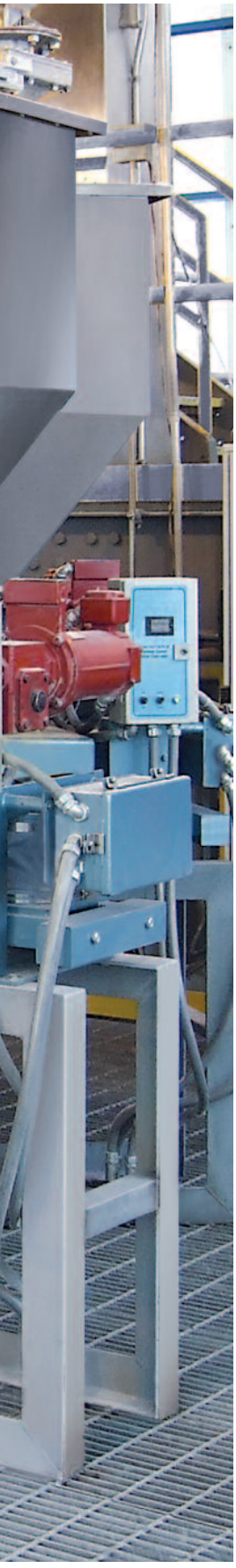
Acrison®

Dry Solids Metering and Handling

Product Line Overview

Acrison Dry Solids Metering and Handling Equipment



Acrison maintains comprehensive state-of-the-art Testing Facilities to evaluate the performance capability of the selected equipment handling customers' actual materials.

And when considering the endless variety of dry solids regularly metered/handled by processors worldwide, each with their own individual handling characteristics, and in further consideration of the many technological differences in the design and functionality of the equipment produced by the various manufacturers, particularly weigh feeders, the significance of a first-hand operational evaluation of the specific equipment recommended for a given application cannot be over-emphasized.

Dry Solids Metering and Handling Equipment

Advanced Dry Solids Metering and Handling Technologies Integrated into Robustly Built Equipment to Satisfy the Requirements of a Broad Spectrum of Applications.

Since 1963, Acrison has been applying its skills to the empirical science of dry solids metering and handling. In particular, and while scientific to some extent, to effectively meter the countless number of dry solid materials regularly processed within the various global manufacturing industries - - each with their own individual physical characteristics - - Acrison designed and developed a range of uniquely versatile metering mechanisms, with certain models possessing the proven, unrivaled ability to accurately and reliably feed the broadest possible variety of dry solids, both volumetrically and gravimetrically.

In addition to dry solids feeders, Acrison also manufactures bin discharging mechanisms, bulk bag unloaders, continuous blenders, 'pre-packaged' metering/blending systems, refill systems for its weight-loss weigh feeders, dust collectors, dust collector bag-dump stations, bin vent filters, flow/no-flow sensors, plus other related equipment, including a variety of leading-edge multi-processor feeder controllers and control systems.

Acrison also produces a range of equipment for the various water and wastewater treatment industries. From basic chemical feeding and dissolving packages to technologically advanced dry and liquid polymer preparation systems, Acrison equipment is widely specified for a variety of water treatment applications.

Headquartered in Moonachie, New Jersey, Acrison's two facilities, totaling over 140,000 square feet, house a staff of professionals conducting marketing and sales, research and development, mechanical and electrical engineering, manufacturing, equipment operational demonstrations, and customer services.

With a strong emphasis placed on new product development and product enhancements, a team of R&D engineers and designers leverage the applicable Acrison technology for mechanical, electronic, and software development . . . a 'think-tank' that boasts a solid history of innovation and industry firsts.

For example, during the late 1960s, Acrison designed, developed and perfected the 'weight-loss' weigh feeding functional concept as it's presently known. And because of the strong metering performance a properly designed weight-loss feeder will provide, today, this major Acrison innovation and contribution to the processing industries has evolved into the most widely specified and utilized type continuous weigh feeder, worldwide.

Acrison also leads the industry with cutting-edge control system technologies and functional capabilities. In particular, Acrison's Model SBC-2000 Family of Weigh Feeder Controllers provide users with an unparalleled degree of operational viability. From their time-proven operating software and advanced color graphics touchscreens, to the latest interfacing and networking capabilities, these controllers are unsurpassed in their ability to provide highest levels of accurate and reliable weigh feeder performance.

With the diversity of process applications, combined with the countless number of dry solid materials that processors routinely handle, Acrison maintains state-of-the-art facilities to determine and/or verify equipment selection, and to demonstrate the type of performance users can expect when metering/handling their actual product(s).

Computerized (automated) testing procedures are precise and definitive, eliminating human error associated with physical testing, while providing the ability to sample feeder metering accuracy from a fraction of a second upwards. Acrison offers the services of these facilities to evaluate (feed) your material(s), usually without cost or obligation, and welcomes your personal attendance.

Acrison's corporate philosophy is to produce the most viable, reliable and durable equipment of its type, and provide strong after-sale support. Acrison is proud of its innovations and products, and their contribution to the processing industries. And Acrison is also proud of its people, and above all, is most appreciative of its customers.

Each of Acrison's various products is fully described in individual Equipment Specifications or Bulletins. For further information or assistance, please contact Acrison directly, or visit Acrison's Website at www.acrison.com.

Volumetric Feeders for Dry Solids

An authentic dry solids volumetric feeder must encompass a positive means of measuring a specific volume of material, and then effectively discharge that material, ideally over a variable output range. Where an auger type volumetric feeder is concerned, the auger measures volume, discharging the 'measured volume' as it rotates within a discharge spout (i.e., each revolution of the auger discharges a specific volume of material).

But most importantly, the ability of any auger type dry solids volumetric feeder to maintain a constant metered output is dependent upon how well the metering mechanism is able to 'condition and maintain' the material in a 'generally uniform state', and how effectively and reliably the metering auger is 'filled' with material for accurate product delivery.

Acrison has designed a number of Volumetric Feeders, each possessing a specific degree of functionality and versatility for effectively handling a range of product characteristics. From basic single auger metering mechanisms, typically for feeding free-flowing granulation type ingredients, to a range of innovative, technologically superior multiple auger/agitator mechanisms for metering difficult-handling dry solids, the overall performance capability of Acrison Volumetric Feeders is simply unrivaled.

Acrison's various model volumetric feeders are each available with a number of different size metering augers, interchangeable on the individual model feeders. Each metering auger designation (size) spans a specific output feed range. Overall, feed rates range from 0.0012 upwards to 6600 cubic feet per hour, depending upon the selected feeder model and the size of the metering auger. In addition, and as standard, the metering augers of all Acrison Volumetric Feeders are equipped with variable speed drives to enable a 20:1 feed rate turn-down from the maximum output of a given size metering auger.

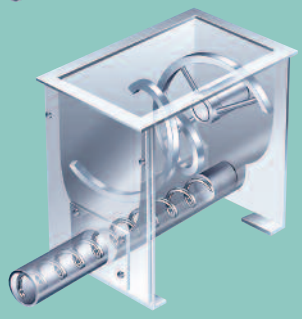
Designed for 24/7 operation, Acrison volumetric feeders are heavy-duty in construction and extremely durable. Maintenance requirements are bare minimal and their longevity expectations are exceptional.

Metering accuracies typically range between ± 1 to 2 percent or better (error) based on a given number of consecutive one minute samples.

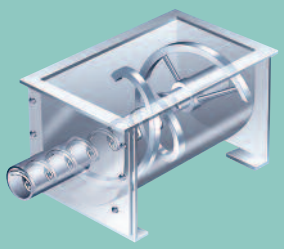
Choose from industry's widest selection of high performance dry solids Metering Mechanisms for the one best suited for your application.

Single Auger Mechanisms
Models 101 and 130 Series

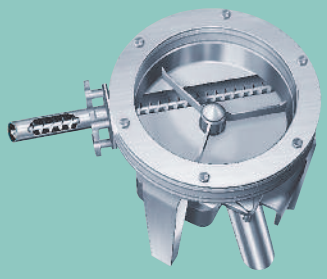
Dissimilar Speed Dual Auger/Agitator Mechanism (Single Common Drive for the Models 1015, 1015X and 1015Z) (Individual Drives for the Models 1015XX and 1015YY)
Model 1015 Series



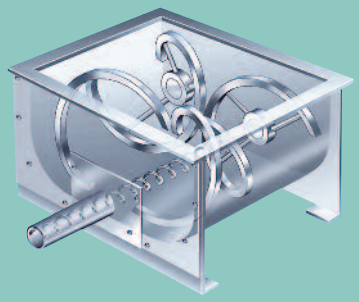
Dissimilar Speed Double Concentric Auger Mechanism (Single Common Drive)
Models 105 and 140 Series



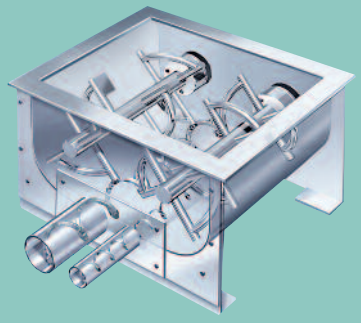
Self-Emptying Auger/Agitator Mechanism
Model 170 Series



Dissimilar Speed Triple Auger/Agitator Mechanism (Single Common Drive)
Model BDF Series



Two independently diven Agitators, combined with two independently driven variable speed Metering Augers to provide a very wide feed range
Model BDFX-1.5-2



Models 101 and 130 Feeder Series

Single auger dry solids volumetric feeders specifically designed to meter free-flowing granular or pelletized ingredients.

