

Acrison®



Product Line Overview

Robustly built, high performance equipment to satisfy your dry solids metering/handling needs.



High Performance, Superior Quality Equipment for Dry Solids Metering/Handling.

In the highly technological and specialized field of dry bulk solids handling... specifically, the precision metering of dry solid ingredients by volume or weight, and the closely related proportioning, blending, storage and hopping of such materials, Acrison ranks as an International Leader. Since 1964, Acrison has been applying its skills to the empirical science of dry solids handling. And while scientific to some extent, the complexity and diversity of dry solid materials has resulted in the evolution of Acrison's business to a true art form in actual practice.

Headquartered in Moonachie, New Jersey, Acrison's North American facilities, totaling over 140,000 square feet, house a staff of several hundred employees conducting marketing and sales, research and development, mechanical and electrical engineering, manufacturing, customer support services and equipment demonstrations.

Today, Acrison offers, by far, the most comprehensive line of volumetric and gravimetric feeders in the industry... feeders that are well known for their ability to accurately and reliably meter an unparalleled variety of dry solid ingredients. And to effectively cope with such an assortment of materials and the incredible diversity of their individual and varied handling characteristics, Acrison can match, without compromise, the proper equipment to the endless list of materials that processors must handle.

In addition to dry solids feeders, Acrison also manufactures bin discharging mechanisms, continuous blenders, "pre-packaged" metering and blending systems, and certain auxiliary components such as bin vent filters, dust collector bag-dump stations, bulk bag unloaders, refill systems for its "weight-loss" weigh feeders, flow/no flow sensors, plus other related equipment, including a variety of controls and control systems.

Acrison also offers equipment to meet the growing needs of the various water and wastewater treatment industries by applying its industrially designed equipment to water treatment processes. From simple chemical feeding and dissolving packages, to advanced dry and liquid polyelectrolyte preparation systems, Acrison's equipment is widely specified for water treatment applications.

With a strong emphasis placed on new product development, as well as on product improvements and enhancements, Acrison maintains an aggressive staff for mechanical, electronic and software development... a "think-tank" that boasts a solid history of successful innovations and industry "firsts", allowing Acrison to maintain its leading technological edge. Acrison's basic philosophy is to produce the most viable and reliable equipment encompassing innovative, exceptionally functional, rugged-duty designs, and to provide strong user support.

In particular, Acrison developed and perfected a number of unique and novel multiple auger type metering mechanisms that have revolutionized the industry, primarily because of their ability to meter more dry materials, more accurately and more reliably than any other, and with minimal maintenance requirements.

Also, during the late nineteen-sixties, Acrison pioneered and developed the "weight-loss" weigh feeding operational concept as it's presently known for the precise metering of both dry solid and liquid ingredients. Since that time, and because of the distinct advantages a properly designed "weight-loss" weigh feeder will provide, this major Acrison innovation has become the most widely specified type continuous weigh feeder in the processing industries, and is now specified in the vast majority of weigh feeding applications, worldwide.

Acrison also leads the industry in control system technology and capability. In particular, Acrison's Model SBC-2000 Family of Weigh Feeder Controllers provide the highest levels of performance and flexibility. From their unique operating software and color graphics touchscreens to the latest in interfacing and networking capabilities, these controllers offer users cutting-edge technologies for optimum weigh feeder performance.

With the diversity of process applications combined with the countless number of dry solid materials that processors regularly handle, Acrison maintains state-of-the-art testing facilities to confirm equipment selection and operational performance for the product(s) in question. Automated feeder testing procedures are precise and definitive, eliminating human error associated with physical performance testing, and provide the ability to sample from a fraction of a second upwards. Acrison offers the services of these facilities to test your material, usually without cost or obligation, and welcomes your personal attendance.

Acrison, builds equipment to satisfy the needs of its customers. Acrison is proud of its innovations and products, and their contribution to the processing industries. Acrison is proud of its people, and most of all, Acrison is very proud of its customers.

Each of Acrison's various products is fully described in individual bulletins. Acrison welcomes the opportunity to make equipment recommendations, demonstrate the selected model, and in general, assist with any of your dry solids handling requirements, usually without charge or obligation.

For additional information, please contact Acrison or visit Acrison's website at www.acrison.com.



Volumetric Feeders for Dry Solid Materials

Acrison Volumetric Feeders are universally acclaimed for their unique ability to accurately and reliably feed an extremely broad variety of dry solid ingredients. Their innovative and technologically superior designs provide a high degree of versatile metering performance. Their quality of construction and durability are unsurpassed; their maintenance requirements are the lowest in the industry.

A true volumetric feeder encompasses a positive method of measuring a specific volume of product and a means to effectively discharge that material, generally over a variable range. With an auger type volumetric feeder, the auger is the means used to measure volume, discharging the "measured" volume of material with each revolution, as it typically rotates through a discharge spout. Consequently, the viability of any auger type dry solids feeder is dependent upon how uniformly and consistently the feed auger is filled with product, and how reliably this is accomplished.

Even in view of today's technological accomplishments, the precise and dependable metering of dry solid ingredients remains far more of an art than a science; unquestionably, specific expertise and experience plays the most crucial role. And since it is also a well-established fact that no single approach to dry solids metering has been able to solve all materials-handling variables, Acrison has designed and manufactures a number of different auger type volumetric feeder models in order to successfully handle the incredible number and diversity of dry solid materials. Each of these individual feeder models possesses specific functionality, suitable to handle a range of product characteristics.

