

## Acrison Model 203B Screw Weigh Auger Feeder

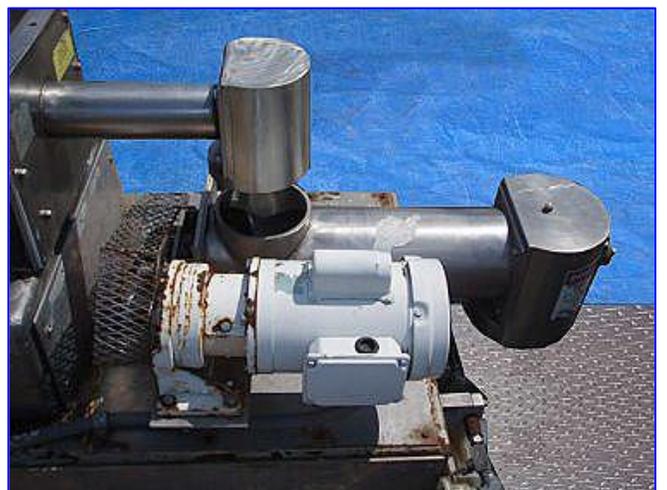
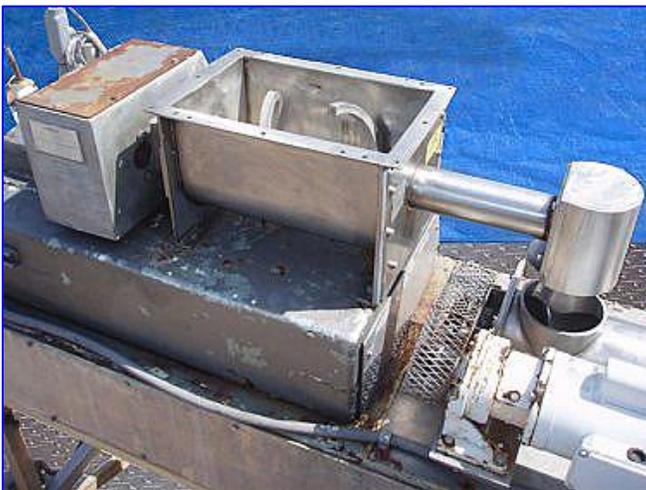
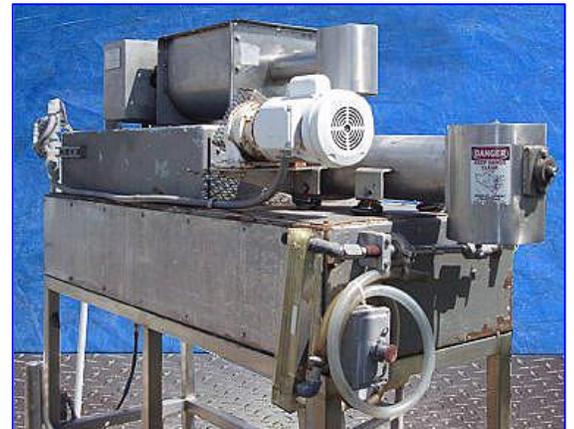
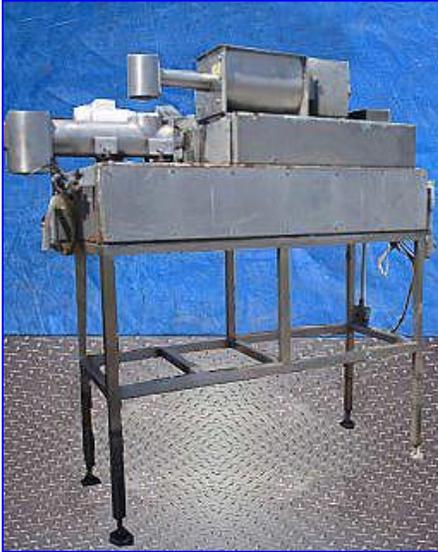
Mfg: Acrison

