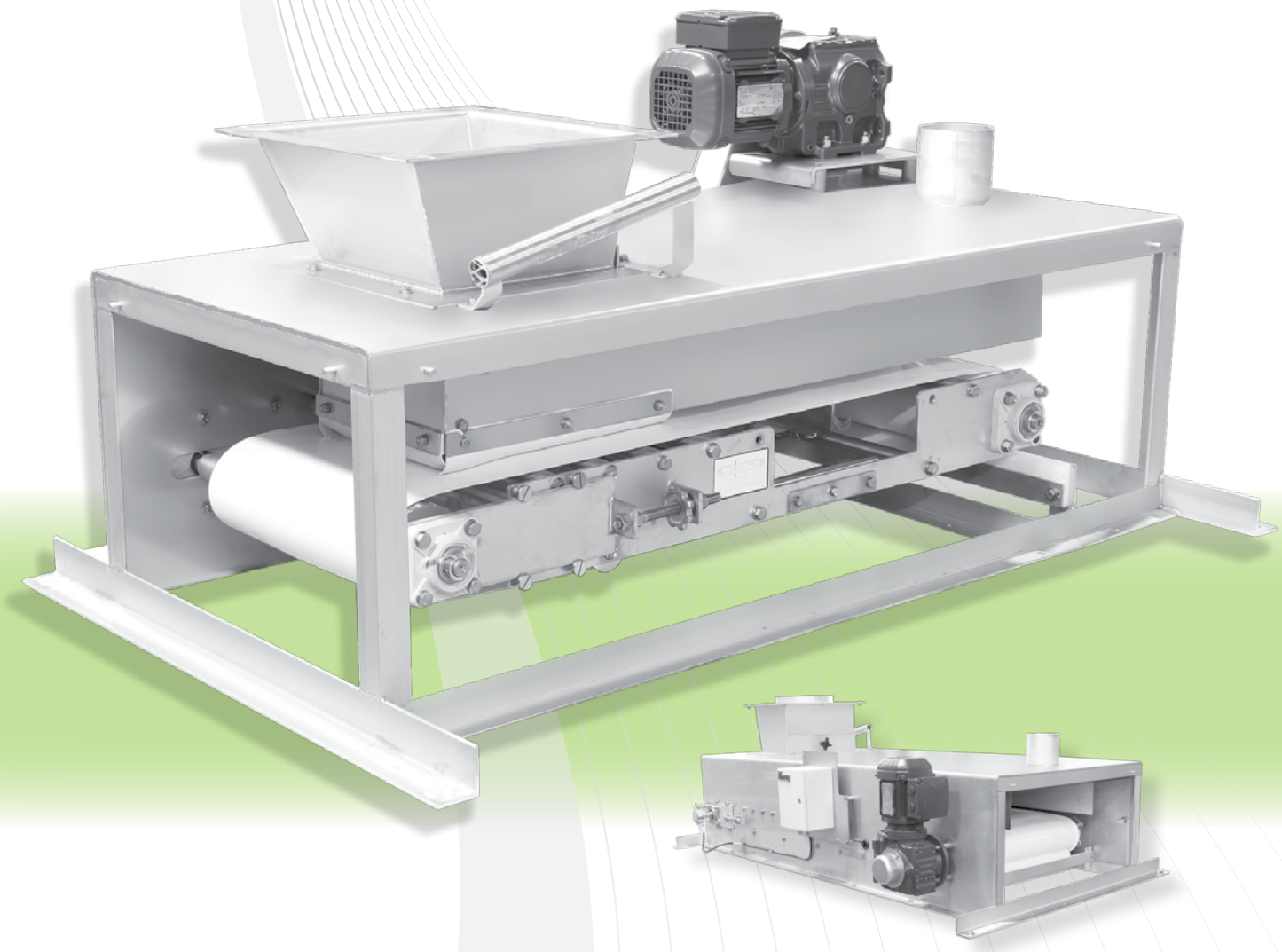
# THAYER SCALE

CONTINUOUS WEIGHING & FEEDING OF BULK MATERIALS

## MODEL MWF-101 WEIGH BELT

RUGGED
COMPACT
HIGH ACCURACY
EASY DISASSEMBLY



# MODEL MWF-101 Light Industry, Compact Weigh Belt Feeder

Thayer Scale's Model MWF-101 is a widely recognized general purpose low capacity weigh belt feeder designed to operate accurately and reliably in harsh industrial environments with minimal maintenance. It can be used with an open loop belt drive to gravimetrically measure the flow of material, or with closed loop control to operate as a feeder and regulate the flow to a constant or dynamic set point.