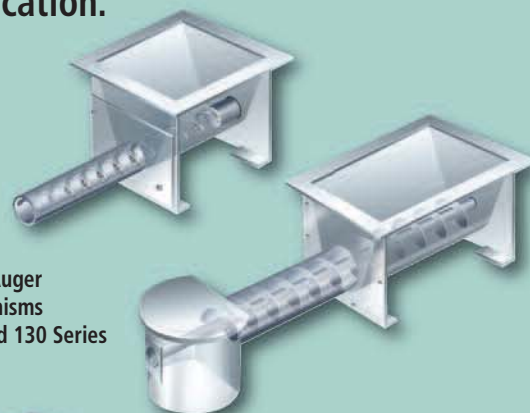
For example, feeding very free-flowing products such as coffee beans, grass seed or plastic pellets really doesn't require much mechanical sophistication; however, to accurately and dependably meter sluggish amorphous materials, especially those with adhesive, cohesive and/or pressure sensitive characteristics, is a challenge.

Today, Acrison produces dry solid volumetric feeders that range from single auger metering devices to handle the generally easier free-flowing materials, to various type dissimilar speed, multiple auger and agitated flat bottom metering mechanisms for the more difficult-handling products.

All of Acrison's various model volumetric feeders are available with a number of different size metering augers – interchangeable on each of the individual model feeders – to cover a specific output feed range. Overall feed rates range from 0.0012 to 6600 cubic feet per hour, depending upon the selected feeder model and the size of its metering auger. In addition, and as standard, all Acrison volumetric feeders are equipped with variable speed drives that cover a wide operating range.

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

Choose from the 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



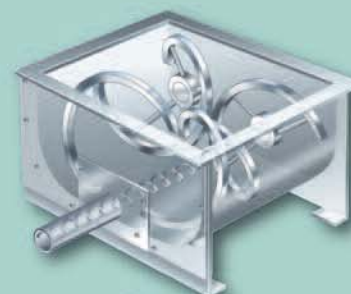
Dissimilar Speed
Dual Auger/Agitator Mechanism
Model 1015 Series



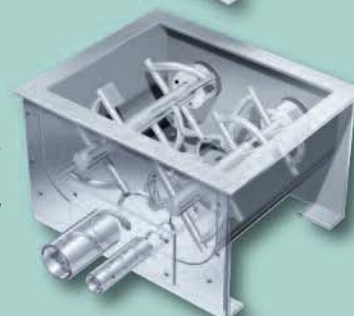
Dissimilar Speed Double
Concentric Auger Mechanism
Models 105 and 140 Series



Self-Emptying
Auger/Agitator Mechanism
Model 170 Series



Dissimilar Speed
Triple Auger/Agitator
Mechanism
Model BDF Series



Multiple Auger/Agitator
Mechanism
with two independently
driven metering
Augers and Agitators

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 between 0.0012 and 29 cubic feet per hour.

Model 101-1 - For feed rates ranging between 0.84 and 202 cubic feet per hour.

Model 130-0 - For feed rates ranging between 4.8 and 600 cubic feet per hour.

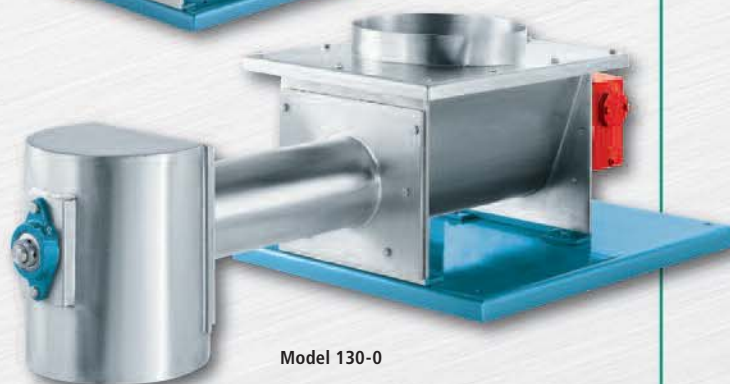
Model 130-1 - For feed rates ranging between 18 and 1200 cubic feet per hour.

Model 130-2 - For feed rates ranging between 36 and 3400 cubic feet per hour.

Equipment Specifications 1-200-0479



Model 101-0



Model 130-0

Model 1015 Feeder Series

Acrison's 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 1015 - Smallest of the Model 1015 Series of Volumetric Feeders, this model is equipped with a 6 inch diameter "conditioning" auger/agitator and provides an overall output capacity ranging between 0.0012 and 19 cubic feet per hour.

Model 1015X - This model is furnished with an 8 inch diameter "conditioning" auger/agitator and provides an overall output capacity ranging between 0.0108 and 72 cubic feet per hour.

Model 1015Z - This model is furnished with a 10 inch diameter "conditioning" auger/agitator and provides an overall output capacity ranging between 0.048 and 202 cubic feet per hour.

Model 1015XX - This model is furnished with a 15 inch diameter "conditioning" auger/agitator and provides an overall output capacity ranging between 4.8 and 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 and provides an overall output capacity ranging between 36 and 3400 cubic feet per hour.