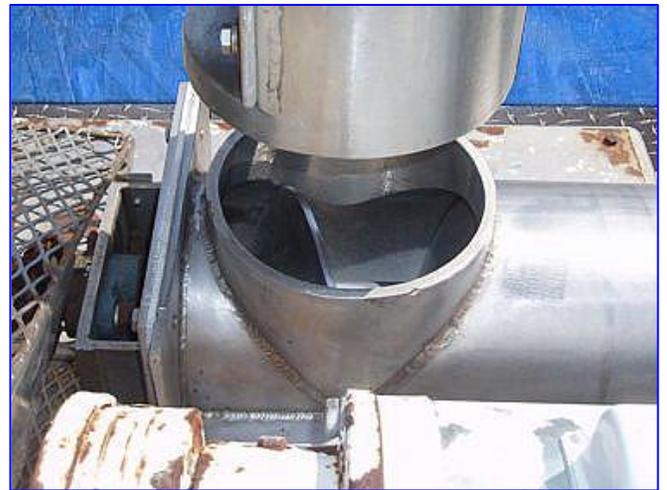
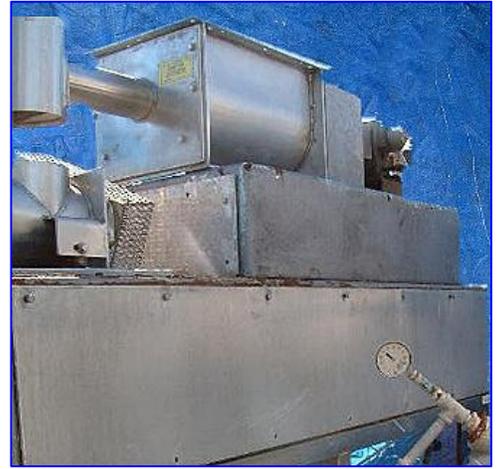
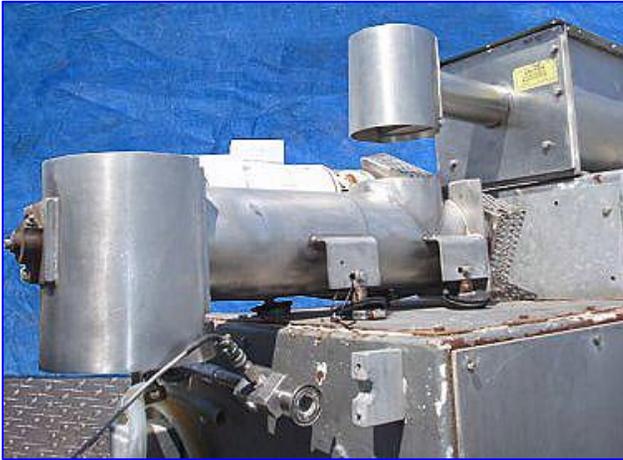
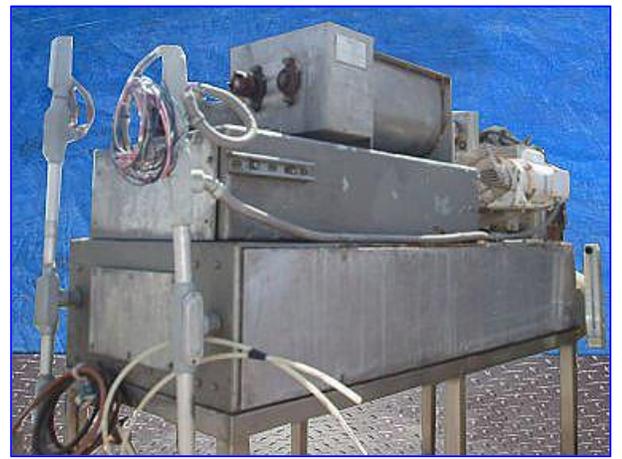
Model: 203B-105Z-H

