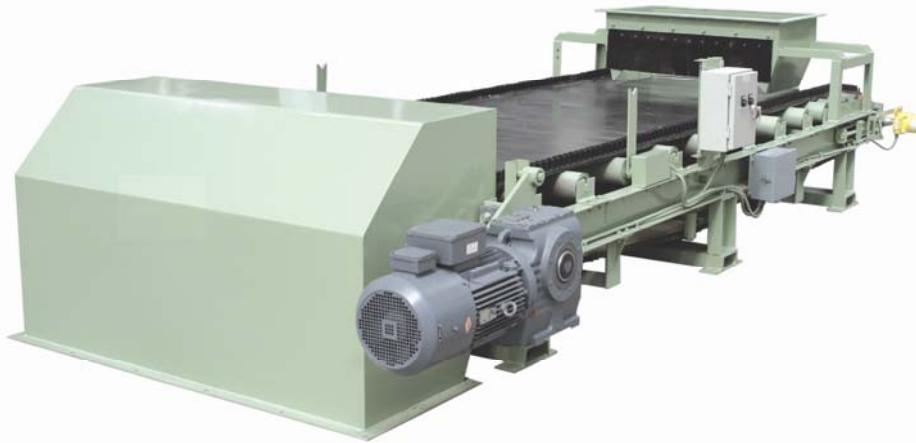


# MODEL F-53 WEIGH BELT FEEDER



Model F-53 Weigh Belt Feeder

The **Model F-53 Weigh Belt Feeder** System is designed to feed industrial materials with high accuracy at high flow rates in challenging applications. Its stout cantilevered design allows for easy belt removal. Either an I-beam or channel type frame provides a heavy duty platform for the scale carriage. These features along with a state of the electronics package will provide effective process control and vital information to the operation of your plant.

## Unique Features:

- Heavy Duty Cantilevered design: allows for easy belt removal without having to deal with splices or cutting the belt.
- Customizable to your application: Bearings, motors, belting, scrapers, idlers, almost anything can be modified to meet your specification.
- Full floating weighbridge design: provides a more accurate response to material variations.
- Covered or uncovered construction.
- Hazardous or non-hazardous locations.
- Constant or variable speed drives.
- Optional drag chain or auger type clean-out devices.

The **Model F-53 Weigh Belt Feeder** is designed for precise accuracy on materials with high flow rates and bulk densities in your most demanding applications. The Model F-53 allows you to accurately control feed rates to your process with a guaranteed accuracy of  $\pm 0.5\%$ . It can accommodate flow rates over 1000 TPH (816 MTPH) and belt loadings of 300 lb's/ft (816 kg's/M). It can help you automate your crushing system, provide more efficient process control and provide you with crucial information for the running of your plant.

The Model F-53 Weigh Belt Feeder incorporates a single idler full floating weighbridge assembly, the Model N60 Belt Speed Sensor, the powerful microprocessor based electronics of the Bulk Pro Systems Model 6805 Integrator.

Material is fed into the feeder via a feed hopper, this hopper is equipped with a manually adjustable profile gate which controls the bed depth on the feeder belt. The weighbridge assembly built into the feeder measures the gravimetric force applied by the material traveling down the belt and converts this force into mV signal which is proportional to the loading on the belt. A digital speed sensor continuously monitors the belt speed and the powerful microprocessor based electronics of 6000 series electronics integrates these two signals to give you an instantaneous rate and totalized weight of material that has passed through the feeder. The 6000 series integrator will then provide analog or digital outputs that allow you to control and monitor your process.

# SPECIFICATIONS

## Model F-53 Weigh Belt Feeder

- Accuracy:  $\pm 0.5\%$  based upon factory approved applications.
- Belt widths: 18 inch (457mm) to 84 inch (2134mm)
- Length: 7' (2,134mm) to 20' (6096mm) centerline of inlet to centerline of discharge, longer lengths available upon request.
- Capacity: 1 TPH to 900 TPH with 50 PCF material (0.9 MTPH to 816 MTPH with 801 kg/m<sup>3</sup> material)
- Belt Loading: 17.5 lb/ft to 300 lb/ft (26 kg/m<sup>3</sup> to 447 kg/m<sup>3</sup>)
- Typical Weigh Span: 2' (610mm)
- Belt Type: Endless polyester carcass with Grade 2 SBR covers, corrugated or vanner edging. Other belts available.
- Idlers: 4" - 6" (102mm - 152mm) diameter idlers rated CEMA C or D with sealed for life bearings. Other types available.
- Head Pulley : 14" (356mm) diameter with rubber lagging.
- Speed Reducer: Sumitomo or equal shaft mounted. Other models available.
- Scale: Single load cell, single idler, full floating weighbridge assembly.
- Frame Design: Heavy duty cantilevered frame for ease belt replacement. Frame design can facilitate belt removal from either the right or left hand side of feeder.
- Load Cell: Single platform type, strain gauge transducer, in compression.
- Load Cell Excitation: 10 VDC recommended, 15 VDC maximum.
- Non-Linearity: 0.03% of rated output.
- Repeatability: 0.01% of rated output.
- Hysteresis: 0.02% of rated output.
- Temperature Sensitivity Zero:  $<0.0005\%$  full scale/degrees F ( $<0.0009\%$  full scale/degrees C)
- Temperature Sensitivity Span:  $<0.0008\%$  of reading/degrees F (0.0014% of reading/degrees C)

## Speed Sensor

- Type: Direct coupled, brushless pulse generator.

## Accessory Equipment:

- Safety Stop Switches
- Conveyor Misalignment Switches
- Plugged Chute Switches
- Variable Speed Drives
- Constant Speed Drives
- Class 1 and 2 Motors and J-boxes
- Drag Chain or Auger Clean-out
- AR or Stainless Steel Liners
- Top Covers
- Side Covers
- Bottom Covers
- Corrugated or Vanner Edge Belts
- Skirt Boards