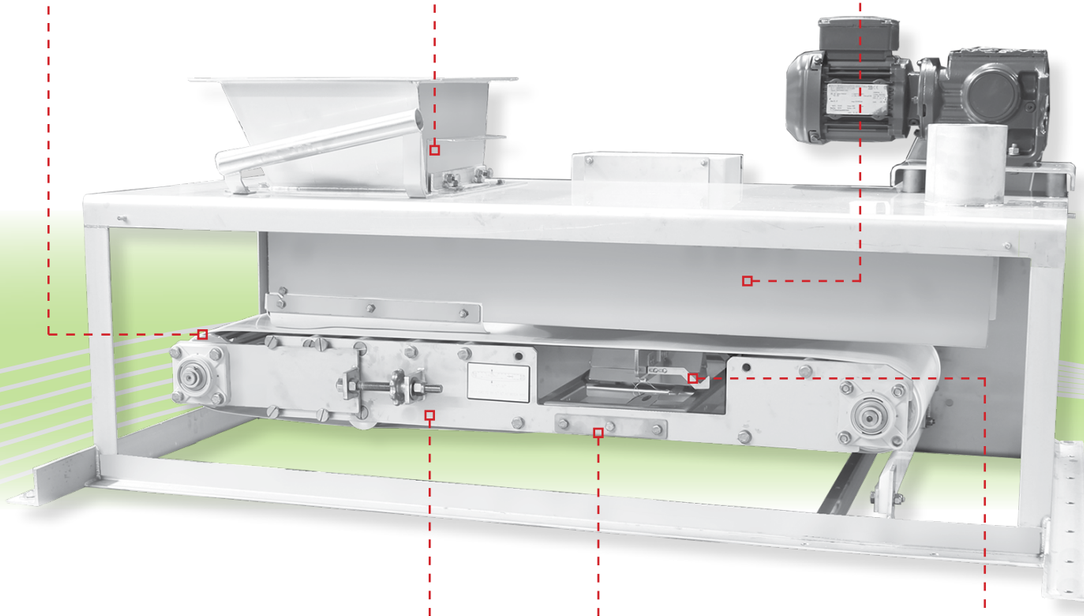
A standard design coupled with dimensions and ratings that are tailored to each application add versatility to its capabilities. Its design for ease of maintenance and change of its ratings gives it a long useful life in a rapidly changing industrial environment.

When connected to the THAYER family of instrumentation it can be consistently and accurately calibrated and the measurements can be presented to operators and supervisory controls seamlessly through a variety of standard industrial interfaces. The instrument can control the flow of material as a master feeder or as a slave proportioning its feed rate to some other master signal.

SELF CLEANING TAIL PULLEY:
Self Cleaning Tail Pulley is not affected by material build up and therefore eliminates the need for an internal belt scraper and belt tracking mechanism, simplifying conveyor maintenance.

POSITIVE MATERIAL FLOW CONTROL:
Level gate can be controlled without opening the feeder enclosure. Interchangeable inlet sections are available to suit a variety of materials.

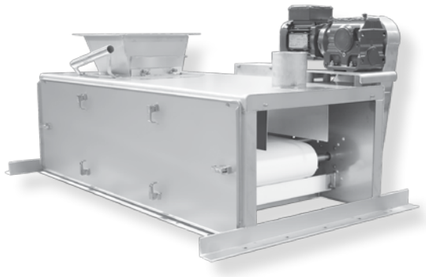
ADJUSTABLE SKIRT BOARDS:
Skirt boards are both adjustable and removable, permitting quick access for cleaning.



CANTILEVERED BELT FRAME:
Permits easy cleaning or removal of belt without disassembling feeder.

SLACK BELT DESIGN:
Low belt tension increases belt life, produces more stable measurement and eliminates the need for belt tensioning and belt tracking devices.