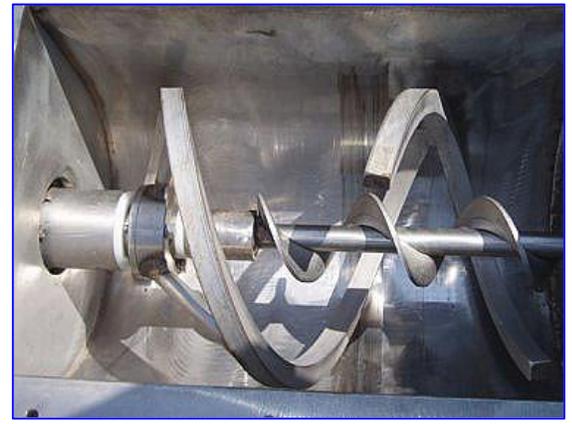
Stock No. GM110a.4a

Serial No. 76660

Acrison Screw Weigh Auger Feeder. Model: 203B-105ZH. S/N: 76660. Infeed hopper dimensions: 1 ft. 5-1/2 in. L x 11 in. W x 10 in. H. Pre-feeder screw auger dimensions: 3 in. dia. x 2 ft. L. Pitch: 3-1/2 in. Scale-mounted weigh auger dimensions: 6 in. dia. x 1 ft. 8 in. L. Pitch: 5 in. Sterling Electric Motor. ID # G76R525R. Frame: FK56C. Insulation Class: F. 1/4 hp, 1800 rpm, 115/230 V, 6.4/3.2 amps, 60 hz, 1 phase. Inlets: (1) 1 ft. 5-1/2 in. L x 11 in. W infeed. Outlets: (1) 8 in. dia. port. Overall dimensions: 6 ft. 5 in. L x 2 ft. 7 in. W x 7 ft. 3 in. H.

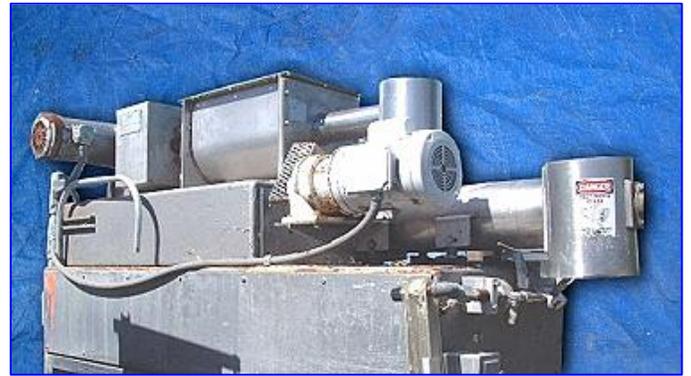






## Models 203B Series Weigh Auger Weigh Feeders For Dry Solids

**Model 203B Weigh Auger Weigh Feeders combine the performance provided by an integral Acrison prefeeder with a highly responsive weighing and control system to produce a highly accurate and versatile dry solids continuous weigh feeder with total product confinement.**

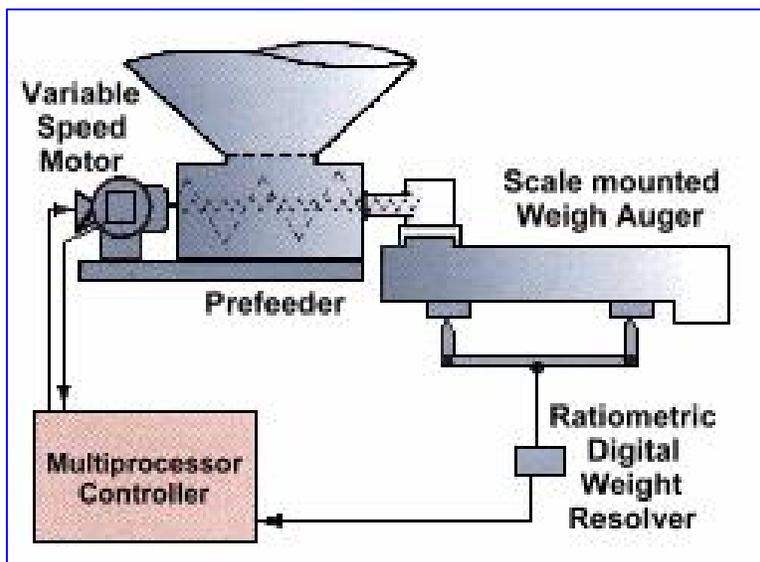


In that the basic design parameters of Model 203B Weigh Auger Feeders require that product be fed into the weigh auger, the appropriate model Acrison metering mechanism is included as an integral component. Even when metering the "easier or generally free flowing" products, the advantages of an integral prefeed device are numerous. However, when feeding the "more difficult or non-free flowing" materials, the significance of a positive-flow prefeeder cannot be over-emphasized. In addition, Acrison can also provide or recommend a hopping system, if necessary, that will ensure a constant, uniform and reliable flow of product into the inlet of a prefeeder.