Equipment Specifications 1-200-0481



Model 1015Z

Volumetric Feeders

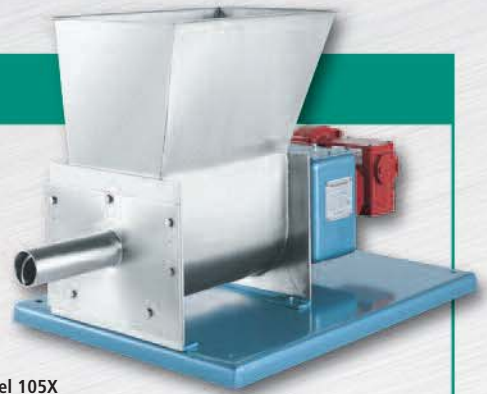
Models 105 Feeder Series

A rugged duty, Dry Solids Volumetric Feeder Series featuring Acrison's unique, *dissimilar speed*, Double Concentric Auger Metering Mechanism and "*Inter-Auger-Action*" for exceptional metering performance and versatility. Introduced in 1965, Acrison's Model 105 Series of Volumetric Feeders are the largest selling feeder series in the world, offering unexcelled performance, value and reliability.

Model 105 - Smallest of the Model 105 Series of Volumetric Feeders, this model is equipped with a 6 inch diameter Intromitter or "conditioning" auger, and provides an overall output capacity ranging between 0.0012 and 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 between 0.003 and 72 cubic feet per hour.

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



Model 105X



Equipment Specifications 1-200-0480

Model 140 Feeder Series

A high capacity Series of Volumetric Feeders that employ Acrison's unique, *dissimilar speed*, Double Concentric Auger Metering Mechanism and "*Inter-Auger-Action*" for efficiently and accurately feeding a wide variety of dry solids ingredients.

Model 140-0 - Smallest of the Model 140 Series of Volumetric Feeders, this model is equipped with a 12 inch diameter Intromitter or "conditioning" auger, and provides an overall output capacity ranging between 4.8 and 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 between 18 and 1800 cubic feet per hour.

Model 140-2 - Largest of the Model 140 Series of Volumetric Feeders, this model is furnished with an 18 inch diameter Intromitter or "conditioning" auger, and provides an overall output capacity ranging between 48 and 3400 cubic feet per hour.



Model 140-2

Equipment Specifications 1-200-0480

Model 120 Feeder

The Model 120 Dry Solids Volumetric Feeder includes an integral R-P (oscillating) Hopper to ensure a positive and uninterrupted flow of product into the feeder's *dissimilar speed*, Double Concentric Auger Metering Mechanism. The Model 120 utilizes a 6 inch diameter Intromitter or "conditioning" auger to effectively and accurately meter a broad variety of dry solid materials.

The output capacity for the Model 120 Feeder ranges between 0.0012 and 96 cubic feet per hour.

Equipment Bulletin 270

Model 120



Models V-101 and V-130 Feeders

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

Model V-101 - For feed rates ranging between 0.1 and 25 cubic feet per hour.

Model V-130 - For feed rates ranging between 0.5 and 54 cubic feet per hour.

Equipment Specifications 1-200-346

Model V-101



Model 905-14 Feeder

Acrison's Model 905-14 Volumetric Feeder has been specifically designed to meter strand-type materials having lengths ranging from 0.4 to 0.75 inches (e.g., fiberglass), even when such products contain a small percentage of moisture.

Output feed rates range from approximately 1 cubic foot to 47 cubic feet per hour.

*Equipment Specifications
1-200-0804*

A Model 905-14 Feeder
metering 0.5 inch long
fiberglass.



Model 905-14



Model 170 Feeder Series

Designed with a circular, flat bottom feed chamber with a non-restrictive, non-converging product inlet, a slow-speed horizontally rotating "conditioning" agitator ensures positive flow of product from within the feeder's integral supply hopper into the feed chamber and into the metering auger located beneath. Dead zones do not exist and consequently, product stagnation cannot occur anywhere within the feeder.

With only two moving parts, Model 170 Metering Mechanisms have the unique ability to "self-empty" – when permitted to feed until empty – or to "empty-quickly" when the need to empty the feeder rapidly exists. Excluding the Model 170-MI-5, "rapid emptying" is accomplished by means of a novel discharge port located in the flat bottom of the feed chamber; total clean-out is extremely fast and simple.

Model 170-00 - Designed with a 9 inch diameter feed chamber, this particular Model 170 Feeder provides an overall output capacity ranging between 0.0012 and 6 cubic feet per hour.

Model 170-0 - Designed with a 13 inch diameter feed chamber, this particular Model 170 Feeder provides an overall output capacity ranging between 0.0076 and 19 cubic feet per hour.

Model 170-1 - Designed with an 18 inch diameter feed chamber, this particular Model 170 Feeder provides an overall output capacity ranging between 0.084 and 51 cubic feet per hour.

Model 170-2 - Designed with a 24 inch diameter feed chamber, this particular Model 170 Feeder provides an overall output capacity ranging between 0.28 and 118 cubic feet per hour.

Model 170-3 - Designed with a 30 inch diameter feed chamber, this particular Model 170 Feeder provides an overall output capacity ranging between 0.38 and 240 cubic feet per hour.

Equipment Specifications 1-200-0525



Model 170-00



Model 170-1



Quick Disconnect Clamps

Isolation Pad



Rapid Empty Discharge Port

Model 170 Feeder Series (con't)



Easy-Clean Swing-Out Hopper
(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 moving parts



Model 170-2

Model 170-MI-5 Feeder Series (Micro-Ingredient 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, the feeder includes quick-disconnect features; it can be disassembled and/or reassembled in less than a minute.

