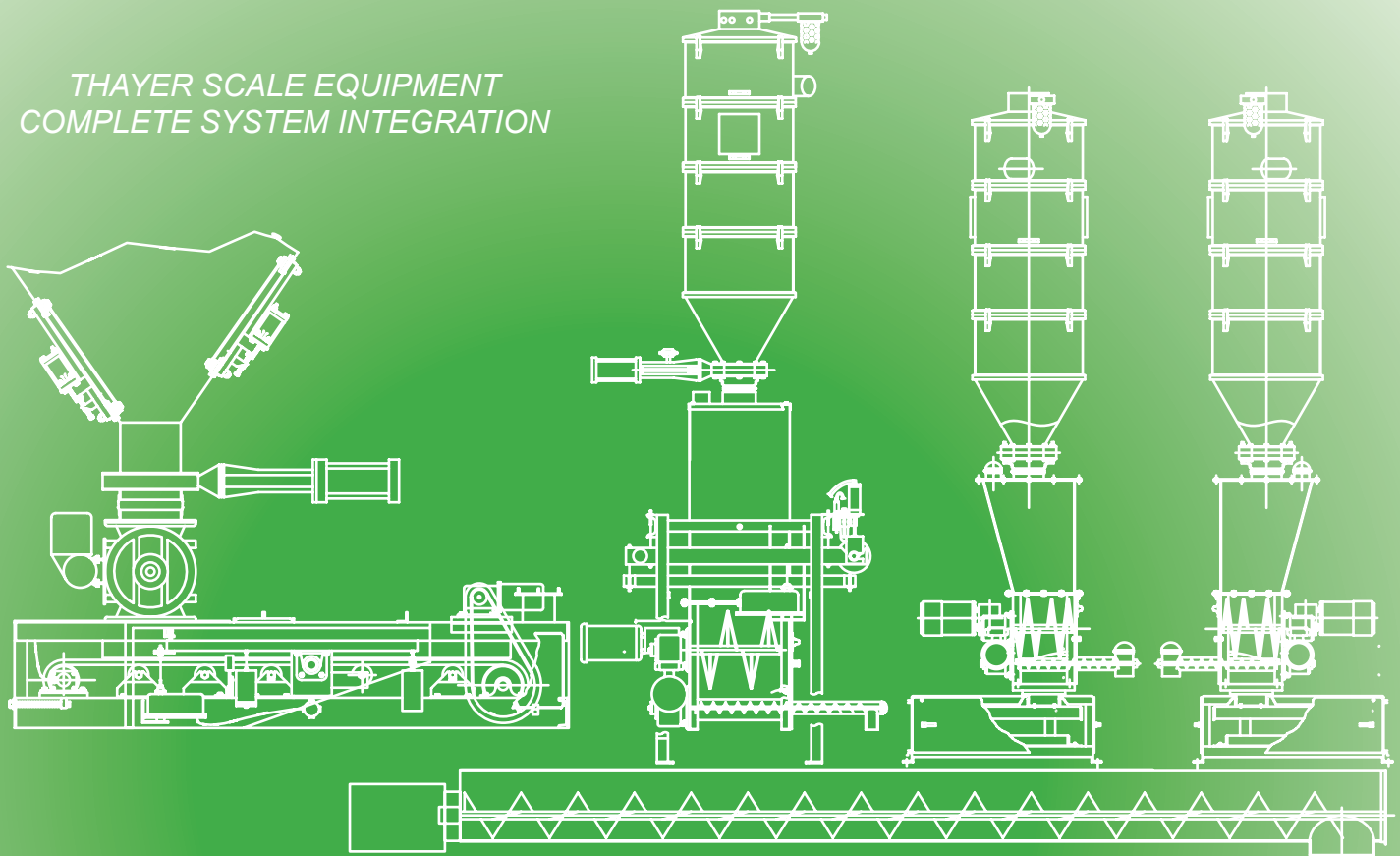


THAYER SCALE

PROCESS MEASUREMENT & CONTROL EQUIPMENT

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

*THAYER SCALE EQUIPMENT
COMPLETE SYSTEM INTEGRATION*



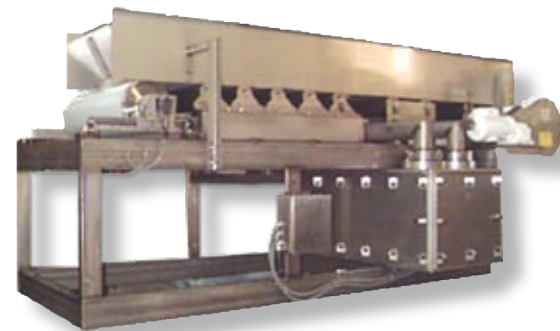
THAYER SCALE EQUIPMENT FOR THE FOOD INDUSTRY



HIGH CAPACITY WEIGH BELTS

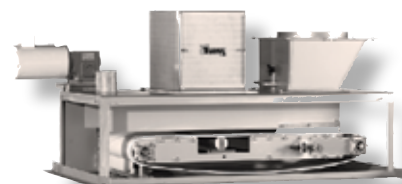
The Models MD and MDL Weigh Belts are widely recognized mainline industrial grade continuous weigh belt feeders for low density, high density and multi-density bulk materials. They can be used with an open loop belt drive to gravimetrically totalize and measure the flow of material, or with closed control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



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.



MODEL MXL WEIGH BELT

Model "MXL" and MXL-LD 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.

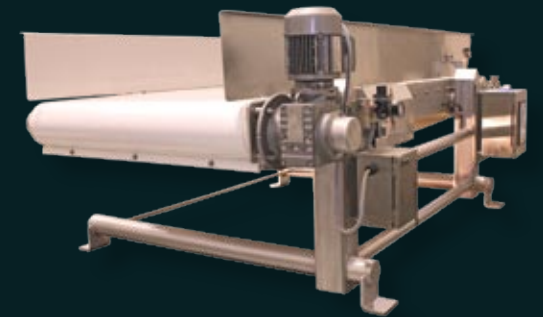
MODEL MWF-ES

Thayer Scales's new Model MWF-ES Sanitary Enclosed Construction Weigh Belt Feeder is used for processing of snack food, cereal, pasta, pet food or any other application where hygiene and ease of cleaning is important. The MWF-ES frame is constructed from 304 or 316 stainless steel and is designed for "no-tools" disassembly. The Model MWF-ES can provide either "closed loop" gravimetric control of material feed rate or precise convey rate measurement and totalization of an uncontrolled or intermittent material supply.