Acrison's Model 203B Series of Weigh Auger Weigh Feeders utilize a specially designed auger conveyor as the weighing/conveying means that not only provides total product confinement, but also, eliminates the typical problematic environmental difficulties usually experienced with the common variety of weigh belt type weigh feeders. Dust for example, a well known "headache" associated with the operation of weigh belt feeders, is not of any concern whatsoever in that the weigh auger is totally enclosed and thus, all product, including dust, is completely confined. The Weigh Auger Feeder is rugged, mechanically simple, has only several moving parts and requires an absolute minimal amount of maintenance. The weigh auger and its housing are constructed of all 304 stainless steel, continuously seal welded and ground smooth.

The auger is then polished, plated and polished again to achieve an extremely hard and smooth surface capable of resisting adhesion and wear. The entire weigh auger assembly is mounted on an [Acrison non-load cell based, high resolution, all-flexure, counterbalanced weighing system](#) (scale) that senses only the net weight of product being conveyed within the weigh auger. The weigh auger conveyor assembly is essentially maintenance-free and boasts long, durable service.

As the variable speed prefeeder discharges product into the synchronous speed weigh auger, the weight of this material is instantaneously sensed and transmitted to the feeder's multiprocessor controller. In turn, the controller modulates the variable speed drive of the prefeeder to maintain the precise feed rate as selected. The control system, including the scale's weight sensor, is entirely and authentically digital. The weighing system, as are all Acrison weighing systems, has been designed most ruggedly for long, trouble free service. Weight is sensed by Acrison's [Ratiometric Digital Weight Resolver](#) which generates twenty bits of unamplified, usable digital data, providing the means for producing optimum overall weigh feeder accuracy and performance. The entire time-proven weighing mechanism (including the Ratiometric Digital Weight Sensor and weigh feeder controller) is totally adjustment and calibration-free. Operation



As the prefeeder discharges product into the scale-mounted weigh auger, a proportional-to-weight signal is generated by the scale's Ratiometric Digital Weight Sensor which is then compared to the selected feed rate. Any difference between these signals results in an instantaneous correction to the feed rate of the prefeeder, altering its output accordingly - so that the actual output (weighed) feed rate precisely matches the selected feed rate.

The prefeeder is normally driven by a variable speed SCR/DC drive which is in itself, a precision metering device controlled by microprocessor logic, including regulation feedback from a digital tachometer. Typically, the accuracy generated by the prefeeder ranges between  $\pm 1$  to 3 percent or better (error) for the majority of ingredients. And, because of this already established preliminary accuracy, little correction in the feed rate output of the prefeeder is usually required to achieve highest levels of weigh feeder accuracy.

Acrison's various multiprocessor controllers encompass an assortment of features designed to enhance and simplify operation of all Acrison weigh feeders with microprocessor speed, precision and reliability. The control network is all digital for maximum performance and versatility.

### Operational Features

- **Accuracy:** Metering accuracy will be + 0.25 to 1 percent or better (error) at two sigma, based on a given number of consecutive one minute weighments.
- **Range:** An Acrison 203B Weigh Auger Feeder is capable of an overall feed range of 20:1 from the maximum designed output capacity of the feeder.

- **Output capacity:** A total feed output capacity ranging from 120 to 136,000 pounds per hour is available (based on product weighing 40 pounds per cubic foot and various model sizes).
- **Versatility:** The appropriate model positive-flow Acrison prefeeder ensures dependable metering of a wide variety of dry solid ingredients. And although the prefeeder may be able to meter a broad range of products, it should be noted, however, that due to the design parameters of the weigh auger itself, the Model 203B is not suitable for all products.
- **Controls:** Model 203B Weigh Auger Feeders utilize multiprocessor controllers specifically developed by Acrison to provide unparalleled weigh feeder performance. The standard Model 203B Weigh Auger Feeder will operate within an ambient temperature range of -10° to 140°F. All motors are totally enclosed. Power requirements are either 115/1/60 or 230/1/60 depending on the model and size.
- **Volumetric Mode of Operation:** All standard Model 203B Weigh Auger Weigh Feeders are equipped with a manual mode of operation whereby the unit may be operated strictly as a volumetric feeder, if ever required. The weigh auger, in volumetric operation, is used for conveying purposes only.