Model 101-0 – For feed rates ranging from 0.0012 to 29 cubic feet per hour.

Model 101-1 – For feed rates ranging from 0.84 to 202 cubic feet per hour.

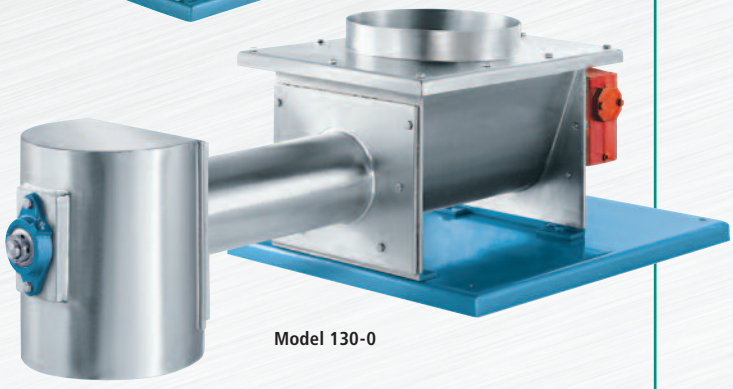
Model 130-0 – For feed rates ranging from 4.8 to 600 cubic feet per hour.

Model 130-1 – For feed rates ranging from 18 to 1200 cubic feet per hour.

Model 130-2 – For feed rates ranging from 36 to 3400 cubic feet per hour.

Equipment Specifications 1-200-0479

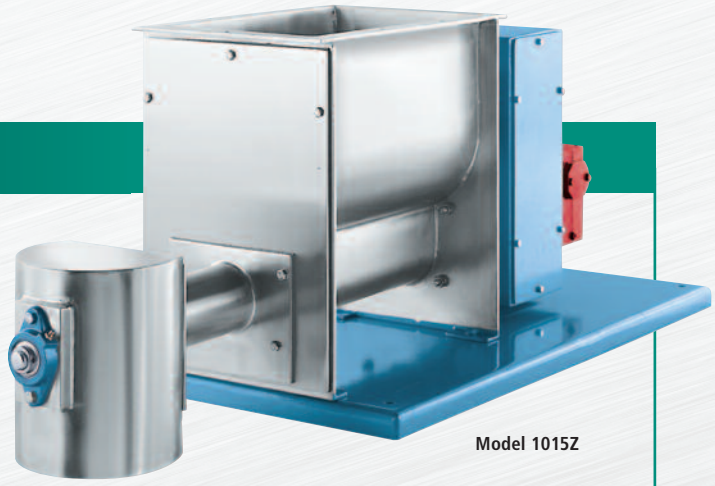
Model 101-0



Model 130-0

Model 1015 Feeder Series

The Model 1015 Series of Dry Solids Volumetric Feeders feature a *dissimilar speed*, dual auger/agitator metering mechanism consisting of a large 'conditioning' auger or agitator mounted above a smaller (metering) auger in a specially configured feed chamber... intended for use in those applications where a minimal amount of residual product is desired.



Model 1015Z

Model 1015 – Smallest of the Model 1015 Series of Volumetric Feeders, this model is equipped with a 6 inch diameter 'conditioning' auger/agitator; provides an overall output capacity ranging from 0.0012 to 19 cubic feet per hour.

Model 1015X – This model is furnished with an 8 inch diameter 'conditioning' auger/agitator; provides an overall output capacity ranging from 0.0108 to 72 cubic feet per hour.

Model 1015Z – This model is furnished with a 10 inch diameter 'conditioning' auger/agitator; provides an overall output capacity ranging from 0.048 to 202 cubic feet per hour.

Model 1015XX – This model is furnished with a 15 inch diameter 'conditioning' auger/agitator; provides an overall output capacity ranging from 4.8 to 1200 cubic feet per hour.

Model 1015YY – Largest of the Model 1015 Series, this model is equipped with an 18 inch diameter 'conditioning' auger/agitator; provides an overall output capacity ranging from 36 to 3400 cubic feet per hour.

Equipment Specifications 1-200-0481

Models 105 and 140 Series Dry Solids Feeders

Series 105 Dry Solids Feeders

Introduced in 1965, the Models 105 and 140 are heavy-duty Series of Dry Solids Volumetric Feeders featuring Acrison's exclusive, uncommonly versatile *Dissimilar Speed, Double Concentric Auger Metering Mechanism,* far superior in its inherent ability to accurately and reliably feed an unrivaled variety of dry solid materials.

In operation, the unique *'Inter-Auger-Action'* produced by rotation of the Double Concentric Augers very effectively *'conditions'* the material to a relatively consistent state, while simultaneously filling the centrally positioned metering auger *from a full 360 degrees*, for unsurpassed highly efficient metering performance.

Aside from their ability to meter an endless number of dry solid materials, Model 105 and 140 Series Feeders are also well known for their minimal maintenance requirements and exceptional longevity.

Model 105

Model 105 – Smallest of the Model 105 Series of Feeders, this model is equipped with a 6 inch diameter Intromitter or 'conditioning' auger, and provides an overall output capacity ranging from 0.0012 to 19 cubic feet per hour.

Model 105X – This model is furnished with an 8 inch diameter Intromitter or 'conditioning' auger, and provides an overall output capacity ranging from 0.003 to 72 cubic feet per hour.

Model 105Z – Largest of the Model 105 Series of Feeders, this model is equipped with a 10 inch diameter Intromitter or 'conditioning' auger, and provides an overall output capacity ranging from 0.0076 to 202 cubic feet per hour.

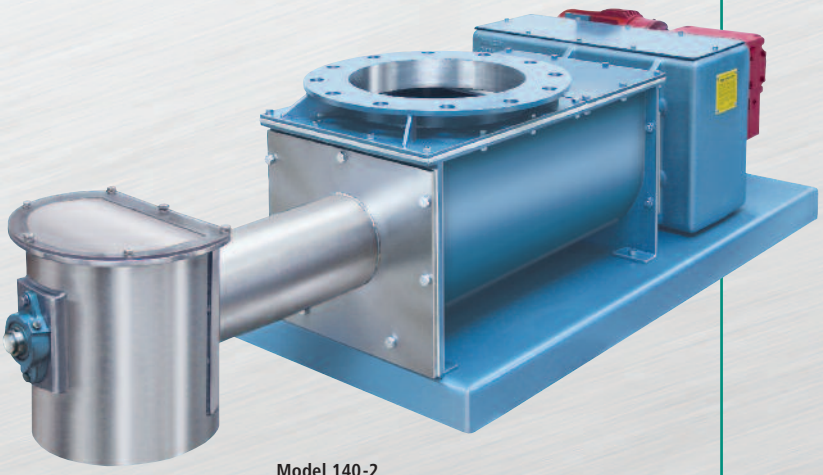
Model 105Z

Series 140 Dry Solids Feeders

Model 140-0 – Smallest of the Model 140 Series of Feeders, this model is equipped with a 12 inch diameter Intromitter or 'conditioning' auger, and provides an overall output capacity ranging from 4.8 to 600 cubic feet per hour.

Model 140-1 – This model is furnished with a 15 inch diameter Intromitter or 'conditioning' auger, and provides an overall output capacity ranging from 6.4 to 1800 cubic feet per hour.

Model 140-2 – Largest of the Model 140 Series of Feeders, this model is furnished with an 18 inch diameter Intromitter or 'conditioning' auger, and provides an overall output capacity ranging from 18 to 3400 cubic feet per hour.



Model 140-2

Equipment Specifications 1-200-0480

Model 120 Feeder

The Model 120 Dry Solids Volumetric Feeder features a novel combination of Acrison's *dissimilar speed*, Double Concentric Auger Metering Mechanism (and *'Inter-Auger-Action'*) with an integral flow-inducing RP (oscillating) Hopper to accurately and effectively meter a broad variety of dry solids. This particular model feeder utilizes a 6 inch diameter Intromitter or *'conditioning'* auger, and provides an overall output capacity ranging from 0.0012 to 34 cubic feet per hour.

Bulletin 270

Model 120

Models V-101 and V-130 Feeders

The Models V-101 and V-130 are single auger Volumetric Feeders uniquely designed with mild regulated vibration to accurately and reliably meter 1/8" to 5/16" stranded fiberglass (and similar materials) at low to moderate feed rates without any product degradation. These particular model feeders are also completely self-emptying.

Model V-101 – For feed rates ranging from 0.1 to 25 cubic feet per hour.

Model V-130 – For feed rates ranging from 0.5 to 54 cubic feet per hour.

Equipment Specifications 1-200-346

Model V-101

Model 905-18 Feeder

The Model 905-18 Volumetric Feeder has been specifically designed to meter strand-type materials having lengths ranging from 0.4 to 0.75 inches (e.g., fiberglass strands), even when such products contain a small percentage of moisture.

Output feed rates range from approximately 2 to 40 cubic feet per hour.

Design Specifications 1-200-0804

Model 905-18 Feeder metering 0.5 inch long fiberglass.