CALIBRATION TEST WEIGHT
(shown with optional Automatic Test Weight Lifter)



ENCLOSURES:
Removable covers along sides and ends, with bottom open and top enclosed.

## THAYER SCALE MODEL MWF-101 WEIGH BELT FEEDER

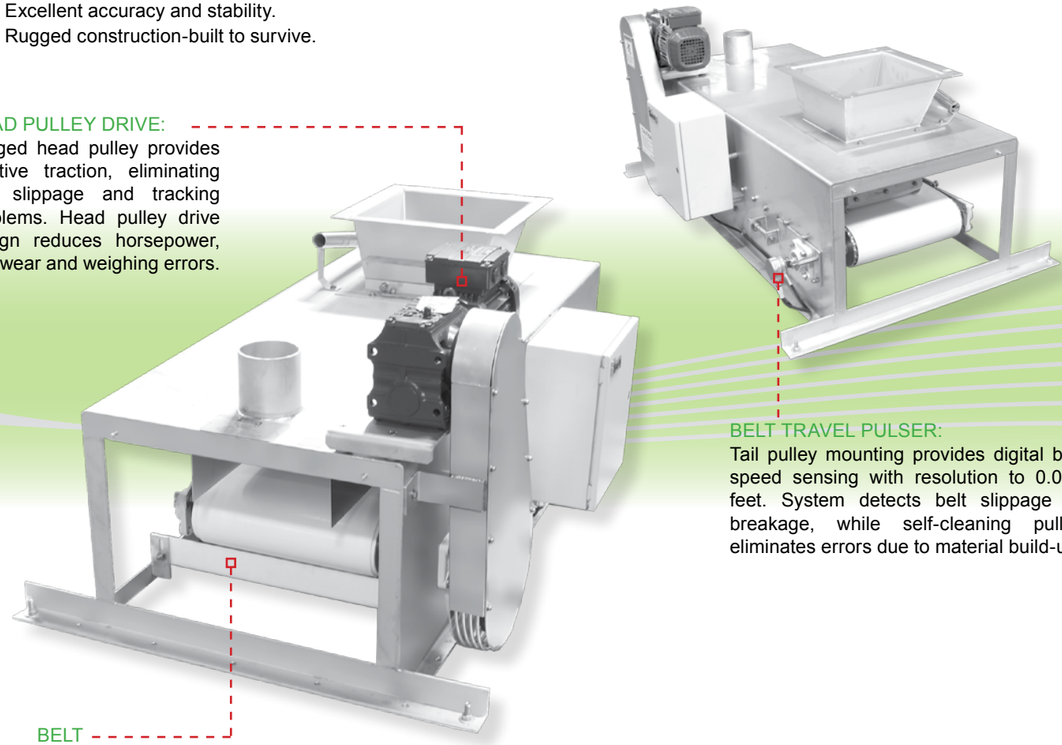
The MWF-101 Weigh Belt Feeder provides Thayer Scale accuracy, ruggedness and reliability and reduces measurement errors. Self cleaning pulley eliminates material build-up and belt tracking problems. Unique flared skirt design prevents material spillage and assures proper feed control. Rigid scale support 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.

A standard design coupled with dimensions and rates that are tailored to each application add versatility to its capabilities. Its design for ease of maintenance and the ability to change its throughput rating gives it a long useful life in a rapidly changing industrial environment.

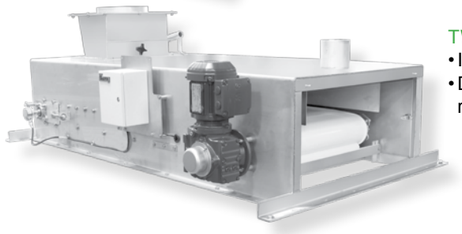
- Very Small Size: 25" center line inlet-to-center line outlet for the 10" wide belt and 41" for the 13" wide belt.
- Handles a wide range of materials and densities.
- Sanitary, stainless construction.
- Totally enclosed for effective dust control.
- Easy access, low maintenance design.
- Totally removable scale assembly needs no re-calibration after reinstallation.
- Excellent accuracy and stability.
- Rugged construction-built to survive.

