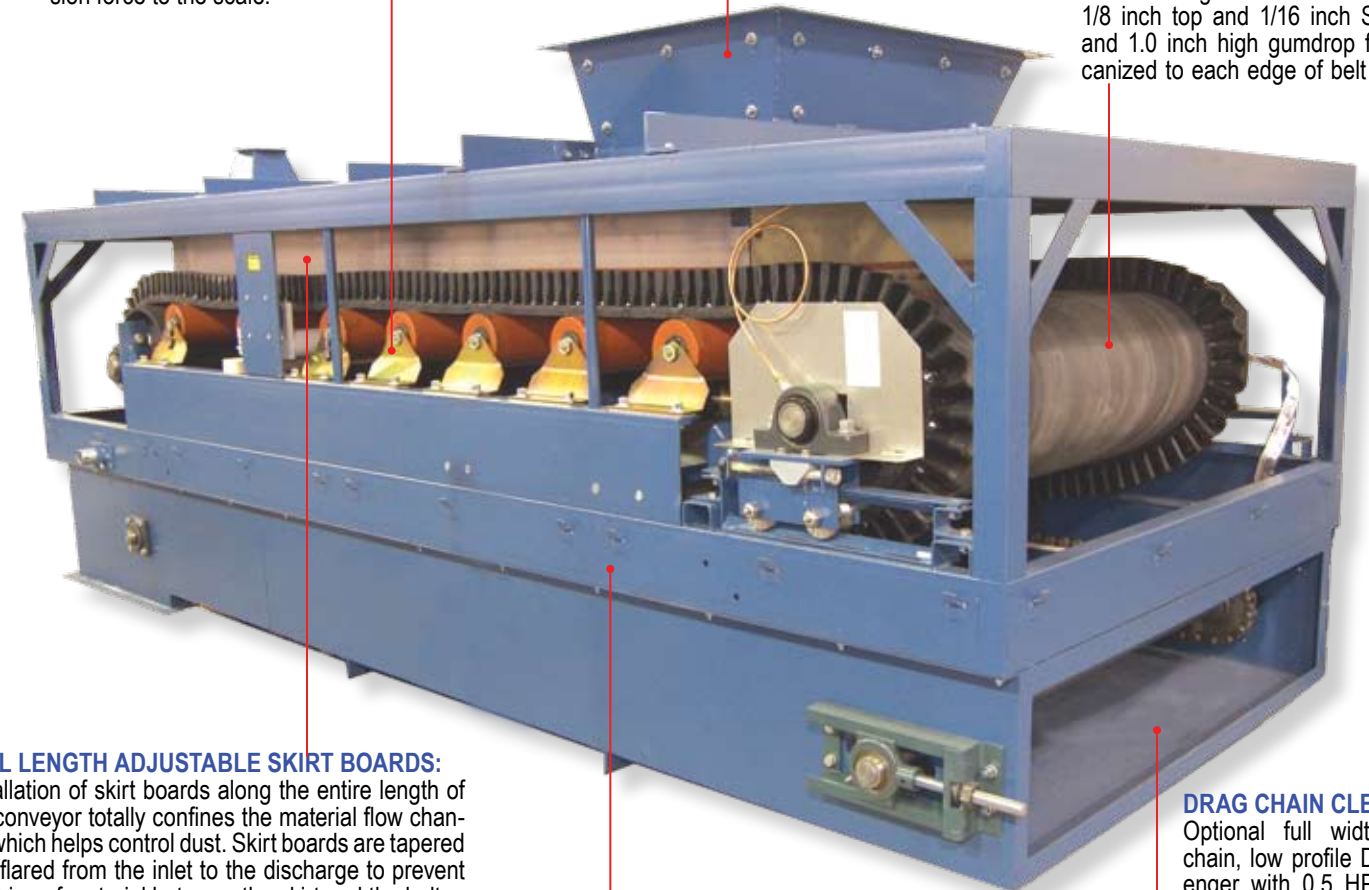
INLET CHUTE:

A major factor in achieving uniform withdrawal from storage bins. THAYER takes very carefully consideration of the inlet section design based on a given material density, particle size and handling characteristics. The correct design allows for maximum efficiency and low energy consumption. Shown with optional removable abrasion resistant liner.



BELT:

2 or 3-ply polyester endless belt with rated tensile strength of 220 PIW complete with 1/8 inch top and 1/16 inch SBR covers and 1.0 inch high gumdrop flanges vulcanized to each edge of belt or 3 1/2 high



FULL LENGTH ADJUSTABLE SKIRT BOARDS:

Installation of skirt boards along the entire length of the conveyor totally confines the material flow channel which helps control dust. Skirt boards are tapered and flared from the inlet to the discharge to prevent pinching of material between the skirt and the belt.

FEEDER FRAME DESIGN

- Heavy channel frame (10" stringer depth) provides rigid support for the material load, belt and idlers.
- Rigid box frame resists deflection and deformation.
- Easy to enclose with removable covers for access to conveyor section.
- Spill hoppers, chutes and scavengers are easily attached for dust removal.