Model 905-18

Model 170 Feeder Series

Model 170 Feeders are designed with a circular flat bottom feed chamber with a non-converging inlet for receiving unrestricted product flow from a supply hopper mounted directly above. Beneath the feed chamber, the metering auger is located in a specially configured trough, offset to one side.

Within the feed chamber, a slow-speed horizontally rotating '*conditioning*' agitator ensures that the metering auger is effectively and efficiently 'filled' with product for accurate and reliable metering, while simultaneously, assisting downward product flow from within the feeder's supply hopper into the feed chamber. Dead zones do not exist anywhere with the feed chamber and consequently, product stagnation cannot occur anywhere within the feeder.

Certain Model 170 Feeders (the Models 170-1-2 and 170-2-2) are designed with two independently driven metering augers to provide a very wide feed range (excess of 100:1) without the need to change metering augers.

Excluding the Model 170-MI-5, all other Model 170 Feeders have the unque ability to 'self-empty' when permitted to feed until empty, or to be 'emptied rapidiy' when such a need exists. Rapid emptying is accomplished by means of a novel discharge port located in the flat bottom of the feed chamber.

Model 170-00

Model 170-1-2

Model 170-00 – Designed with a 9 inch diameter feed chamber and a single, independently driven metering auger, this model feeder provides an output capacity ranging from 0.0012 to 6 cubic feet per hour.

Model 170-0 – Designed with a 13 inch diameter feed chamber and a single, independently driven metering auger, this model feeder provides an output capacity ranging from 0.0076 to 19 cubic feet per hour.

Model 170-1 – Designed with an 18 inch diameter feed chamber and a single, independently driven metering auger, this model feeder provides an output capacity ranging from 0.084 to 51 cubic feet per hour.

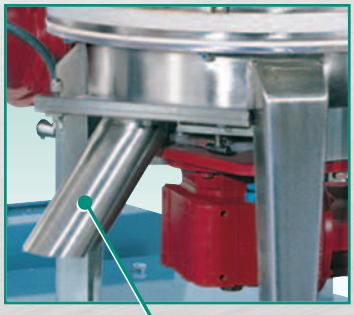
Model 170-1-2 – Designed with an 18 diameter feed chamber and two independently driven metering augers, this model feeder provides a very wide feed range (utilizing the combined overlapping output ranges of two metering augers), and an overall output capacity ranging from 0.084 to 40 cubic feet per hour.

Model 170-2 – Designed with a 24 inch diameter feed chamber and a single, independently driven metering auger, this model feeder provides an output capacity ranging from 0.28 to 118 cubic feet per hour.

Model 170-2-2 – Designed with a 24 inch diameter feed chamber and two independently driven metering augers, this model feeder provides a very wide feed range (utilizing the combined overlapping output ranges of two metering augers), and an overall output capacity ranging from 0.28 to 118 cubic feet per hour.

Model 170-3 – Designed with a 30 inch diameter feed chamber and a single, independently driven metering auger, this model feeder provides an output capacity ranging from 0.38 to 240 cubic feet per hour.

Model 170-4 – Designed with a 36 inch diameter feed chamber and a single, independently driven metering auger, this model feeder provides an output capacity ranging from 1.92 to 900 cubic feet per hour.



Rapid Empty Discharge Port

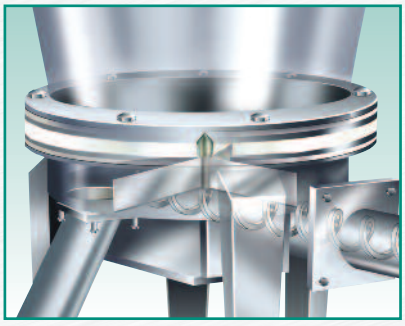
Equipment Specifications 1-200-0525 and 1-200-0072

Model 170 Feeder Series (con't)

Swing-Out Hopper to Facilitate Clean-out (certain models)

Pneumatically operated Swing-Out Hopper (certain models)

Tilt-Back Hopper to Facilitate Clean-Out (certain models)



The Model 170 Series of Feeders, designed with just two (or three) moving parts

Model 170-2-2

Model 170-MI-5 Feeder Series (micro-metering)

Designed with a 5 inch feed chamber, the Model 170-MI-5 Feeder will accurately meter a wide assortment of dry solid ingredients at extremely low feed rates; its overall capacity ranges from approximately 0.0012 up to 1.4 cubic feet per hour.

As standard, this model feeder includes quick-disconnect features; it can be disassembled and/or reassembled in less than a minute for cleaning, primarily for 'sanitary' or similar type applications. A totally enclosed, fractional horsepower variable speed gearmotor powers the metering auger. The 'conditioning agitator' is also powered by a variable speed gearmotor, with its speed proportional to that of the metering auger. Both gear-motors are capable of washdown.

The feeder is supplied with either a 0.10 cubic foot vertical hopper, or a 0.18 cubic foot conical hopper, the selection of which is dependent upon product characteristics. Other hopper sizes may be available, also predicated on material handling characteristics. As standard, all product contact surfaces are 316 stainless steel, including the feeder's drive shafts and seal components. Excluding the hopper and metering auger, all remaining components of the feeder are fully machined. Like all Model 170 Series of Feeders, the Model 170-MI-5 Feeder is completely dust-tight and virtually silent when operating.

Equipment Specifications 1-200-0802

Model 170-MI-5

Multiple Auger/Agitator Bin Discharger Feeders

Models BDFM, BDF-1 and BDF-1.5 Feeders

Acrison Models BDFM, BDF-1 and BDF-1.5 Volumetric Feeders (Bin Discharger Feeders) combine a dual auger/agitator flow-inducing mechanism with a centrally positioned metering auger -- *operating at proportional but dissimilar speeds* -- to produce positive flow-inducing internal agitation while simultaneously metering the material accurately and reliably. Capable of handling a very broad variety of dry solid materials, these particular model feeders feature wide product in-feed areas without any type of internal convergence.

The Models BDFM, BDF-1 and BDF-1.5 are powered by a single heavy-duty variable speed gearmotor.

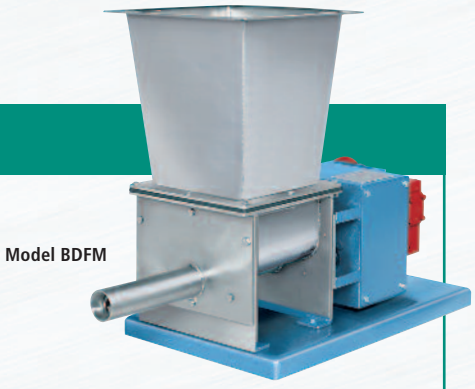
Model BDFM – For feed rates ranging from 0.0012 to 3 cubic feet per hour.

Model BDF-1 – For feed rates ranging from 0.0108 to 9.5 cubic feet per hour.

Model BDF-1.5 – For feed rates ranging from 0.84 to 48 cubic feet per hour.

Model BDFX-1.5 – Intended for *'special applications'*, the Model BDFX-1.5 is designed with individual drives for the two augers/agitators and the metering auger. Feed rates range from 0.048 to 96 cubic feet per hour.

Bulletin 708



Model BDFM

Model BDF-1

Model BDFX-1.5-2 Feeder

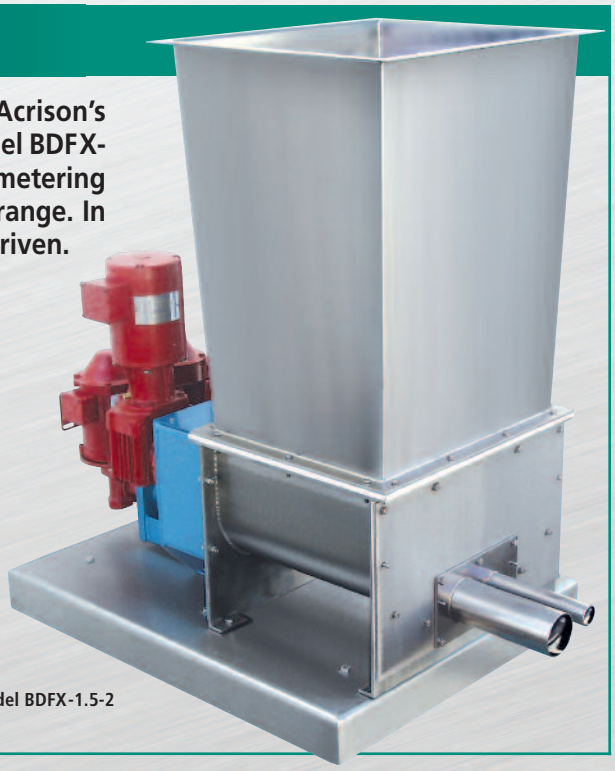
The Model BDFX-1.5-2 Volumetric Feeder is a version of Acrison's uniquely versatile Model BDF-1.5 Feeder; however, the Model BDFX-1.5-2 Feeder includes two separate independently driven metering augers, which when combined, produce a very wide feed range. In addition, the two auger/agitators are also independently driven.

Specifically, the Model BDFX-1.5-2 Feeder eliminates the undesirable, if not burdensome task of changing the size of the single metering auger of a continuous dry solids feeder whenever an exceptionally wide feed range is required.

