

THAYER SCALE

PROCESS MEASUREMENT & CONTROL EQUIPMENT

Weigh Feeders and Scales for the Food Industry

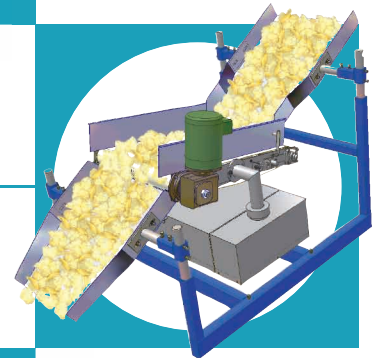
LOW DENSITY WEIGH BELT FEEDERS



LOSS-IN-WEIGHT FEEDERS



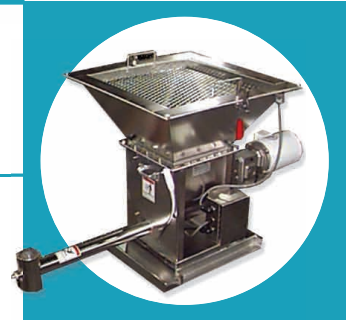
SPECIALIZED WEIGH BELT FEEDERS AND SCALES



HIGH CAPACITY WEIGH BELT FEEDERS AND SCALES



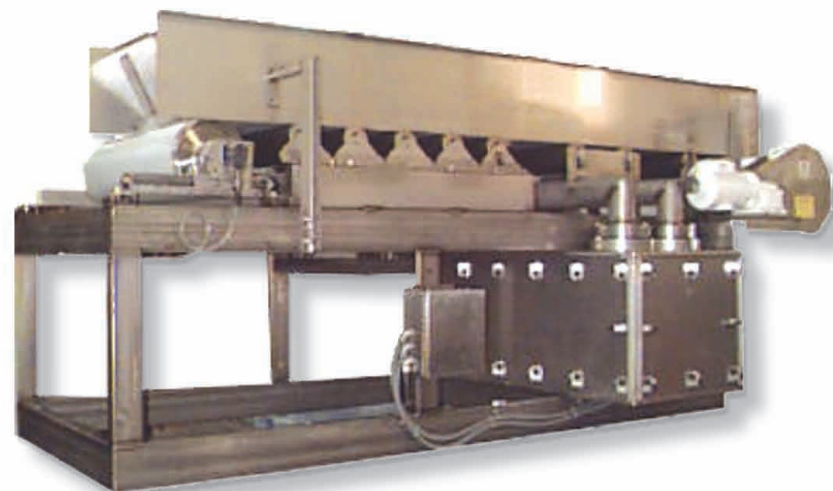
VOLUMETRIC SCREW FEEDERS



THAYER SCALE EQUIPMENT-COMplete SYSTEM INTEGRATION

SANITARY LOW DENSITY, HIGH CAPACITY WEIGH BELTS

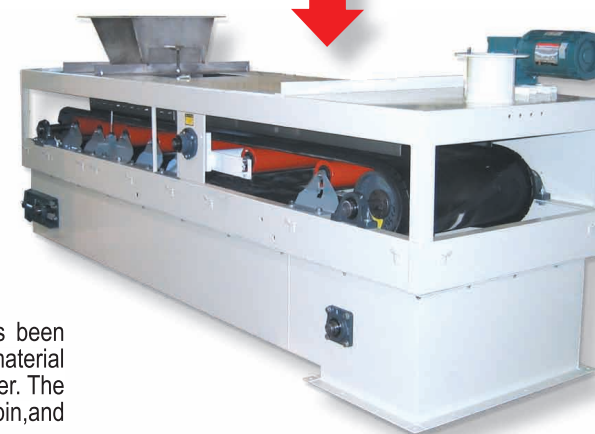
Thayer Scale's Model "M" Low Density Feeder line has been specifically designed for weighing bulk materials having densities under 10 lb/ft³. These feeders find applications in raw ingredient weighing such as rice, wheat and corn as well as finished products such as cereals and snacks (chips and flakes) Without question, Thayer Scale has more experience than any other manufacturer in weighing these low density materials. With an outstanding performance record in over 1,000 installations, the THAYER Model "M" Low Density Weigh Belt Feeder represents the standard to which all others are compared. Many of these feeders have been in operation for more than 30 years with the only modifications being instrumentation upgrades to better suit the interconnection needs of modern-day automation schemes, or re-rating of either the load or speed range to accommodate line capacity changes.