DRAG CHAIN CLEANOUT

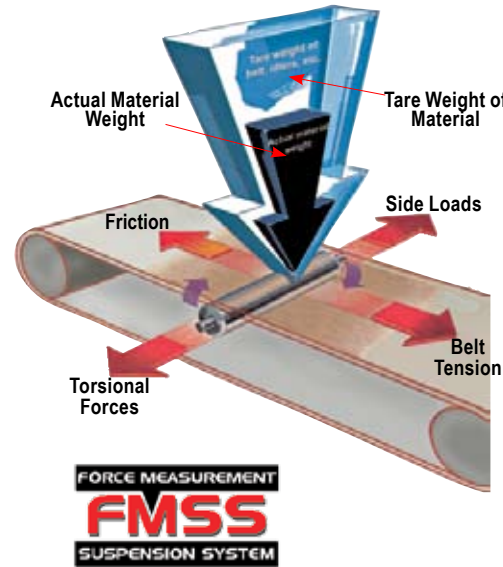
Optional full width, double chain, low profile Drag Scavenger with 0.5 HP AC constant speed motor prevents dust build up on bottom of enclosure. Equipped with removable dust-tight end panels with lift and turn fasteners.



“FMSS” FORCE MEASUREMENT SUSPENSION SYSTEM

Unique technology provides isolation from all force vectors except material weight.

- A load sensor cannot distinguish between the “meaningful” force of material weight and other forces. THAYER Weigh Feeders are engineered to isolate the load sensor from these other forces for highly accurate material weighing.
- Weight sensing system is totally enclosed and requires no maintenance.
- Weight sensing system has infinite over-load protection (mechanical stops) and weight sensor (LVDT) cannot be damaged by shock loads.
- Weight signal represents only material load; the dead load (belt & idler) is completely mass counter-balanced.
- Excessive belt tension forces are eliminated by our head pulley drive and low deflection scale. Friction is defeated by using precision rollers instead of slider decks. Torsional forces, caused by off center loading and side forces, are decoupled from the true force transmission by our weigh scale.
- **Load Cell Utilization Factor >80%**
Because THAYER manufactures the load cell, we can provide a load cell with a capacity that is closely matched to the actual maximum material weight. The tare weight of the weigh idler and belt are mass counterbalanced. We design our scales such that the maximum material weight is always > 80% of scale capacity. This results in the best possible signal resolution. This flexibility is not possible with strain gauge load cells, which tend to be available in standard capacities of 10, 50, 100, 200, 500 lb., etc. Thayer’s rugged load cell design assures reliable operation for the life of the weigh belt. Because our load cells never fail, they are not a recommended spare part. Unique technology provides isolation from all force vectors except material weight.
- Force vector isolation is a Thayer Scale technological advantage. It is one of the best reasons to buy from the weigh feeder experts at Thayer Scale.



PROCESS INSTRUMENTATION

Thayer Scale manufactures a wide range of instrumentation products that can be configured to operate either a single or multi-feeder operation in either batch or continuous mode. Features include programmable analog and discrete I/O, multi-level password protection, RS232 and RS485 serial communications and a wide range of PLC/PC communications drivers and device level interfaces including DeviceNet, Profibus-DP, and Ethernet/IP.

High quality, professionally fabricated, custom packaging is available including feeder systems for use in hazardous areas, free standing control cabinets and fully integrated weigh feeder/PLC control systems.



PRODUCTS & MARKETS SERVED

Thayer Scale supplies the world with process measurement & control equipment with emphasis on solids flow weighing and metering. Our products include” Loss-In-Weight , Weigh Belt Feeders, Conveyor Belt Scales, Measurement & Control Instrumentation and Bin & Hopper Material Flow Aids. The markets we serve include: Forest Products, Plastics, Food, Chemicals and Cement to name a few.

MAJOR PRODUCTS & TECHNOLOGIES

- Patented “FMSS” Force Measurement Suspension System Cable Scales
- Patented Loss-In-Weight “Differential_{TM}” Screw Feeder
- Patented “Nodal-Membrane” Vibratory Tray Feeders.
- Patented “Spiralator” Hopper Agitator
- Patented “Rocking Flexure” Belt Scales
- Patented “PF” Volumetric Screw Feeder
- Patented “Bridge Breaker_{TM}” Bin & Hopper Dischargers.
- Low Feed Rate “Miniature” Weigh Belt & Loss-In-Weight Feeder.
- “NAR” NTEP Approved commercial grade Conveyor Belt Scales (approved for legal trade).
- “SI” Insertion Weigh Belt Feeder and Scale.
- “MFLI” Mass Flow Liquid Injection System.
- High Capacity, Heavy Industry Weigh Belts.
- Modular, Singular or Multi Feeder Continuous or Batch Control Systems.



SUPPORT SERVICES

TEST FACILITY:

Thayer Scale operates a fully equipped dry particle test center in a dedicated wing of our Massachusetts facility. A full time staff performs product application and performance testing with user supplied materials. The facility is designed to duplicate as closely as possible industrial processing conditions.

SERVICE:

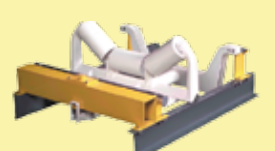
Thayer Scale has a well trained professional service department with an outstanding record of longevity, experience and achievement. Thayer’s technicians are available for start-up support, inspection, diagnosis and repair service, routine maintenance and material testing services.

TRAINING:

Thayer Scale offers formal training either here at the factory in Pembroke, MA or at the customers plant. Each training class is tailored to the specific instrumentation and mechanical equipment used in their facility.



Volumetric Feeders



Conveyor Belt Scales



Tote Batch Systems



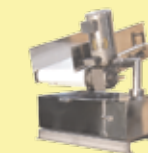
Material Flow Aids



Heavy Duty, High Capacity Weigh Belts



Process Instrumentation



Specialty Weigh Belts



Loss-In-Weight Feeders



Low Capacity Weigh Belts

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Model MDH 08

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