HEAD PULLEY DRIVE:
Lagged head pulley provides positive traction, eliminating belt slippage and tracking problems. Head pulley drive design reduces horsepower, belt wear and weighing errors.



BELT TRAVEL PULSER:
Tail pulley mounting provides digital belt speed sensing with resolution to 0.001 feet. System detects belt slippage or breakage, while self-cleaning pulley eliminates errors due to material build-up.

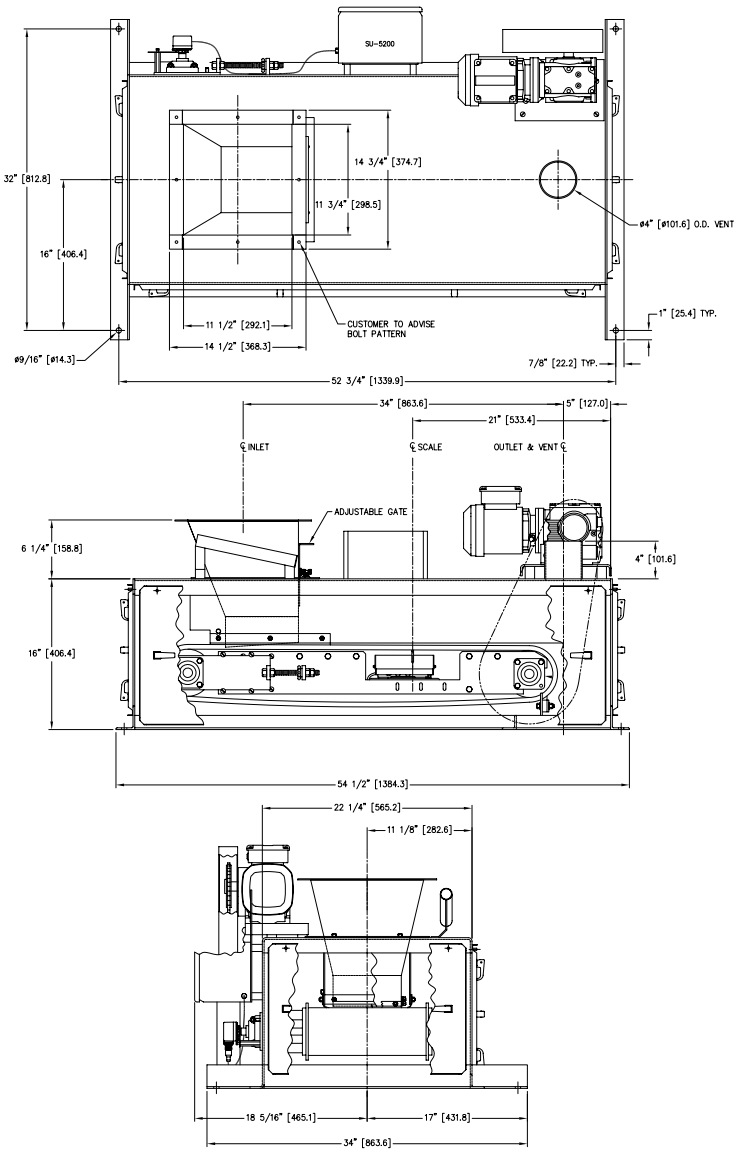
BELT SCRAPER



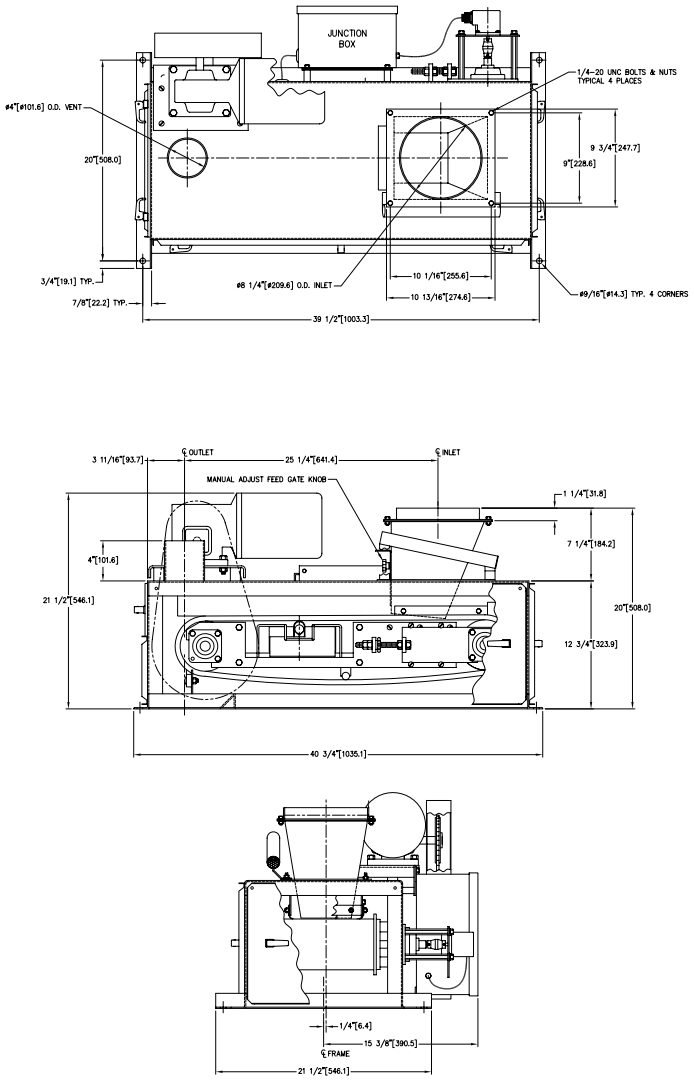
TWO MOTOR/GEAR REDUCER TYPES
- Indirect Drive using chain & sprocket
- Direct Drive using hollow shaft gear reducer

PE PELLETS • GRAINS • PEANUTS • DEXTRIN • PC PELLETS • REGRIND • LIMESTONE • PULVERIZED LIME • PVC • PHOSPHATE ROCK • CALCIUM CARBONATE • OATS • FLOUR • MINTS • COCOA BEANS • PERLITE

MWF-101-13




MWF-101-10




## SPECIFICATION MODEL MWF

**Feed Rate:**

- 10” (245 mm) wide weigh belt - up to 25,000 lbs/hr (11,340 kg/hr) with a material bulk density of 50 lbs/ft³ (0.8 gr/cm³).
- 13” (330 mm) wide weigh belt - up to 41,500 lbs/hr (18,820 kg/hr) with a material bulk density of 50 lbs/ft³ (0.8 gr/cm³).

**Density Range:**

- 15 to 100 lbs/ft³ (0.24 to 1.6 gr/cm³).

**Particle Size:**

- Up to 0.25” (6.4 mm) - consult factory if particle size exceeds 0.25”.

**Weight Measurement System:**

- Precision strain gauge force transducer.