Cleaning has been made very simple and quick, particularly 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 gearmotors are capable of washdown.

The feeder is supplied with either a 0.10 cubic foot vertical hopper, or a 0.20 cubic foot conical hopper, the selection of which is dependent upon product characteristics. Other hopper sizes may be available, predicated on material handling characteristics. As standard, all product contact surfaces are 316 stainless steel, including the feeder's drive shafts and seal components. And 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's *Bin Discharger Volumetric Feeders* represent a unique and versatile combination of a multiple auger/agitator bin discharging mechanism with a metering auger – operating at proportional, but *dissimilar speeds* – specifically designed to ensure both positive product flow and feed of even the most difficult-handling dry solids ingredients. The wide throat feed chambers of Bin Discharger Feeders are also designed without any internal convergence whatsoever, greatly enhancing product flow.

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

Model BDFM - For feed rates ranging between 0.006 and 3 cubic feet per hour.

Model BDF-1 - For feed rates ranging between 0.0015 and 7 cubic feet per hour.

Model BDF-1.5 - For feed rates ranging between 0.088 and 48 cubic feet per hour.

Equipment Specifications 1-200-0482

Model BDFM



Model BDF-1



Model BDF-1.5-2 Feeder

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

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

Additionally, the Model BDF-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.

Please reference the below indicated Equipment Specifications for feed output capacities.

Equipment Specifications 1-200-0815

Model BDF-1.5-2



Multiple Auger/Agitator Bin Discharger Feeders

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

The Models BDF-2, BDF-2.5, BDF-3, BDF-4-1 and BDF-5 Bin Discharger Feeders are powered by individual heavy-duty gearmotor drives. The metering auger is equipped with a variable speed drive.

As an alternate to the common variety of bin dischargers with their typical bottom discharge and a separate feeder mounted beneath, Acrison's various larger Model Bin Discharger Volumetric Feeders (BDF) combine Acrison's Multiple Auger/Agitator Bin Discharger with an integral feed auger to provide both positive hopping and reliable metering of the widest possible variety of dry solid ingredients, particularly, the most difficult-to-handle. In addition, and to optimize mass flow, Bin Discharger Feeders are designed with full throat product inlets without any internal convergence whatsoever.

This configuration eliminates the additional hardware and height that would be typically required to mount a volumetric feeder beneath a bin discharger mechanism. The metering auger is normally furnished with a variable speed drive.

Acrison also furnishes Bin Discharger Feeders with integral storage bins up to 200 cubic feet in capacity (and larger if application parameters permit).

Model BDF-2 - For feed rates ranging between 0.12 and 202 cubic feet per hour.

Model BDF-2.5 - For feed rates ranging between 0.28 and 600 cubic feet per hour.

Model BDF-3 - For feed rates ranging between 0.58 and 1200 cubic feet per hour.

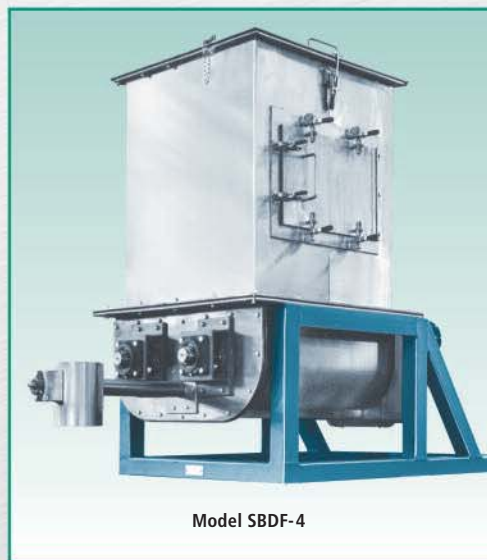
Model BDF-4 - For feed rates ranging between 0.58 and 3400 cubic feet per hour.

Model BDF-5 - For feed rates ranging between 12 and 6600 cubic feet per hour.

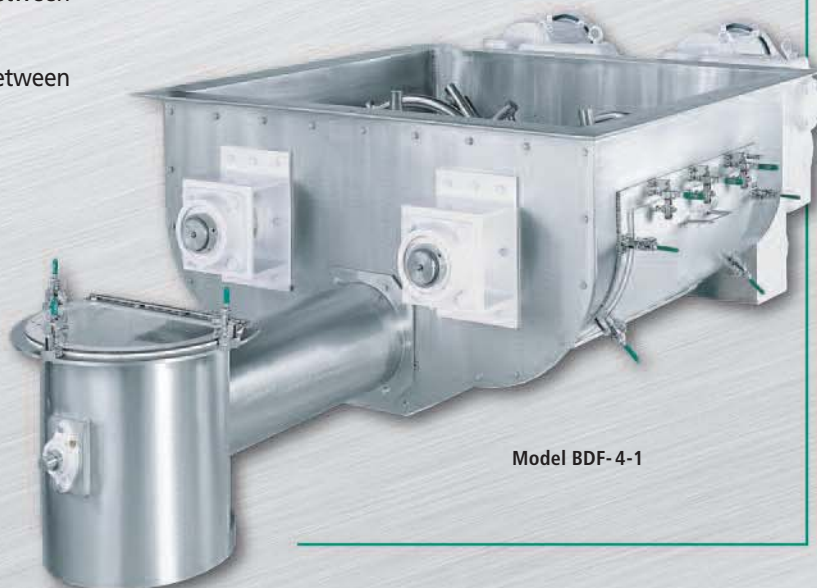
Equipment Bulletin 712



Model BDF-3-1



Model SBDF-4



Model BDF-4-1

Bin Discharging Mechanisms

Multiple Auger / Agitator Bin Dischargers

Acrison's Multiple Auger/Agitator Bin Dischargers produce a positive uninterrupted flow of product from storage. In utilizing opposed multiple segmented helical sections, or pitched agitator blades slowly rotating within the body of the Bin Discharger, removal of the most difficult-handling materials from within is reliably accomplished.