HIGH CAPACITY WEIGH BELTS

The Models MD and MDL Weigh Belts are widely recognized mainline industrial grade continuous weigh belt feeders for low density, high density and multi-density bulk materials. They can be used with an open loop belt drive to gravimetrically totalize and measure the flow of material, or with closed control as a feeder and regulate the flow to a constant or dynamic setpoint

Unlike conventional weight sensing systems wherein the weigh idler is directly coupled to a series of load cells, the Model MD and MDL weigh belts incorporate a unique Force Measurement Suspension System (FMSS) interposed between the weigh idler and a single load transducer. The FMSS is a NET weighing system that counter-balances dead load so that the entire range of the load transducer is available for weighing the material. The FMSS also prevents erroneous horizontal force vectors from being interpreted as changes in weight for unsurpassed resolution and weight measurement repeatability.



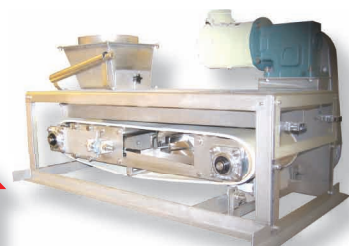
"LWF" PORTABLE BIN FEEDERS

Right from bin to batch. These exclusive feeders use standard portable bins as the material supply hopper. Material in the bin is automatically transferred to the feeder surge hopper, from which it is metered using any one of our discharge feeders (screw, vibratory, etc.). You get high accuracy loss of weight feeding while maintaining all of the material handling and inventory benefits of your portable bin system.

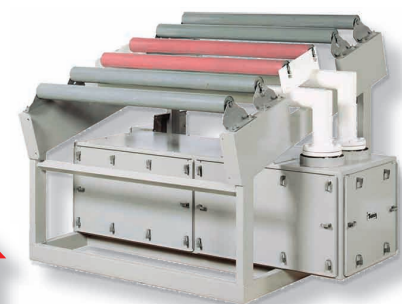
A stand to receive either side or bottom discharge portable bins is built into the scale system. Side discharge stands are equipped with hydraulic tilt mechanism. Automatic test weight is a standard feature of this design

SANITARY LOW RATE WEIGH BELT

The MWF-101 Weigh Belt Feeder provides Thayer Scale accuracy, ruggedness and reliability and reduces measurement errors. Self cleaning pulley eliminates material build-up and belt tracking problems. Unique flared skirt design prevents material spillage and assures proper feed control. Rigid scale support system provides exceptional stability, assuring accuracy without frequent re-calibration.

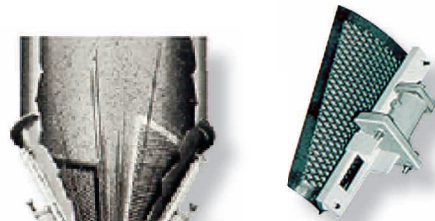


Belt velocity is measured from the tail pulley, not the drive motor, providing a direct measurement of belt speed which improves both measurement and control of the material. Totally enclosed, gasketed design assures safe, dust free operation even when handling fine powder. The strain gauge load cell assembly can be easily removed then reinstalled without re-calibration of the feeder.



"MODEL "FP" BELT SCALE

THAYER "FP" Belt Scale is a unique weighing scale specifically designed to accurately weigh "low density" materials. Weighing deck typically consists of 2 to 6 flat idlers, mounted either horizontally or at an incline of up to 15 degrees, depending on material handled. It can be used in new installations or can be seamlessly integrated into an existing conveyor. Typical applications include cereals, snack foods, pet foods, wood fibers, paper waste, tobacco, and textiles (bulk densities ranging from 0.5 to 25 pcf).