**Speed Measurement System:**

- Direct coupled quadrature digital pulse transmitter mounted to tail pulley shaft.

**Motor:**

- 0.25 HP (0.19 kW), 90 volt DC armature, permanent magnet, TENV, 115 VAC, 1ph, 50-60 Hz, continuous duty, Class B insulation or AC Inverter Duty Motor 230-460 VAC, 3 ph, 50-60 Hz volts AC, TENV.

**Drive Reducer:**

- C faced coupled to motor, right angle worm & gear type, service factor 1.5, complies with A.G.M.A. standards.

**Turndown:**

- 20:1.

**Contact Material:**

- 304 Stainless Steel
- Option: 316 Stainless Steel.

**Non-Contact materials:**

- 304 Stainless Steel
- Option: 316 Stainless Steel.

**Temperature Limits:**

- Ambient 32°F-130°F (0°C-54°C). Material: 0°F to 250°F (-18°C -121°C).

**Enclosure:**

- Fully enclosed, removable side and end panels gasketed and secured with captive type fasteners, open bottom.

**Belt:**

- Endless two ply polyester carcass with BUNA-N, top cover, raised 5/16” (8 mm) flanges, rated for material temperature up to 250° F (121° C) FDA approved.

**Adjustable Bed Depth Gate:**

- Standard.

**Accuracy (Combined Error):**

- 0.25 to 1.0% of set rate (@ 2 sigma) based on a minimum sample of 1 minute or 2 circuits of the belt, which ever is greater.

MADE IN USA

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