Additionally, the Model BDFX-1.5-2 provides both high (rapid feed) and low (dribble feed) outputs for batching applications (i.e., a larger metering auger feeds the majority of the material for the selected batch weight, and a smaller metering auger provides the final "dribble" amount so that the highest degree of batch cut-off accuracy can be achieved.

Model BDFX-1.5-2 – For feed rates ranging from 0.048 to 192 cubic feet per hour.

Bulletin 708



Model BDFX-1.5-2

Multiple Auger/Agitator Bin Discharger Feeders

Models BDF-2, BDF-2.5, BDF-3, BDF-4-1 and BDF-5

Acrison's larger model Bin Discharger Feeders combine a pair of augers/agitators with a metering auger (centrally positioned at the bottom of the Bin Discharger's body) to produce both positive flow and feed of a very wide variety of dry solid materials.

To optimize product flow, Bin Discharger Feeders are designed with full throat product inlets (in-feed area) without any internal convergence whatsoever. Typically, the Bin Discharger directly flange-attaches to a mating hopper, often supplied by Acrison. This configuration eliminates the additional hardware and height normally required to mount a separate volumetric feeder beneath a bin discharging mechanism. The two augers/agitators are individually driven by heavy-duty gearmotors; the metering auger is powered by a heavy-duty variable speed gearmotor.

Acrison furnishes Bin Discharger Feeders with integral storage bins in various capacities determined by the size of the Bin Discharger Feeder, and the applicable product handling characteristics.

Model BDF-2 – For feed rates ranging from 0.12 to 202 cubic feet per hour.

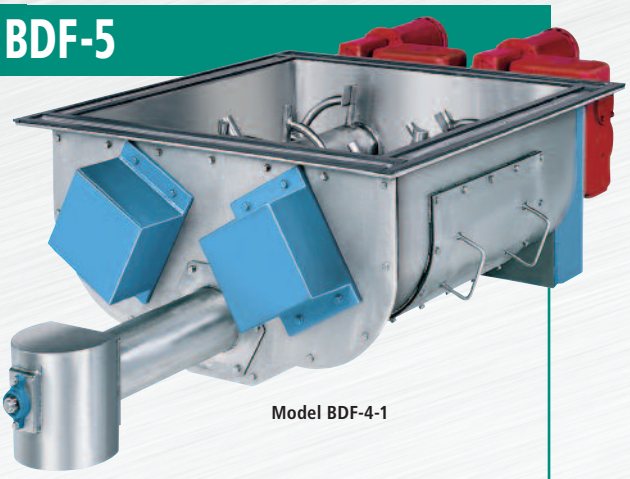
Model BDF-2.5 – For feed rates ranging from 0.28 to 600 cubic feet per hour.

Model BDF-3 – For feed rates ranging from 0.58 to 1200 cubic feet per hour.

Model BDF-4-1 – For feed rates ranging from 0.58 to 3400 cubic feet per hour.

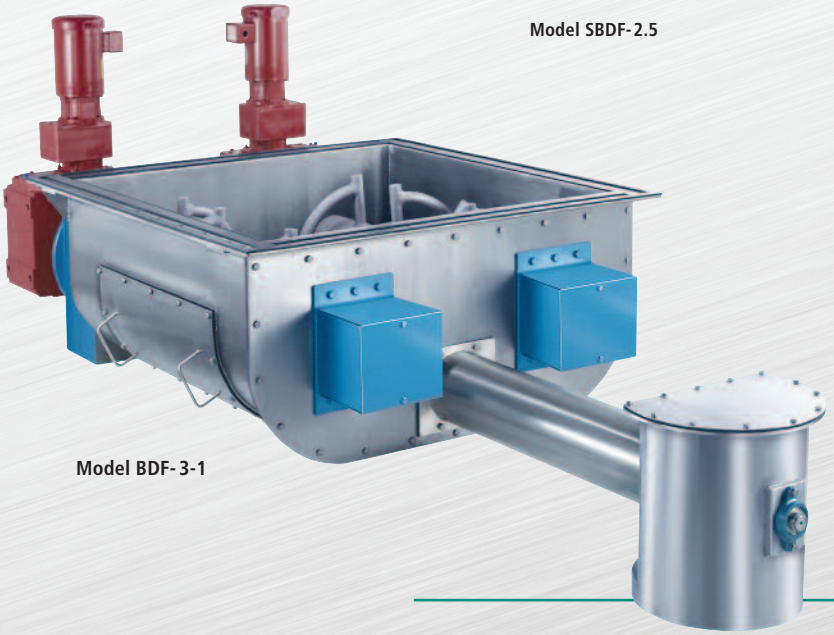
Model BDF-5 – For feed rates ranging from12 to 6600 cubic feet per hour.

Bulletin 712



Model BDF-4-1

Model SBDF-2.5



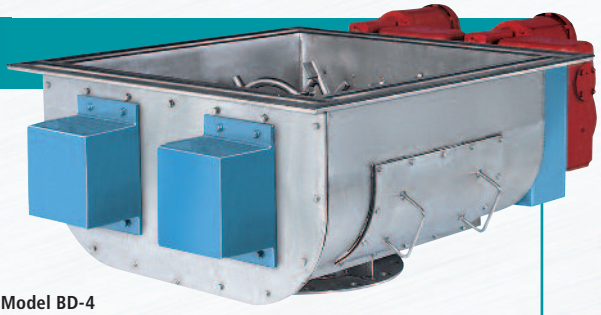
Model BDF-3-1

Bin Discharging Mechanisms

Multiple Auger / Agitator Bin Dischargers

Acrison's Multiple Auger/Agitator Bin Dischargers produce flow-inducing internal agitation for the positive removal of dry solid materials contained within, and from within the storage bin (or hopper) onto which Bin Dischargers attach, when furnished by Acrison as a complete assembly.

In the utilization of opposed multiple helical sections, or pitched agitator blades slowly counter-rotating within the non-converging Bin Discharger body, discharge of the most difficult-handling materials is reliably accomplished.

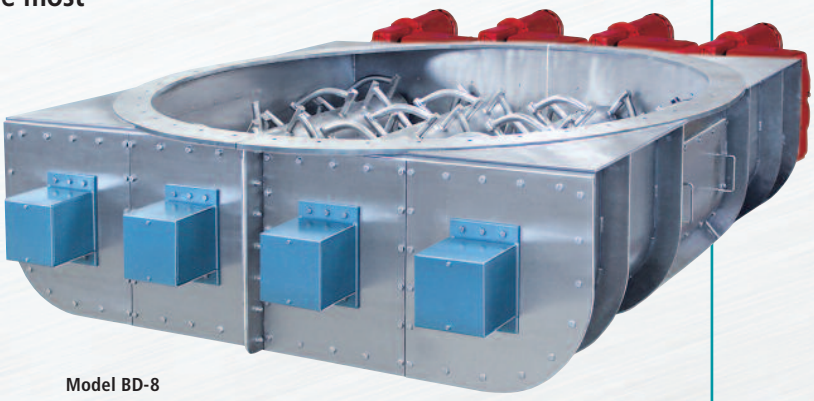


Model BD-4

Available in sizes ranging from 2 to 8 feet round or square, these Bin Dischargers are designed for direct flange attachment to the bottom of mating storage bins (hoppers). Flexible connections are not required on either the inlet or outlet, and the Bin Dischargers may be furnished with multiple discharge outlets.

Acrison furnishes Bin Dischargers with storage bins up to 200 cubic feet in capacity (larger if application parameters permit), as an integral assembly, factory mounted on a common structure.

Bulletin 712



Model BD-8

Model VBDSB Vibrating Bin Dischargers with Storage Bins

Acrison Vibrating Bin Dischargers with integral Storage Bins provide positive discharge of dry solid materials, typically into Acrison feeders. Product discharge is on a first-in/first-out basis, accomplished without compaction, degradation or attrition.

Vibrating Bin Dischargers are available with integral storage hoppers for use in conjunction with Acrison feeders as a factory assembled package.

Equipment Specifications 1-200-0296

A Model VBDSB-32-30 with a Storage Bin and a Model 105Z Volumetric Feeder on a common structure.

Flat Bottom Bin Discharger

Model 170-BD–30 Bin Discharger

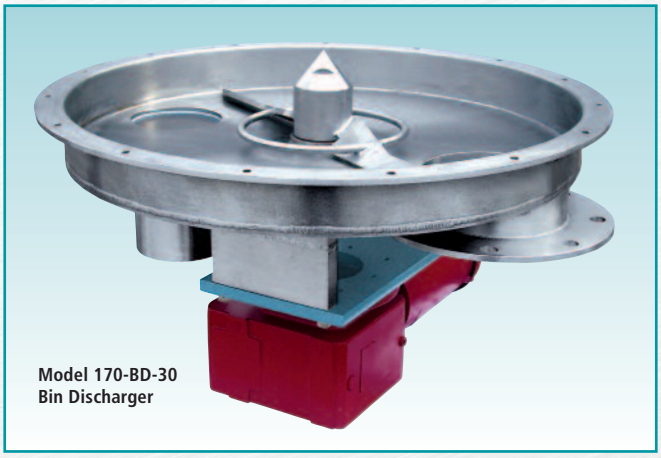
Self-emptying with total clean-out capability

The Model 170-BD-30 Bin Discharger consists of a circular, flat bottom housing (without any internal convergence whatsoever) containing a horizontally mounted agitator (driven from beneath) for the positive removal (discharge) of the dry solid material contained within, and from within the storage bin (or hopper) onto which the Model 170-BD-30 attaches, when furnished by Acrison as an integral assembly.