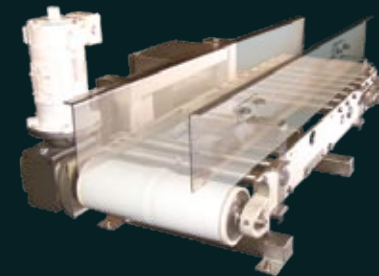
Model WB-SGSP-OS SANITARY Weigh Belt

Thayer Scale's sanitary Model WB-SGSP-OS is manufactured with all stainless steel and food grade components and is suitable for constant wash down environments. Its construction provides the food industry with a consistently accurate, low capacity weigh feeder that is easy to maintain with minimal downtime. Can be completely washed down with no tools needed for disassembly. All sensitive scale components are located outside the material handling area and are isolated by covers and other protective devices that guard against the often destructive forces generated from even normal cleaning practices.



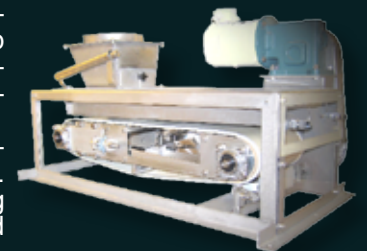
MODEL "MWF-OS" SANITARY WEIGH BELT

Thayer Scales's new Model "MWF-OS" Sanitary Open Construction Weigh Belt Feeder is used for the processing of snack food, cereal, pasta, pet food or any other application where hygiene and ease of cleaning is important. The Model "MWF-OS" uses a rugged open frame construction, made from 304 or 316 stainless steel and is designed for "no-tools" disassembly. The Model "MWF-OS" can provide either "closed loop" gravimetric control of material feed rate or precise convey rate measurement and totalization of an uncontrolled or intermittent material supply.