Available in sizes from 2 to 8 feet round or square, these Bin Dischargers do not require flexible connections on either the inlet or outlet and may be furnished with multiple discharge outlets. They are designed for direct flange attachment to the bottom of a bin or silo.

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

Equipment Bulletin 712



Model BD-3



A Model SBD-4 with a Storage Bin and a discharge valve

Model VBDSB Vibrating Bin Dischargers with Storage Bins

Acrison Vibrating Bin Dischargers, with integral Storage Bins, promote 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 with a Storage Bin and a Model 105Z Volumetric Feeder

Flat Bottom Bin Discharger

Model 170-BD-30 Bin Discharger

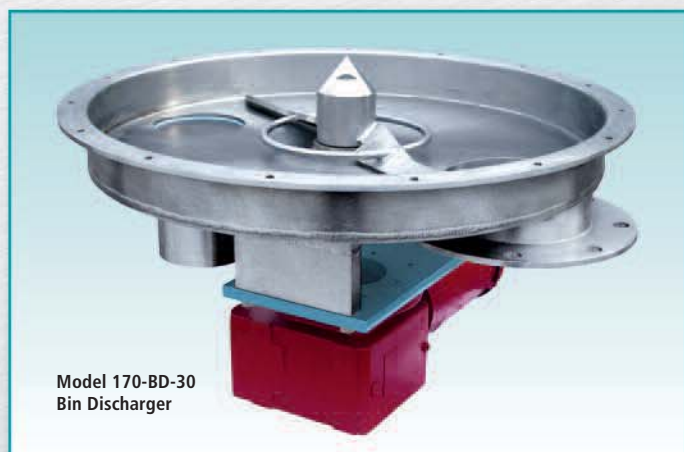
Self-emptying with total clean-out capability

The Model 170-BD-30 Bin Discharger consists of a circular, non-converging flat bottom housing containing a horizontally mounted agitator (driven from beneath) for effectively and reliably discharging dry solid materials from within a storage bin (hopper) to which it attaches.

The Model 170-BD-30 Bin Discharger is equipped with two individual outlets, one of which is typically utilized for filling an Acrison Feeder, or to refill an Acrison "Weight-Loss" Weigh Feeder. (When refilling a "weight-loss" feeder, the discharge outlet typically includes an automatically operated slide gate type valve.)

The second outlet is a novel "Discharge Port" that allows the contents of the Bin Discharger, and its associated storage bin, to be emptied rapidly, ideally suited for frequent product changeovers. The "Discharge Port" is normally furnished with a manually operated slide gate valve, although it can also be equipped with an automatically operated valve. And because the Bin Discharger itself is self-emptying, total cleanout is quick and easy.

Equipment Specifications 1-200-0796



Model 170-BD-30
Bin Discharger



A Model 170-BD-30
Bin Discharger with
a Storage Bin



A Model 170-BD-30 Bin Discharger with a
Storage Bin and an automatically operated
discharge valve 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 clean, efficient and effective means for discharging a wide assortment of dry solid materials, especially those that do not flow freely, contained within various size and type Bulk Bags. Designed to empty the entire contents of a Bulk Bag, typically into an Acrison metering mechanism, the ruggedly constructed Model 810 Bulk Bag Unloader will handle bags weighing up to 2 tons; the bags can be disposable, reusable or lined.

Equipment Specifications 1-200-0796



Basic Model 810 Bulk Bag Unloader designed for forklift loading.



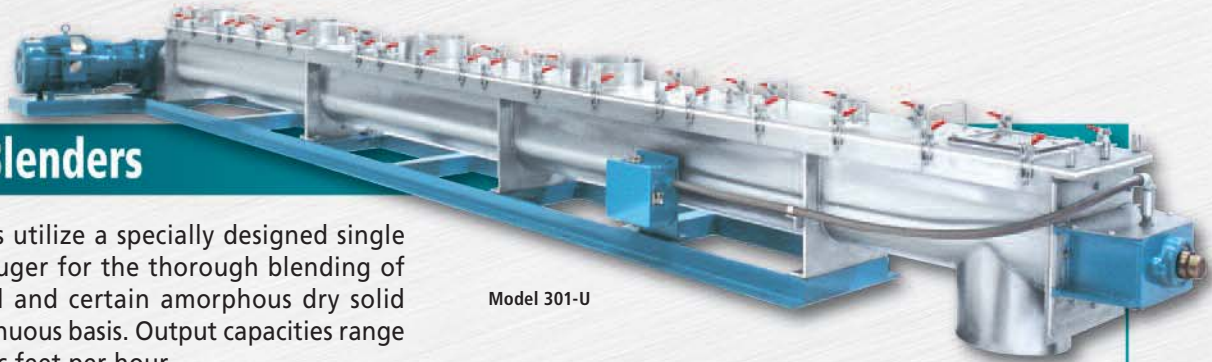
A Model 810 Bulk Bag Unloader mounted above an Acrison Volumetric Feeder (a maintenance gate is provided between the Bulk Bag Unloader and the feeder). The Bulk Bag Unloader also includes an electric hoist and motorized trolley, Acrison's Automatic Tensioning Bag Lifting Rack and Dust Collector.