BRIDGE BREAKER

The patented THAYER BRIDGE BREAKER™ has been designed to continuously break the arch of the material as it attempts to bridge between the walls of a hopper. The BRIDGE BREAKER vibrates the material-not the bin, and prevents an arch or rat-hole from forming.

FOOD INGREDIENTS HANDLED WITH THAYER EQUIPMENT

WHOLE CORN

RAW RICE

STEAMED RICE

PUFFED RICE

CRISPED RICE

RAISINS

POTATO CHIPS

CORN CHIPS

TORTILLA CHIPS

CHEESE PUFFS

CHEESE DOODLES

WHEAT FLOUR

CORN FLOUR

RICE FLOUR

MILK WHEY

MILK POWDER

SALT

COFFEE

DRIED BLUE BERRIES

DRIED BANANAS

BETA CAROTENE

SLICED ALMONDS

WHOLE PEANUTS

PRETZELS

CHEESE WHEY

CHOCOLATE

COCOA BEANS

CONFECTIONERY SUGAR

10X SUGAR

CANDY

LICORICE

WHOLE EGGS

BRAN

CORN STARCH

CORN FLAKES

COCOA POWDER

DORITOS

ROLLED OATS

RICE CAKES

RICE CRISPS

CURD

VITAMINS

TSP

COCONUT

MARBITS

SOYBEAN OIL

CINNAMON SUGAR

MALT

FROSTED FLAKES

CRACKERS

GRANOLA

SPICES

VEGETABLES

BEETS

CELERY STALKS

TOFFEE CHIPS

GERM

CROUTONS

CALCIUM

GRITS

ORANGE PEELS

CARROTS

OATS

BAKING SODA

TRISODIUM PHOSPHATE

CALCIUM CARBONATE

DRIED STRAWBERRIES

MALT

PRUNE POWDER

FROSTED FLAKES



POWDER FEEDER™

Patented "U-Trough" feed chamber with independently driven agitator assures precise, reliable delivery of material to the feed screw.

Eliminates material build-up, controls material aeration and delivers a steady and constant flow of material.

Trough is designed for fast, easy, and thorough clean out. Feeder completely disassembles in less than one minute. High quality, rugged, stainless steel construction assures years of reliable, trouble free operation.

THAYER SCALE PROCESS MEASUREMENT & CONTROL EQUIPMENT FOR THE CEREAL AND SNACK FOOD INDUSTRIES



PROCESS INSTRUMENTATION

Thayer manufactures a wide range of state of the art instrumentation that can be configured to operate either a single or multi-feeder in operation. Supports serial communications and a wide range of device level buses.



VIBRATORY LOSS-IN-WEIGHT FEEDER

The LWF-18L-V Spiralator Loss-In-Weight Vibratory Feeder is designed to operate over a wide feed range typically 100:1, while assuring uniform, non-pulsating flow of difficult-to-discharge materials, whether they be fine cohesive powders or fragile interlocking particles or irregular shapes. A slowly rotating, non-agitating, conical wire-spiral within the hopper counteracts the material's tendency to pack under its own weight by virtue of a "lifting" action throughout the stored material. The resulting reduction in consolidation pressures throughout the material mass assures that the stored material will not develop sufficient strength to form stable arches that can cause erratic flow or complete flow stoppage. The combination of this unique material conditioning system and a vibrating pan feeder insure that the material will be handled reliably and gently throughout the entire feeding range.

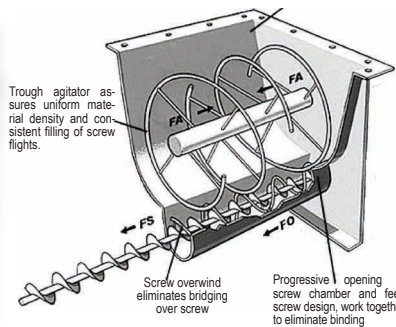


LOSS-IN-WEIGHT CABLE SCALE SCREW FEEDER

Thayer Scale Loss-In-Weight feeders are designed to provide precision class accuracy and repeatability even in the harshest of industrial environments. They range in capacity from grams per minute to tons per hour.