The Model 170-BD-30 is equipped with two separate outlets, one of which is typically connected to processing equipment such as an Acrison volumetric feeder, or for 'refilling' an Acrison 'Weight-Loss' Weigh Feeder via use of an automatically operated valve.

The second outlet, normally furnished with a manually operated slide gate valve, can also be connected to processing equipment, or alternately, can be used for independently emptying the entire contents of the Model 170-BD-30 and its storage bin. The second outlet can also be furnished with an automatically operated valve.

Equipment Specifications 1-200-0796



Model 170-BD-30
Bin Discharger

A Model 170-BD-30 Bin Discharger with a Storage Bin for refilling an Acrison 'Weight-Loss' Weigh Feeder.

Bulk Bag Unloading for Dry Solids

Model 810 Bulk Bag Unloader

Acrison's Model 810 Bulk Bag Unloader provides a safe, clean and effective means for discharging a wide assortment of dry solid materials from within various size and type bulk bags.

Designed to empty the entire contents of a bag, positive discharge is reliably achieved through the use of 'regulated vibration', uniformly applied to the body of the unloader, and in turn, directly into the bulk bag (and its contents) by an adjustable, heavy-duty motorized vibrator.

Typically, the Model 810 Bulk Bag Unloader discharges into an Acrison feeder, a storage hopper, or a take-away conveyor (e.g., pneumatic or mechanical), and will handle bags weighing up to 4000 pounds; the bags can be disposable, reusable, or lined.

The Bulk Bag Unloader mechanism is resiliently mounted onto a robust support structure. Bags are loaded (lifted) into the Unloader by either a forktruck or hoist.

Equipment Specifications 1-200-0806

Basic Model 810 Bulk Bag Unloader designed for forktruck loading.

A Model 810 Bulk Bag Unloader mounted above an Acrison Volumetric Feeder (a maintenance gate is provided between the Bulk Bag Unloader and the feeder). This Bulk Bag Unloader includes an electric hoist and motorized trolley, Acrison's Automatic Tensioning Bag Lifting Rack, and a Dust Collector.

Bulk Bag Unloading for Dry Solids

Model 820 Bulk Bag Unloader

Acrison's Model 820 Bulk Bag Unloader provides a safe, clean and effective means for discharging a wide assortment of dry solid materials from within various size and type bulk bags.

Positive discharge is reliably achieved through the use of 'regulated vibration' uniformly applied to the low-profile body of the unloader, and in turn, into the bulk bag (and its contents) by an adjustable, heavy-duty motorized vibrator. The bulk bag unloader mechanism is resiliently mounted onto a robust support structure. Bags are loaded (lifted) into the unloader by either a forktruck or hoist.

As standard, the Model 820 Bulk Bag Unloader is equipped with Acrison's Model 82-SCM Bag Spout Clamping Mechanism for easy, dust-free bag spout untying and attachment to auxiliary equipment. The Model 820 is also available with Acrison's Model 82-SCV Bag Spout Closure Valve that allows closing-off the discharge spout of a bag so that the spout can be retied, primarily when it's desired to remove a partially empty bag.

Typically, Acrison Bulk Bag Unloaders discharge into an Acrison feeder, a storage hopper, or a take-away conveyor (e.g., pneumatic or mechanical), and will handle bags weighing up to 4000 pounds; the bags can be disposable, reusable, or lined.

For certain specialty applications, the 'active' body of the Model 820 Bulk Bag Unloader is furnished with without the standard Model 82-SCM Bag Spout Clamping Mechanism and instead, may be equipped with other type dust-tight process interfacing equipment based on application requirements.

Equipment Specifications
1-200-0074

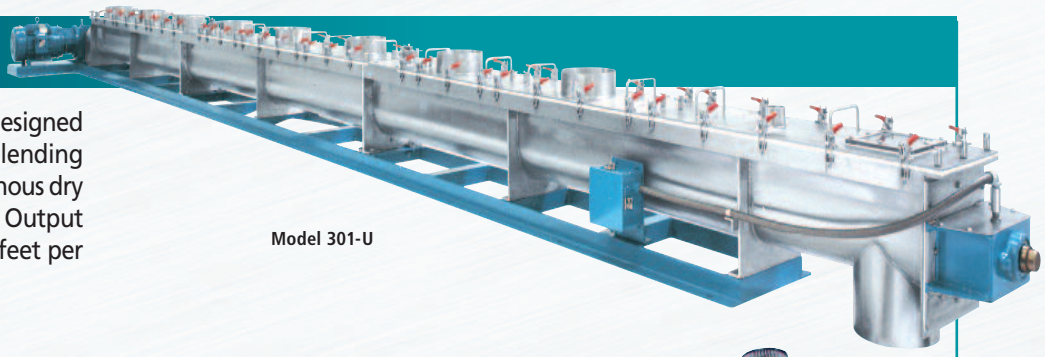
A Bulk Bag being loaded into a Model 820 Bulk Bag Unloader by an integral hoist and trolley system.

A Model 820 Bulk Bag Unloader discharging into an Acrison Volumetric Feeder.

Continuous Blenders and Blending Systems

Model 301 Blenders

Model 301 Blenders utilize a specially designed single helicoidal mixing auger for blending granular, pelletized and certain amorphous dry solid materials on a continuous basis. Output capacities range from 6 to 8000 cubic feet per hour.



Model 301-U

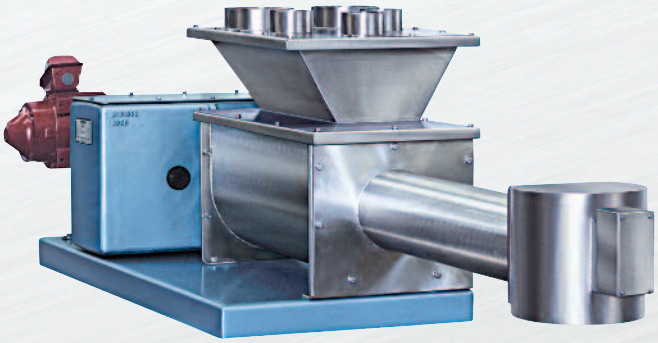
Model 350 Blenders

Model 350 Blenders utilize modified '*Inter-Auger-Action*' (Acrison's Double Concentric Augers operating at dissimilar speeds) to thoroughly and homogeneously mix dry solids with dry solids, and depending upon product characteristics, dry solids with liquids on a continuous basis. Output capacities range from 1.2 to 5100 cubic feet per hour.

Acrison can also furnish complete multiple feeder blending systems including integral supporting structures and auxiliary equipment.

Acrison blenders are only sold in conjunction with Acrison feeders.

Bulletin 711



Model 350-2

A Model 301 Continuous Blending System

Model 400 Series '*Weight-Loss*' Weigh Feeders

For Dry Solids and Liquid Metering

Models 402, 403 and 404 Series, 405, 406, 407X, 408 and 410

Today, throughout the global processing industries, *'Weight-Loss'* weigh feeders are, by far, the continuous weigh feeders of preference. However, although the operating principle employed by the various weight-loss feeder manufacturers is similar, distinct equipment design and functional differences do exist - - *differences that determine the true viability of the feeder, and the type of overall 24/7 performance that a user can realistically expect.*

An Acrison *'Weight-Loss'* Weigh Feeder consists of a dry solids feeding mechanism, or a liquid metering pump (not manufactured by Acrison), as an integral component of a precision weighing system - - where the rate of product discharge is precisely controlled on a *'weight-loss'* basis by a multiprocessor controller.

During the developmental years, Acrison found that the weighing system associated with a *'weight-loss'* weigh feeder had to possess a high signal to noise ratio in order to eliminate the need to integrate (average) the weight signal for stabilization purposes, typical of load cell weighing systems, which integration delays response of the weight signal. Therefore, Acrison determined it best to design weighing systems for 'weight-loss' weigh feeder applications with a very high signal to noise ratio, eliminating the need for signal integration, allowing the feeders to operate on a 'real-time' basis to ensure highest levels of metering performance.

Excluding the Model 403 Series of *'Weight-Loss'* Weigh Feeders, all other Acrison 'weight-loss' weigh feeder models are designed with ***Platform*** weighing mechanisms; Model 403 Weigh Feeders utilize ***Overhead*** weighing systems. These novel, technologically advanced, exceptionally durable lever weighing mechanisms are widely recognized for their stability, reliability, and longevity. And they're also *counterbalanced* so that only the net weight of material within the feeder is weighed.

When combined with Acrison's Ratiometric Digital Weight Resolver, these adjustment-free weighing systems boast unrivaled (non-amplified) weight sensing resolution, precision and durability. Moreover, they are neither temperamental nor delicate, do not require calibration or rezeroing, and are virtually maintenance-free. In addition, their unique design enables them to easily withstand the effects of vibrating environments; in fact, Acrison produces several model 'weight-loss' weigh feeders equipped with metering mechanisms that utilize vibration as part of their functional designs.

All Acrison 'Weight-Loss' Weigh Feeder Controllers include *'Acri-Lok'*, an Acrison innovation that ensures accurate metering, within design tolerances, should the feeder's weighing system sense any type of abnormal disturbance that would otherwise adversely affect metering performance.