Continuous Blenders and Blending Systems

Model 301 Blenders

Model 301 Blenders utilize a specially designed single helicoidal mixing auger for the thorough blending of 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" (Double Concentric Augers operating at dissimilar speeds) for the thorough and homogeneous mixing of dry solids-to-solids and solids-to-liquids (depending upon product characteristics) 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.

Acrison blenders are only sold in conjunction with Acrison feeders.



Model 350-2

Equipment Bulletin 711



A Model 350 Continuous Blending System

Model 400 Series Weigh Feeders "Weight-Loss Differential"

For reliable dry solids or liquid metering... featuring Acrison's unique, exceptionally precise and durable counterbalanced lever weighing systems that are permanently calibrated and adjustment-free.

Model Series 402, 403, 404, 405, 406 and 407

"Weight-Loss-Differential" Weigh Feeders from Acrison... proven to be the most accurate and versatile continuous (or batch) weigh feeding concept for totally reliable, unattended operation in scores of installations worldwide.

Although "weight-loss" weigh feeding is now a proven, highly accepted concept – with the operating principle employed by the various weight-loss feeder manufacturers similar in nature – *distinct functional and physical differences do exist... differences that determine the true viability of the feeder and the type of overall performance that a user can realistically expect.*

Unlike the common variety of "weight-loss" type weigh feeders, Acrison weighing systems are neither temperamental nor delicate, do not require calibration, periodic or otherwise and are virtually maintenance-free. **They do not utilize load cell(s) for weight sensing.**

Acrison "Weight-Loss-Differential" Weigh Feeders consist of an Acrison positive-flow dry solids feeding mechanism, or positive displacement liquid pump – as an integral portion of a precision weighing and supply system – where the rate of product discharge is precisely controlled on a "Weight-Loss-Differential" basis by an Acrison designed and manufactured multiprocessor controller. The weigh feeders are fully digital.

The positive metering mechanisms provided with all Acrison "Weight-Loss-Differential" weighing systems, ensure the highest possible degree of reliable dry solids handling performance available in the industry.

The "heart" of any weigh feeder is its weighing system. Acrison Model 403 "Weigh-Loss-Differential" Weigh Feeders employ an "Overhead" type weighing system, while the Models 402 and 404 Series, 405, 406 and 407 Weigh Feeders utilize "Platform" type weighing mechanisms... both of which possess a remarkable track record for near-zero maintenance and permanence of calibration. *These novel, exceptionally reliable, state-of-the-art counterbalanced lever weighing mechanisms, combined with Acrison's Ratiometric Digital Weight Resolver®, boast unexcelled weight sensing resolution, precision and ruggedness.*

All Acrison "Weight-Loss-Differential" control systems include "Acri-Lok"®... an Acrison innovation that provides "Disturbance-Free" weight sensing to further ensure accurate metering, within design tolerances, should the weighing system be disturbed in any manner or form that would otherwise affect performance.

Acrison weigh feeders have been designed with the user's overall long-term operational requirements as the primary objectives. They offer highest value in providing reliably accurate performance in an exceptionally heavy-duty package – unmatched in design, quality and user-oriented features. In operation since the late nineteen-sixties, their history of trouble-free performance has placed them in a most enviable position; they remain without equal in the very specialized field of weight-loss weigh feeding.

Acrison's Series 400 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 type Acrison metering mechanisms.
- Various Acrison multiprocessor controllers.
- Acri-Lok... scale disturbance protection... to ensure optimum metering accuracy at all times.
- Feed rates range from 0.10 pounds to 50 tons per hour.
- Highest performance capability and reliability.
- Unsurpassed quality and longevity.
- Near-zero maintenance.
- User-friendly operation.
- Simple installation.
- The lowest cost of ownership in the industry.

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

Models 403 Series Weigh Feeders

"Weight-Loss-Differential"

Highest Performance, Quality and Value

Introduced in 1970 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" 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.

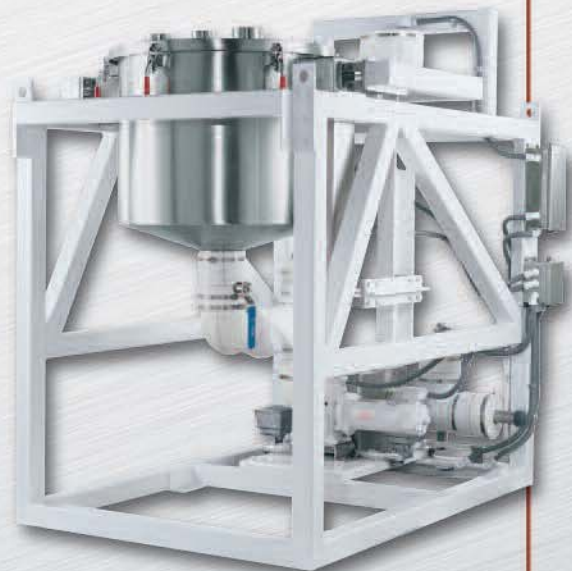
Equipment Bulletin 893



Model 403-105Z



Model 403-BDF-2



Model 403L
(Liquid Feeder)



Model GP403-130

Models 402 and 404 Series, 405, 406 and 410 Weigh Feeders

"Weight-Loss-Differential"

Highest Performance, Quality and Value

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

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

Each of these model 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.