These are the most versatile feeders in the industry. At the heart of each Loss-In-Weight Feeder is a THAYER scale that has been designed exclusively for the stringent requirements of Loss-In-Weight feeding.

Thayer Scale offers a powerful set of proprietary add-on accessories that are designed to defeat the problematic flow issues encountered by industry such as bridging, flushing, adhesion and cohesion. Comprehensive process solutions that can only come from a company with over fifty years experience.

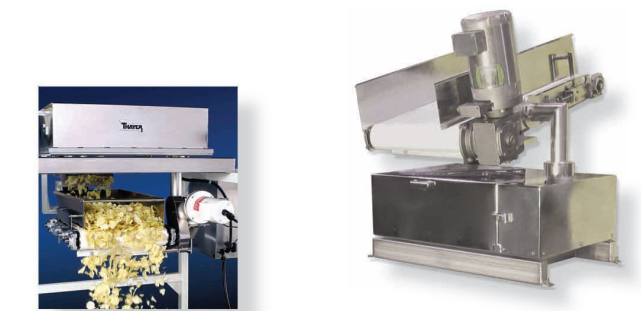


MODEL MXL LD WEIGH BELT

The Low-Density "MXL" is the only low capacity weigh feeder designed specifically to handle low-density materials. Because the weight sensing system in the Low-Density "MXL" is engineered exclusively for these types of materials, it can deliver consistently accurate performance. Thayer Scale engineers developed the technology for reliable weigh feeding of low-density materials. In these specialized applications, our Low-Density Weigh Feeders have proven record of significantly more reliable and accurate performance than "standard" weigh feeders.

MODEL MXL WEIGH BELT

Model "MXL" Weigh Belt Feeders meter various materials reliably and accurately for years on end, needing only minimal care to maintain peak performance. The rugged "MXL" is constructed with heavy-duty components and a welded steel body to assure long life in severe environments. The highly accurate THAYER Load Cell used in the "MXL" is totally isolated from heat, dust, and particle jamming present in the material flow channel, eliminating a major source of performance and repair problems. The "MXL" is flexible with a full range of enclosures and scavenger systems for dusty materials available to suit any process needs.