Since the late nineteen sixties, Acrison 'Weight-Loss' Weigh Feeders have been providing users the highest value for their investments with accurate and reliable long-term operational performance, and minimal maintenance requirements. Their unmatched heavy-duty designs, quality and user-oriented features remain without equal in the very specialized field of 'weight-loss' weigh feeding.

Acrison's Series 400 'Weight-Loss' Weigh Feeders Feature…

- Continuous metering accuracies typically range between ±0.25 to 1 percent or better (error), at two sigma, based on a given number of consecutive one minute weighments.
- Batch accuracies typically range between ± 0.1 to 0.5 percent or better (error), at two sigma, based on a given number of consecutive weighments.
- Exceptionally rugged, permanently calibrated, counterbalanced weighing mechanisms with Acrison's Ratiometric Digital Weight Resolver.
- Various model Acrison metering mechanisms.
- Various Acrison multiprocessor controllers.
- Acri-Lok… scale disturbance protection… to ensure optimum metering accuracy at all times.
- Feed rates from 0.10 pounds to 70 tons per hour.
- Highest performance capability and reliability.
- Unsurpassed quality and longevity.
- Near-zero maintenance.
- User-friendly operation.
- Simple installation.
- Lowest cost of ownership in the industry.

All Acrison Weigh Feeders include a five year guarantee on the entire weighing mechanism of the weigh feeder, including the Ratiometric Digital Weight Resolver and its associated electronics.

Model 403 Series '*Weight-Loss*' Weigh Feeders

Exceptionally Versatile Dry Solids Weigh Feeders for Unrivaled Metering Performance

Introduced in 1970, initially for low rate metering, Acrison's Model 403 was the first commercially successful 'weight-loss' type continuous weigh feeder. Today, Acrison's Model 403 Weigh Feeders encompass over 50 distinct model sizes, available with 15 different type metering/hoppering mechanisms unrivaled in their materials-handling capabilities. Their 'overhead' technologically advanced lever weighing systems are virtually maintenance-free devices that do not require rezeroing, calibration or adjustment. Longevity is inherent in their design.

The feed rate capability for Model 403 Weigh Feeders ranges from several pounds to approximately 70 tons per hour... based on the selected metering mechanism, hopper size, product bulk density, scale capacity, and frequency of refills.

Bulletin 728

Model 403-BDF-3

Model 403L
(Liquid Feeder)

Model 403-140-2

Models 402 and 404 Series, 405, 406, 408 and 410 '*Weight-Loss*' Weigh Feeders

Exceptionally Versatile Dry Solids Weigh Feeders for Unrivaled Metering Performance

The Models 402 and 404 Series, 405, 406, 408 and 410 are compact, low profile precision Weigh Feeders utilizing Acrison's widely recognized 'Weight-Loss' concepts and advanced technologies to provide unparalleled overall performance in metering a wide variety of dry solid and liquid ingredients.

These particular model weigh feeders utilize Acrison's time-proven weighing systems, specifically developed by Acrison for 'weight-loss' weigh feeding applications. The basic weighing system is a dual (split) beam, 'platform' type counterbalanced lever network, robustly constructed for exceptionally long life and near zero maintenance requirements. In addition, the weighing system is permanently calibrated and adjustment-free.

These weigh feeders are available with several different type metering mechanisms … the selection of which is determined by the physical handling characteristics of the product or products to be metered and/or the feed rate requirements. Feed rates range from less than one pound up to approximately 350 cubic feet per hour.

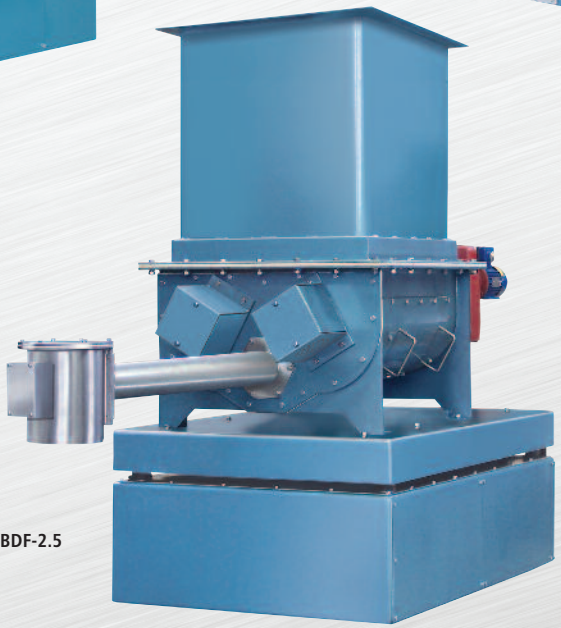
Model 410-170-MI-5

Bulletin 893

Model 402X-BDF-1.5

Model 408-105

Model 405-170-0



Model 404X-BDF-2.5

Model 407X *'Weight-Loss'* Weigh Feeder

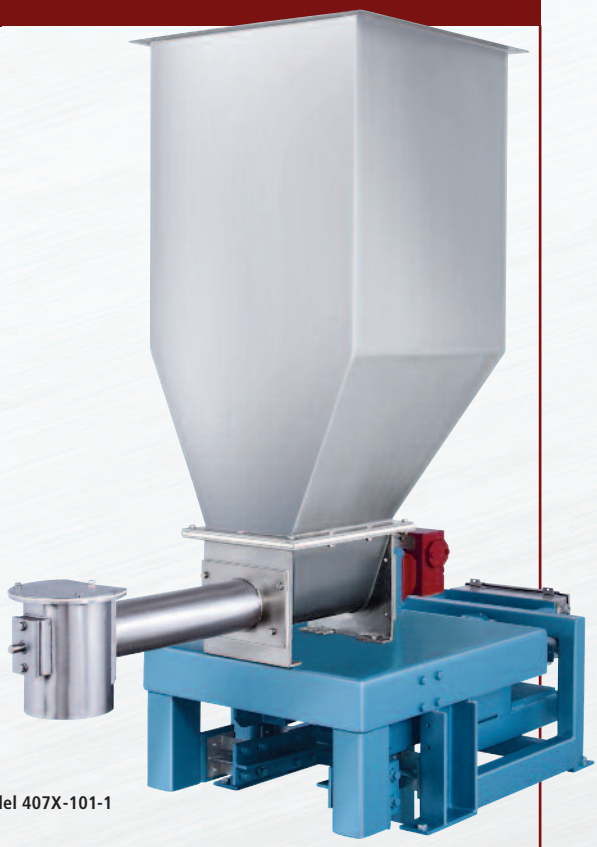
A Low Profile, Application-Specific Dry Solids Weigh Feeder

The Model 407X is a compact, economically priced weigh feeder employing Acrison's 'Weight-Loss' weigh feeding concepts and designs for accurately and reliably metering a variety of dry solid ingredients at feed rates ranging from approximately ten pounds to several thousand pounds per hour.

Encompassing strong, field-proven weighing technology, specifically developed by Acrison for 'weight-loss' weigh feeding applications, the Model 407X consists of a uniquely configured, open 'platform' type lever weighing system where the selected metering device 'mounts' onto a weigh platform.

Analogous to the weighing mechanisms used with all of Acrison's various model 'weight-loss' weigh feeders, the Model 407X weighing system is also counterbalanced and permanently calibrated.

Bulletin 897



Model 407X-101-1

Model 407X-105X

Model 407X-101-0

Model 403B(D) Series Batch/Dump Weighing Systems

Model 403B(D)-3

Acrison's Model 403B(D) 'Batch/Dump' Weighing Systems also utilize Acrison's unique, high resolution, counterbalanced lever weighing mechanisms.

- **Batch/Dump (single ingredient)...**
  meter product into the appropriate size Model 403B(D) Weigh Hopper (or Tank) to a preset weight and then, discharge the entire contents upon command.
- **Batch/Dump (multi-ingredient)...**
  meter products (sequentially) into the appropriate size Model 403B(D) Weigh Hopper (or Tank) to individually preset weights and then, discharge the entire contents upon command.

The total weight or amount of product in a given batch must be encompassed within the weigh hopper (or tank). Therefore, the weigh hopper (or weigh tank for liquids) must be designed sufficient in size to hold the entire amount of the largest desired total batch. Upon the initiation of each batch, the controller automatically rezeroes the scale to ensure optimum performance.

The various Model 403B(D) Batch Weighing Systems may be controlled by one of Acrison's multiprocessor controllers, the selection of which is predicated on user preference and/or the specifics of a given application. In particular, Acrison's multi-ingredient Model 740 Batch Weighing System controls and supervises batch weighing of up to 20 dry solid products, each being sequentially fed by Acrison volumetric feeders into a common Model 403B Batch/Dump Weigh Hopper.

The batch weighing control system provides all of the necessary control functionality for precise batch weighing with complete data reporting, numerous user-desirable features and a broad range of interfacing capabilities. All operating parameters are graphically displayed for easy operator interfacing and understanding.

Batch accuracy typically ranges between ± 0.1 to 0.5 percent or better (error), at two sigma, based on a given number of consecutive weighments.