Equipment Bulletin 893



Model 410-170-MI-5



Model 406-BDFM



Model 405-170-0



Model 402-105Z



Model 402X-BDF-1.5



Model 406-170-00

Models 407 and 407X Weigh Feeders

"Weight-Loss-Differential"

Highest Performance, Quality and Value in a Compact and Economical Package

The Models 407 and 407X are low profile, economically priced weigh feeders employing Acrison's advanced "Weight-Loss-Differential" weigh feeding concepts and designs for accurately and reliably metering a wide variety of dry solid (and liquid) ingredients at feed rates ranging from approximately one pound to several thousand pounds per hour.

Encompassing strong, field-proven weighing technology, specifically developed by Acrison for "weight-loss" weigh feeding applications, the Models 407 and 407X consist 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, Models 407 and 407X Weighing Systems are also permanently calibrated and will remain precise without the need for recalibration and/or adjustment.

Equipment Bulletin 728



Model 407-101-0 "Weight - Loss"
Weigh Feeder with clean-out valve



Model 407X-105X



Model 407X-101-1



Model 407X-170-1



Model 407-170-00

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

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 product (sequentially) into the appropriate size Model 403B(D) Weigh Hopper (or Tank) to individually preset weights and then, discharge the entire contents upon command.

With the various batch/dump arrangements, 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 zeroes the scale to ensure optimum performance.

Acrison's 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 the 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.

*Equipment Bulletin 840 and
Equipment Specifications 1-200-0813*



Model 403B(D)-3



Model 403B(D)-25



Model 403B(D)-10

Series 200 Weigh Feeders

Model 203 Series (Weigh Belt Feeders)

A multiprocessor controlled, weigh belt weigh feeder that combines the initial high performance of an integral Acrison metering mechanism with a highly responsive, **non-load cell** 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).

Equipment Bulletin 723



Model 203-105Z

Model 203B Series (Weigh Auger Weigh Feeders)

A multiprocessor controlled, weigh auger weigh feeder that combines the initial high performance of an integral Acrison metering mechanism with a highly responsive, **non-load cell** counterbalanced lever weighing mechanism to produce optimum metering performance in select applications. The Model 203B provides a totally enclosed design where the entire product metering zone is isolated from both the atmosphere as well as all areas of the weighing mechanism.

Capacities range from 120 to 136,000 pounds per hour (based on product weighing 40 pounds per cubic foot).

Equipment Bulletin 723



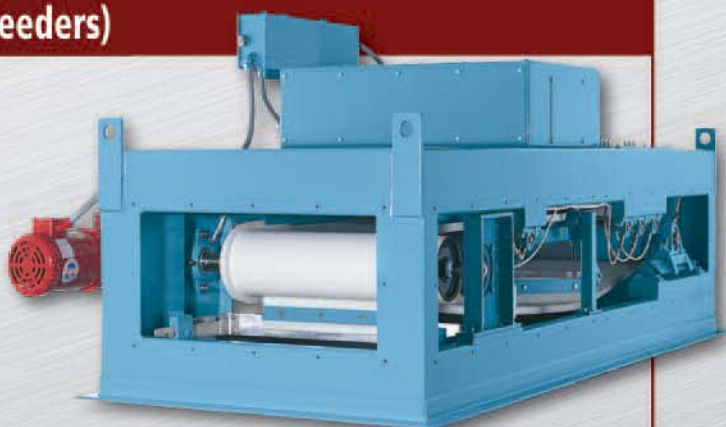
Model 203B-140-1

Model 260 Series (Weigh Belt Weighers / Feeders)

A multiprocessor controlled, rugged-duty, fully digital weigh belt weigher (wild-flow) and weigh belt weigh feeder series to satisfy high capacity weighing requirements. Model 260 Feeders/Weighers also feature an Acrison high resolution, **non-load cell** 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).

Equipment Bulletin 720



Model 260-30
(side panels removed)

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 (Weigh Feeders)

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 an “in-line” vertical configuration.

The Model 270 Series of Weigh Feeders provide accurate and dependable performance in a totally dust-tight, vertical in-line assembly. With their compact design and only one moving part, these weigh feeders require less installed space than most other type heavy-duty weigh feeders having similar through-put capacities.

Model 270 Weigh Feeders also utilize Acrison's exclusive counter-balanced lever weighing systems, equipped with Acrison's Ratio-metric Digital Weight Resolver for unsurpassed weight sensing resolution and trouble-free long-term operation. This unique, **non-load cell** counterbalanced lever weighing mechanism is permanently calibrated and completely adjustment-free. It is also exceptionally robust, virtually maintenance-free, extremely dependable and boasts exceptional longevity. The entire weighing mechanism is backed with an industry leading unconditional five-year warranty.

In addition, 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 Ratio-metric 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 in-depth 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 includes 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.

Equipment Bulletin 924



Two Model BDF-1.5 Volumetric Feeders, each feeding powdered activated carbon into an Acrison high-capacity wetting cone .