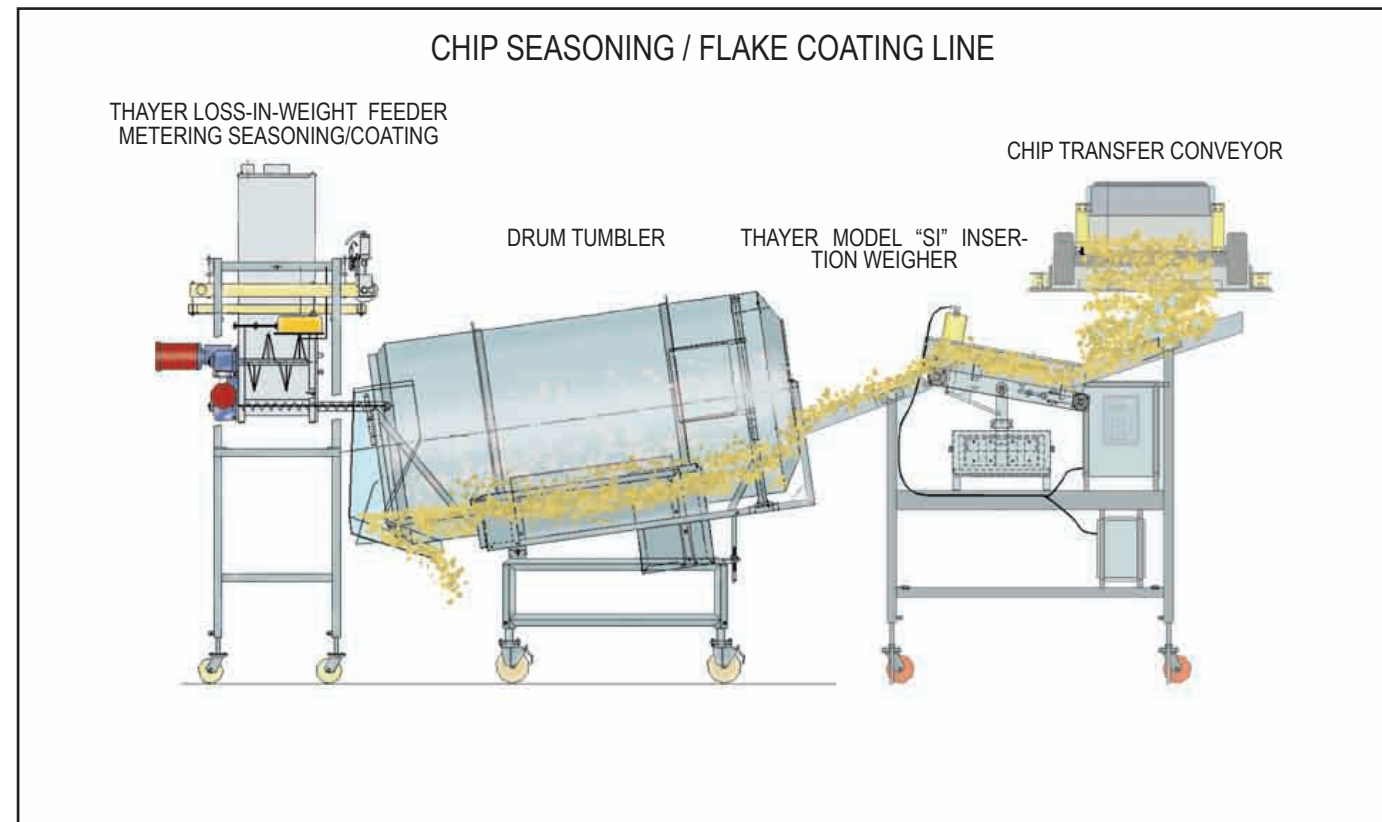
MODEL "SI" INSERTION WEIGHER

The Series "SI" gravimetric scales are designed for continuous control and/or measurement of solid material which can be conveyed on a belt in applications where space is limited. This unit can be applied singularly or in combination for batch weighing, proportioning, blending, metering or inventory control.

Depending on the material handled, the scale's pre-feeder can be screw, rotary, belt, vibratory or pinch valve. Screw, rotary or pinch valve pre-feeders are normally used with fluid powders, while belt and vibratory pre-feeders are used with granular or fibrous materials.

Scale: The "SI" Weigher uses Thayer Scale's patented Model 15L precision flexure plate suspension scale with FMSS technology. The scale provides for complete mass counterbalancing of the dead load of the conveyor, permitting the load sensor to react only to the net material load. This unique system is not affected by dirt, shocks or vibration, and can withstand overloads in excess of 1,000 pounds without causing damage or affecting calibration. The highly advanced and extremely robust sensing technology is based on the marriage of the LVDT, embedded temperature sensing and proprietary linearizing and temperature compensating algorithms. The scale is mounted above or below the conveyor, which is totally suspended. This design eliminates belt effects and permits immediate scale response when the flow rate varies.

Conveyor: Conveyor is heavy-duty construction, employing standard industrial pulleys. Conveyor belting is endless and is normally furnished with a molded edge flange. Side skirts are also supplied to eliminate side spillage. Since load measurements are not affected by the physical characteristics of the belting and its supporting means (belt stiffness, sliding friction, belt non-uniformity, splice effects, tension/misalignment interaction, etc.) the type of belting construction and its material can be chosen on the basis of durability and belt-tracking ability without concern for accuracy compromise. The unique cantilevered conveyor support makes it possible to replace belting without dismantling the conveyor.



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



Process Instrumentation



Loss-In-Weight Feeders



Heavy Duty, High Capacity Weigh Belts



Specialty Weigh Belts



Low Capacity Weigh Belts

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