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 "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.

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.

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.





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.

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.

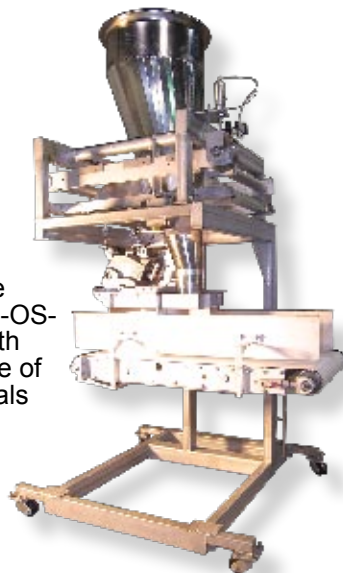


LOSS-IN-WEIGHT CABLE SCALE SCREW FEEDER

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.



CASCADE BLENDER

The "CASCADE BLENDER" is unique combination of a Thayer Loss-In-Weight Cable Scale with a electromagnetic vibratory feeder metering minor ingredient and Thayer's Model MWF-OS-24 open construction sanitary weigh belt for monitoring the major ingredient material flow. Both feeders are mounted on a common portable stand along with instrumentation. The discharge of the minor ingredient is situated above the discharge of the weigh belt so that the two materials are blended as they cascade into the takeaway conveyor going to the packaging line.

LIQUID BATCH FEEDERS

Liquid batch feeders utilize many of the same features as our dry powder Loss-In-Weight Feeders. Thayer Scale's patented FMSS technology scales are used to assure high accuracy and repeatable batching of liquids regardless of viscosity, pressure or temperature.



"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.

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).



FLOW AIDS

Bridge Breaker® Flow Aids, both custom designed and universal models for installation in existing bins, chutes or hoppers to reliably discharge materials which have a tendency to bridge, arch, or rat-hole.

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 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.



SOME OF THE MATERIALS HANDLED WITH THAYER EQUIPMENT

DRIED BLUE BERRIES	COCOA POWDER	BEETS	WHOLE CORN
DRIED BANANAS	DORITOS	CELERY STALKS	RAW RICE
BETA CAROTENE	ROLLED OATS	TOFFEE CHIPS	STEAMED RICE
SLICED ALMONDS	RICE CAKES	GERM	PUFFED RICE
WHOLE PEANUTS	RICE CRISPS	CROUTONS	CRISPED RICE
PRETZELS	CURD	CALCIUM	RAISINS
CHEESE WHEY	VITAMINS	GRITS	POTATO CHIPS
CHOCOLATE	TSP	ORANGE PEELS	CORN CHIPS
COCOA BEANS	COCONUT	CARROTS	TORTILLA CHIPS
CONFECTIONERY SUGAR	MARBITS	OATS	CHEESE PUFFS
10X SUGAR	SOYBEAN OIL	BAKING SODA	CHEESE DOODLES
CANDY	CINNAMON SUGAR	TRISODIUM PHOSPHATE	WHEAT FLOUR
LICORICE	MALT	CALCIUM CARBONATE	CORN FLOUR
WHOLE EGGS	FROSTED FLAKES	DRIED STRAWBERRIES	RICE FLOUR
BRAN	CRACKERS	MALT	MILK WHEY
CORN STARCH	GRANOLA	PRUNE POWDER	MILK POWDER
CORN FLAKES	SPICES	FROSTED FLAKES	SALT
	VEGETABLES		COFFEE

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 Feeder, 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™" 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™" 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 FACILITIES:

Thayer Scale operates three fully equipped dry particle test centers in a dedicated wing of our Massachusetts facility. A full time staff performs product application and performance testing with user supplied materials. These facilities are 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 customer's plant. Each training class is tailored to the specific instrumentation and mechanical equipment used in their facility.



MADE IN USA