Dry/Liquid Polymer Preparation Modules/Systems

Model 500 Polymair® Preparation System

The Model 500 Polymair Preparation System automatically prepares a homogeneous and precise polymer solution at moderate to high capacities via the use of a novel dry air atomizing system and wetting chamber, especially effective for wetting very fine dry polymers. Although usually furnished to handle only a dry polymer, the Model 500 System can also be furnished to handle both dry and liquid polymers. To accomplish this, a dry solids feeder and a liquid metering pump are included. Manual selection provides automatic transfer from dry to liquid or liquid to dry operation without the need for any modification 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.

Equipment Bulletin 500



Model 512 Polymair® Preparation Module

For dry polymers, the Model 512 Polymair Preparation Module automatically prepares a homogeneous and precise solution at moderate to high capacities by means of a unique atomizing/wetting system. The Model 512 Module can also be furnished to handle both dry and liquid polymers. To accomplish this, both a dry solids feeder and a liquid metering pump are included. Manual selection provides automatic transfer from dry to liquid or liquid to dry operation without the need for any equipment modifications. Prepared solution is immediately transferred (pumped) to a separate mixing/aging or holding tank(s).

The Model 512 Polymair 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.

Equipment Bulletin 512



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. To accomplish this, a dry solids feeder meters dry polymer into a unique wetting chamber or a pump meters liquid polymer into a Dispersion-Injector to produce a homogeneous and precise solution. Manual selection provides automatic transfer from dry to liquid and liquid to dry operation without the need for any equipment modifications. The prepared solution is then transferred (pumped) from the Model 515 Module to the required mixing/aging or holding tank(s).

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.

Equipment Bulletin 515



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 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



Model W105 Feeders Series

Volumetric Dry Chemical Feeders

Designed to handle various dry chemicals, the Models W105 and W105Z 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 and trouble-free operation.

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

Model W105

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

Model W105Z

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

Equipment Bulletin W-718



A Model W105Z
with Dissolving Tank

Weigh Feeder Controllers and Control Systems

Acrison Weigh Feeder Controllers and Control Systems are universally recognized for their design superiority, unparalleled versatility, ease-of-use and operational reliability. From basic single weigh feeder controllers to multi-feeder supervisory control systems, the technologically advanced designs of these devices, including their cutting-edge software routines, provide users with unexcelled weigh feeder performance to satisfy the most demanding metering requirements across a broad spectrum of applications. 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.

SBC-2000® Family Controllers

Acrison's SBC-2000 Family of Weigh Feeder Controllers presently include the Models SBC-2000-CM and SBC-2000-DSP Controllers. These small, yet powerful devices encompass the latest technologies and functional algorithms, providing users with an unprecedented number of standard and optional features, including native Ethernet connectivity and a single operating program capable of controlling one or more Acrison weigh feeders. In particular, these controllers are ideally suited for those applications that require central computer control with minimal hardware. A variety of keyboard/display options is also available to suit specific user requirements.

Model SBC-2000-CM Controller

The Model SBC-2000-CM Controller operates a single Acrison Weigh Feeder. It consists of a single circuit board (module) designed for applications that utilize a central computer, PLC or DCS for monitoring and control, which do not require a local operator interface. The Model SBC-2000-CM Controller is typically supplied in a card rack, the size of which depends upon how many SBC-2000-CM Controllers will be required for a given application. A local Keyboard/Display unit is available as an option.



Model SBC-2000-DSP

The Model SBC-2000-DSP Controller operates a single Acrison Weigh Feeder. It consists of a single circuit board (module) designed primarily for applications that require a local operator interface. Basically, the SBC-2000-DSP Controller integrates an SBC-2000-CM control module with a dust-tight/water-tight monochrome LCD graphic Keyboard/Display Unit (KDU), designed for panel mounting.



Model SBC-2000-DSP/C Controller

The Model SBC-2000-DSP/C Controller operates a single Acriston Weigh Feeder. It consists of a single circuit board (module) designed primarily for applications that require a local operator interface. Basically, the SBC-2000-DSP/C Controller integrates an SBC-2000-CM control module with a Keyboard/Display Unit (KDU) comprised of a dust-tight/water-tight aluminum keyboard utilizing piezoelectric keybutton technology and an integrated infrared transceiver, coupled with a color graphic TFT display. Shown in a NEMA 12 enclosure.



Multiple Weigh Feeder Control Systems

When combined with Acriston's Acriston Data® Supervisory Control System Software hosted on a wall or desktop-mounted Microsoft® Windows® Embedded XP Platform, the Model SBC-2000-DSP, SBC-2000-DSP/C and/or SBC-2000-CM Controllers form the basis for the SBC-2000-MFC Multiple Feeder Control System. This control system, with its color touchscreen provides the ability to operate and control up to 20 Acriston Weigh Feeders while displaying rapid data and screen updates, and includes master/slave and ratio-proportioning operation, unlimited recipe storage and retrieval, trending, event and alarm logging, automatic shut-down configurability, and more.

User PLC and DCS equipment can also serve as a host for and SBC-2000 Family Controller System.



*Equipment Bulletin 959 and Equipment Specifications
1-200-0602, 1-200-0627 and 1-200-113.*

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

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 ultra-modern equipment demonstration facilities are the largest, most advanced and best-equipped in the industry. We'll be glad to demonstrate the operation of the selected equipment model 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 strong overall performance capabilities of an Acrison feeder, you must see it operate first hand. To appreciate the unsurpassed quality of Acrison equipment, you must inspect it first hand.

Arrange for a demonstration handling your actual product; it will be a most informative and worthwhile experience.



Acrison Facilities

"Visibly Different... Measurably Better"

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