Bulletin 840 and
Equipment Specifications 1-200-0813

Model 403B(D)-00

Model 403B(D)-10

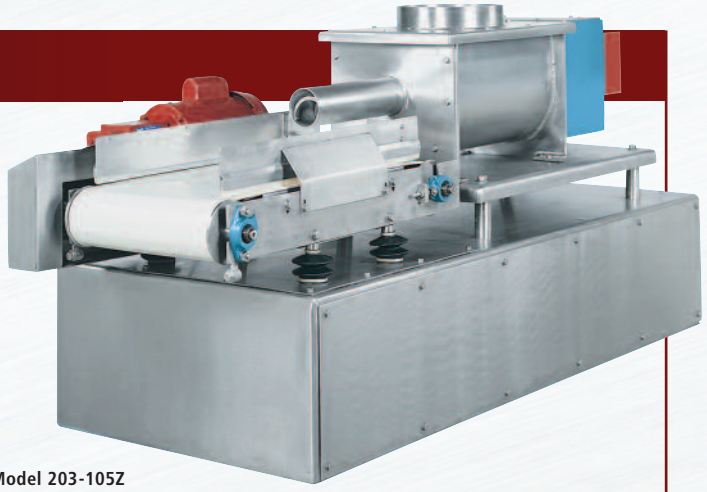
Series 200 Weigh Feeders

Model 203 Series (Weigh Belt Feeders)

A Weigh Belt Weigh Feeder that combines the initial high performance of an integral Acrison metering mechanism with a highly responsive, counterbalanced lever weighing mechanism to produce optimum metering accuracy.

Capacities range from 60 to 48,000 pounds per hour (based on product weighing 40 pounds per cubic foot).

Bulletin 723



Model 203-105Z

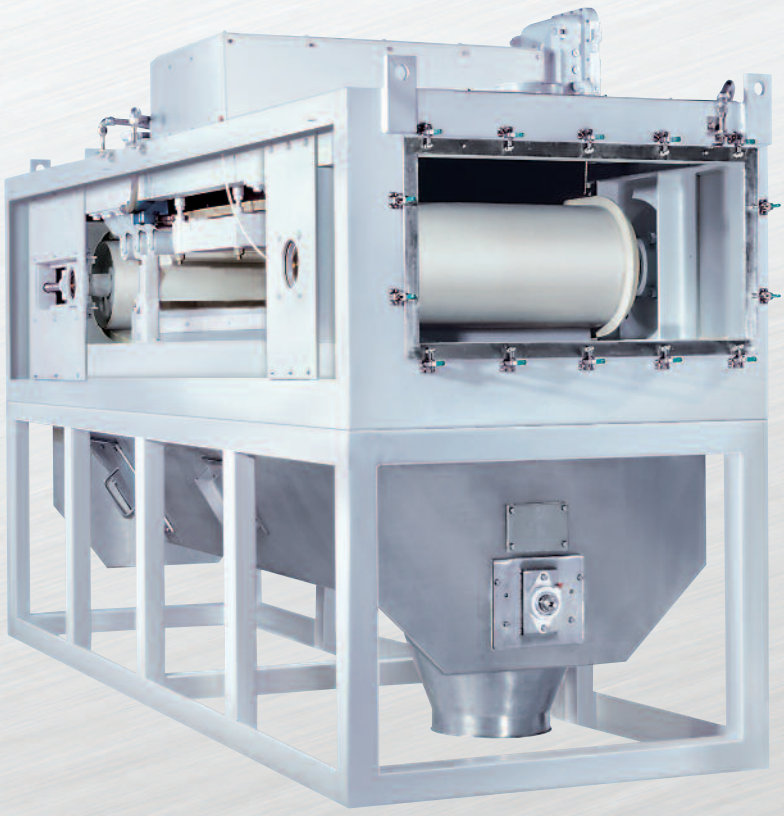
Model 260 Series (Weigh Belt Weighers / Feeders)

A rugged-duty Weigh Belt Weigher (wild-flow) and Weigh Feeder series to satisfy high capacity weighing requirements. Model 260 Feeders/Weighers also feature an Acrison high resolution, counterbalanced lever weighing system mounted above the weigh belt, out of the product metering zone.

Standard feed output capacities range from approximately 80 to 7100 cubic feet per hour (higher and/or lower capacities may be available).

Bulletin 720

Model 260-24
(side panels removed)



Model 260(F)-30 Weigh Belt Feeder (side panels removed).
The feeder is equipped with a scavenger screw.

All Acrison Weigh Feeders include a five year guarantee on the entire weighing mechanism of the weigh feeder, including the Ratiometric Digital Weight Resolver and its associated electronics.

Series 200 Weigh Feeders

Model 270 Series

Model 270 Weigh Feeders offer processors an economical, precise and reliable method for metering a variety of dry solid ingredients at moderate to high rates (up to 7355 cubic feet per hour) in a compact, 'in-line' vertical configuration.

Model 270 Weigh Feeders utilize a uniquely configured, rotary pocketed mechanism, mounted onto an Acrison lever weighing system that precisely weighs all of the material passing into and then out of the pocketed mechanism as it rotates.

The permanently calibrated, adjustment-free weighing system is also counterbalanced, and includes Acrison's Ratiometric Digital Weight Resolver for unsurpassed weight sensing resolution without signal amplification or integration. In addition, the weighing system is exceptionally robust, virtually maintenance-free, and designed for exceptional longevity.

Model 270 Feeders completely confine the product being metered from inlet to outlet. Side panels completely enclose the entire weighing mechanism, prohibiting airborne dust from affecting weigh feeding performance. Portions of the side panels are clear plastic to allow visual observation of the weigh feeder system.

Metering accuracy typically ranges between ±0.25 and 1 percent or better (error), at two sigma, based on a given number of consecutive one minute weighments.

Equipment Bulletin 726

Model 270-4 (shown with dust-tight panels removed)

Model 270-3

All Acrison Weigh Feeders include a five year guarantee on the entire weighing mechanism of the weigh feeder, including the Ratiometric Digital Weight Resolver and its associated electronics.

Industrial and Municipal Chemical Feed Equipment

Acrison Silo Systems

For Storing, Feeding and Dissolving Dry Chemicals

To meet the growing needs of the various water and wastewater treatment industries, Acrison applies its expertise and experience to the design and implementation of product storage silos, and the dependable removal (discharge), metering and dissolving of the chemicals contained within.

The equipment section of the silo typically includes items such as bin dischargers, feeders, maintenance gates, dissolving systems (including pumps, if required), control panels, interior lights, and all valves and components necessary for a completely operable system. All components are installed, pre-piped, and pre-wired prior to shipment.

Also, depending on the location of the silo system, the skirted area may also include heaters, exhaust fans, vents, insulation, etc., all of which would also be pre-installed.

Acrison guides customers through the entire silo process, from system design to equipment start-up and operator training. Acrison can assist in equipment selection, component recommendations, layout of system control logic, and is able to provide complete specifications specifically tailored to application requirements.

Bulletins 924 and 514

Equipment in this skirted silo includes several dry solids feeders metering chemical into dissolving tanks plus all required ancillary equipment and applicable controls.

Dry/Liquid Polymer Preparation Modules/Systems

Model 500 Polymair® Preparation System

The Model 500 Polymair Preparation System automatically prepares a homogeneous and precise solution from dry and liquid polymers at moderate to high capacities. Primarily designed for handling dry polymers, a volumetric feeder meters dry polymer into an advanced dry air atomizing system, conveying the atomized polymer into a novel cyclone wetting chamber, especially effective for wetting very fine dry polymers.

However, this system can also be furnished to handle both dry and liquid polymers with the addition of a pump to meter liquid polymers into Acrison's 'Dispersion-injector' to produce a homogeneous polymer solution. Manual selection provides automatic transfer from dry to liquid or liquid to dry operation without the need for any equipment modifications whatsoever. The Model 500 Polymair Preparation System is completely assembled and mounted onto a 'skid' type base. An aging tank, when furnished, is shipped separately.

Bulletins 500 and 514

Model 500 Polymair Preparation System

A specially designed Model 500 Polymair System for handling both dry and liquid polymers. Includes the mixing tank, metering pumps and related controls all mounted on a common base.

Model 515 Polymer Preparation Module

The Model 515 Polymer Preparation Module automatically prepares a homogeneous and precise solution from dry and/or liquid polymers at low to moderate capacities. Primarily designed for handling dry polymers, a volumetric feeder meters dry polymer into a unique wetting chamber, or a pump meters liquid polymer into Acrison's 'Dispersion-Injector', to produce a homogeneous polymer solution. Manual selection provides automatic transfer from dry to liquid or liquid to dry operation without the need for any equipment modifications whatsoever.

The Model 515 Polymer Preparation Module is provided as a complete packaged assembly mounted onto a 'skid' type base. Different capacity systems provide a wide range of polymer metering capacities and solution concentration strengths.

Bulletins 515 and 514

Model 515 Polymer Preparation Module

Liquid Polymer Preparation Modules

Models 530 and 580 Polymer Preparation Modules

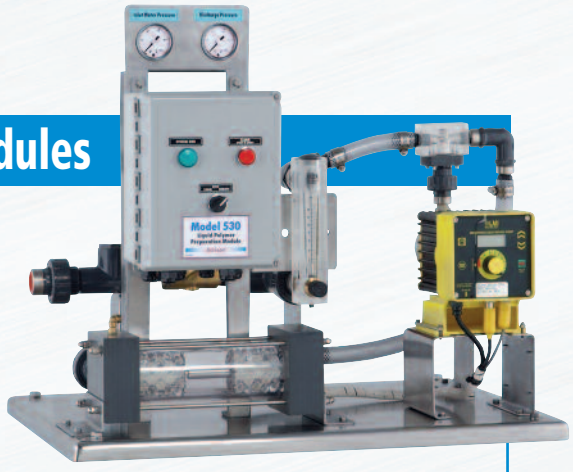
For the efficient and precise activation of liquid polymers, using a novel two stage activation process.

The Models 530 and 580 Polymer Preparation Modules automatically prepare a congruous and active solution from liquid polyelectrolyte emulsions and solutions.

To accomplish this, a pump meters liquid polymer into Acrison's unique 'Dispersion-Injector' where the polymer initially and very effectively combines with water. The output of the Dispersion-Injector discharges directly into an 'Activation Chamber' where the polymer and water solution is thoroughly and instantaneously mixed for final and complete activation. The Model 530 utilizes a static Activation Chamber, whereas the Activation Chamber for the Model 580 is motorized.

The prepared solution immediately discharges from the Preparation Module either directly into the process, or through a retention vessel before being applied to the process. The Models 530 and 580 Preparation Modules are furnished in a durable packaged assembly. Different capacity systems provide a wide range of polymer metering capabilities and solution concentration strengths.

Equipment Specifications 1-200-0558 and 1-200-0552
Bulletin 514



Model 530

Model 580

Model W-105 Feeder Series

Volumetric Dry Chemical Feeders

Designed to handle various dry chemicals, the Models W-105 and W-105Z Volumetric Feeders are usually supplied as part of a 'package' for water and waste water treatment processes. These rugged-duty feeders employ Acrison's *dissimilar speed*, Double Concentric Auger Metering Mechanism for unequalled performance, trouble-free operation, and exceptional longevity.

Typical metering accuracies range between ± 1 to 2 percent or better (error) based on a given number of consecutive one minute samples.

Model W-105

Used for semi-free flowing materials, this model feeder features a six inch diameter Intromitter or 'conditioning' auger.

Model W-105Z

Used for non-free flowing materials, this model feeder features a ten inch diameter Intromitter or 'conditioning' auger.

Equipment Specifications 1-200-0011
Bulletin 514

A Model W-105Z
with Dissolving Tank

Acrison Weigh Feeder Controllers and Control Systems are universally recognized for their design and functional superiority, unparalleled versatility, ease of use, and operational reliability. From basic weigh feeder controllers to multi-feeder supervisory control systems, their technologically advanced designs combined with cutting-edge software routines operating on a *real-time* basis, provide users with unexcelled all-around performance to satisfy the most demanding metering requirements across a very broad spectrum of applications. And with a wide range of options, accessories and interfacing capabilities, these controllers and control systems are also available in a number of different packaging configurations to suit the specifics of a given installation.

Model SBC-3000™ Controllers

Acrison's Model SBC-3000 Weigh Feeder Controllers utilize leading-edge technologies and functional algorithms to provide users with unexcelled weigh feeder performance across a very broad range of process requirements and applications. And with an unprecedented number of standard and optional features, accessories and interfacing capabilities, including native Ethernet and Profibus connectivity, these Controllers also provide unparalleled versatility, ease of use, and operational reliability. In particular, SBC-3000 Controllers are ideally suited for those applications that require central computer control with minimal hardware.

Model SBC-3000 Controller

The Model SBC-3000 Controller operates a single Acrison Weigh Feeder. The Controller integrates a single circuit module with a bright, state-of-the-art TFT color graphics display (measuring 7" diagonally) in a package designed for panel-mounting. The assembly is dust-tight/water-tight.

All Acrison controllers are certified to UL, CSA and EC specifications.

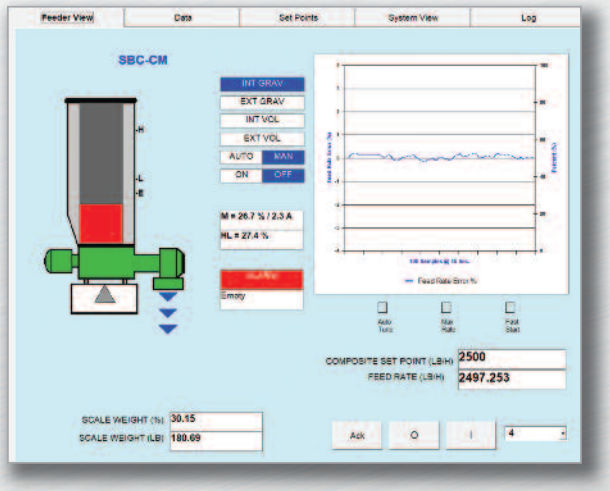
Model SBC-3000-CM Controller

The Model SBC-3000-CM Controller operates a single Acrison Weigh Feeder. It consists of a single circuit module designed for applications that utilize a central computer, PLC or DSC for monitoring and control, which do not require a local operator interface. The Model SBC-3000-CM Controller is typically supplied in a card rack, the size of which depends upon the number of controllers required for a given application. A local (remote) Keyboard/Display unit is available as an option.

Acri-Data® Multi-Feeder Supervisory Control System

Typically operating with either a 17 or 21 inch color touch-screen (measured diagonally), Acri-Data is a Supervisory Control System capable of supervising the operation of up to twenty (20) Acrison Weigh Feeders while displaying real-time data and operational updates. It is also capable of master/slave and ratio/proportioning operation, unlimited recipes (including storage and retrieval), trending, event and alarm logging, automatic shut-down configurability and more.

Acri-Data is frequently used in conjunction with Acrison's SBC-3000-CM Weigh Feeder Control Modules. It can be hosted on a Microsoft Windows operating platform (e.g., a panel-mounted embedded PC or a desktop/laptop PC). A user's PLC or DCS can also serve as a host for SBC-3000 Controllers.



Acri-Data® Screen

Equipment Specifications 1-200-0091 and 1-200-0627

Weigh Feeder Controllers and Control Systems (cont.)

Model SBC-3000 Weigh Feeder Controller

A NEMA 12 Enclosure housing two Model SBC-3000 Weigh Feeder Controllers

Control Console in one of Acrison's Equipment Demonstration Facilities

Let's Talk Performance

Clearly, ***there is a difference...*** a significant difference in technology, quality, durability, maintenance parameters and attainable performance, particularly, where weigh feeders are concerned.

Acrison strongly encourages a prospective user of dry solids metering equipment to visually and physically compare the available devices in order to select the most viable hardware to satisfy the metering requirements of the most demanding processes. The information obtained from a personally witnessed equipment operational demonstration will prove to be invaluable in the decision-making process.

Acrison's modern equipment demonstration facilities are the most advanced and best-equipped in the industry. We would be glad to demonstrate the operation of the selected equipment with your actual product, normally, without any charge or obligation. Test procedures are generally completely automatic.

In addition to equipment demonstration/materials testing, Acrison also offers comprehensive user training programs, focusing on equipment operation and maintenance. Acrison also offers customized seminars dealing with the application of Acrison products.

To appreciate the overall performance capability of an Acrison dry solids feeder, especially a weigh feeder metering a 'difficult-handling' material, the significance of observing operation of the selected equipment handling the actual product cannot be over-emphasized.

Discover the difference!

We cordially invite you to witness a test in Acrison's state-of-the-art Customer Demonstration Facilities handling your actual product(s) with the specific equipment we recommend for the application. Usually, there is no cost or obligation for this service.

Discover the difference in technology, quality and performance of Acrison equipment.

Empire Boulevard Facility
Moonachie, NJ USA

Joseph Street Facility
Moonachie, NJ USA

Acrison products...

- Models 101 and 130 Volumetric Feeder Series
- Models V-101 and V-130 Volumetric Feeders
- Model 1015 Volumetric Feeder Series
- Model 105 Volumetric Feeder Series
- Model W-105 Volumetric Feeder Series
- Model 120 Volumetric Feeder
- Model 140 Volumetric Feeder Series
- Model 170 Volumetric Feeder Series
- Model 905-14 Volumetric Feeder
- Bin Discharger Feeders
- Model 200 Weigh Belt Feeder Series
- Model 203B Weigh Auger Feeder Series
- Model 270 In-Line Weigh Feeder Series
- Models 402, 404, 405, 406, 407X, 408 and 410 ('Weight-Loss') Weigh Feeders
- Model Series 403 ('Weight-Loss') Weigh Feeders
- Model 403B(D) Batch/Dump Weighing Systems
- Model 404BZ(BU) Bulk Bag Unloader Batch Weigher
- Models 350 and 301 Continuous Blenders and Blending Systems
- Multiple Auger Bin Dischargers and Multiple Auger Bin Discharger Hoppering Systems
- Vibratory Bin Discharger Hoppering Systems
- Model 170-BD-30 Bin Discharger
- Models 810 and 820 Bulk Bag Unloaders
- Models 500, 515, 530, and 580 Polyelectrolyte Preparation Systems
- Water and Waste Water Treatment Systems
- Volumetric and Gravimetric Feeder Controllers and Control Systems
- Silo Systems
- Accessory Equipment for Acrison Products
- Systems Engineering

"Visibly Different... Measurably Better"

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300-0006/M/12-23/W