

Acrison[®]

Volumetric Feeders Models BDFM, BDF-1, BDF-1.5 and BDFX-1.5

For Dry Solid Materials



Rugged-duty volumetric dry solids feeders featuring a dissimilar speed, triple auger/agitator mechanism for optimum metering and hoppering performance.

Volumetric Dry Solids Feeders

Models BDFM, BDF-1 and BDF-1.5

Featuring a triple auger/agitator metering mechanism

Acrison's various model dissimilar speed, multiple auger/agitator Bin Discharger Feeders (BDF) have been specifically designed to produce positive flow and feed of even the most difficult-handling dry solid ingredients.

Bin Discharger Feeders

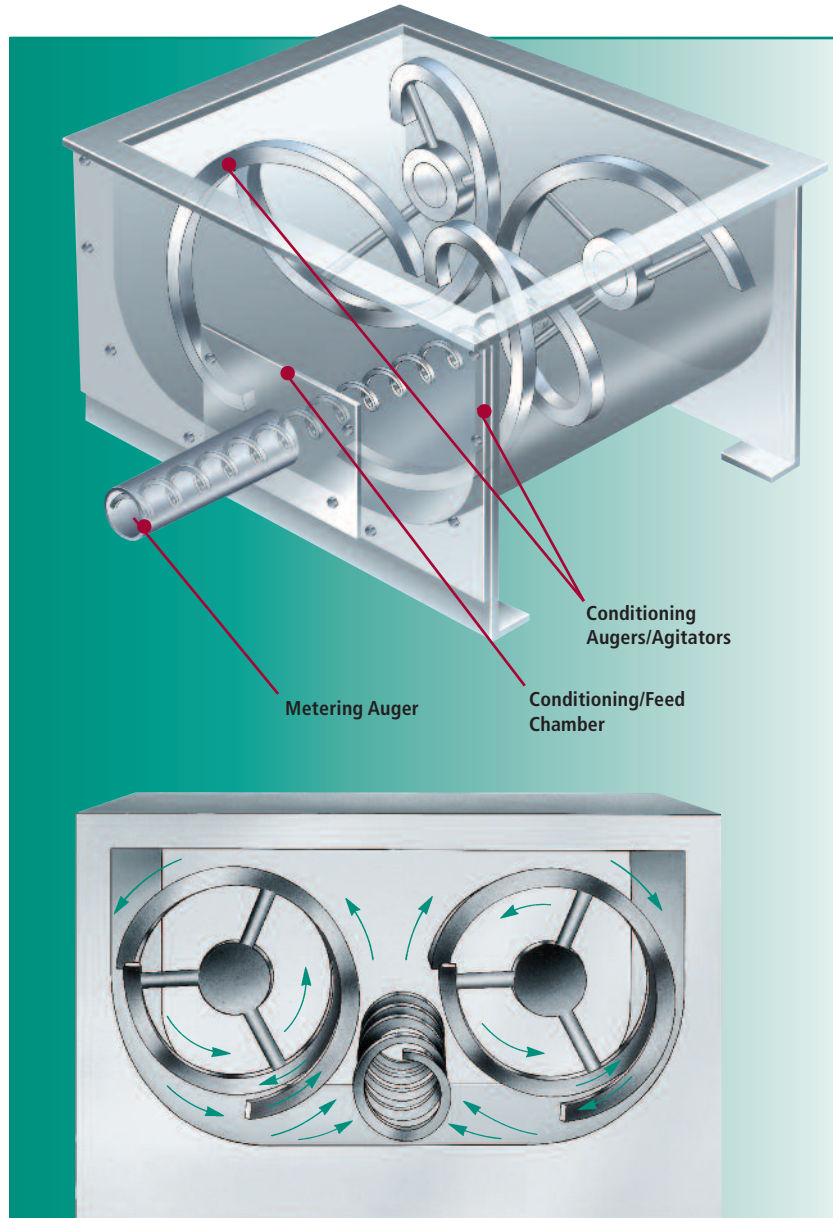
The Model BDF Series of Dry Solids Volumetric Feeders combine Acrison's extremely versatile multiple auger/agitator bin discharging mechanism with an integral metering auger, operating at *dissimilar speeds*, to produce positive flow-inducing internal (mechanical) agitation while simultaneously metering the product with a high degree of precision and reliability.

Unlike volumetric feeders where a single auger is typically located at the bottom of a converging "V" shaped trough — *across which amorphous products easily and often bridge, regardless whether or not the trough is vibrated or agitated* — the unique design of Acrison's Bin Discharger Feeder totally eliminates any type of convergence that could prove detrimental to product flow and feed. Opposed multiple auger/agitator action plus substantially increased gravity flow into the feed chamber combine to ensure a smooth, gentle and unrestricted movement of even the most difficult handling materials.

Within the feeder's feed chamber, stagnant areas are eliminated by the design and rotation of the two large augers/agitators which continuously move product inward and into the metering auger.

Mechanically, the augers/agitators and the metering auger are geared together, powered by a single AC or DC variable speed gearmotor drive. The two larger augers/agitators operate at a much slower speed than the smaller metering auger.

Volumetric metering accuracies generally range between ± 1 and 2 percent or better (error) for the majority of products. Accuracy is based on a given number of consecutive one minute samples.



A HIGHLY VERSATILE DRY SOLIDS METERING DESIGN

In order for an auger type dry solids volumetric feeder to feed accurately, its metering auger must be uniformly and consistently filled with product.

Acrison's dissimilar speed, triple auger/agitator conditioning/feeding mechanism effectively and efficiently fills the metering auger from a minimum of 320 degrees.

Models BDFM, BDF-1 and BDF-1.5 Volumetric Feeders

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



Model BDFM

For feed rates ranging between 0.0006 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.

Model BDFM

Utilizes a pair of 3.75 inch diameter conditioning augers/agitators.

Model BDF-1

Utilizes a pair of 6 inch diameter conditioning auger/agitators.

Model BDF-1.5

Utilizes a pair of 10 inch diameter conditioning augers/agitators.

Volumetric Dry Solids Feeders

Models BDFM, BDF-1 and BDF-1.5

Standard Features for the Models BDFM, BDF-1 and BDF-1.5 Feeders...

- Product contact surfaces are 304 stainless steel.
- Drive shafts and seal components are 304 stainless steel.
- Metering auger is 316 stainless steel.
- Model BDFM augers/agitators and metering auger are threaded onto their individual drive shafts.
- The augers/agitators of the Models BDF-1 and BDF-1.5 are flange-attached onto their drive shafts. The metering auger utilizes a threaded attachment to its drive shaft.
- The Model BDFM is furnished with a one-quarter cubic foot (vertical) supply hopper. Additional hopper sizes may be available.
- The Model BDF-1 is furnished with a one cubic foot (vertical) supply hopper or flanged feed chamber with a cover having a circular inlet up to 8 inches in diameter. Additional hopper sizes may be available.
- The Model BDF-1.5 is furnished with a four cubic foot (vertical) supply hopper or flanged feed chamber with a cover having a circular inlet up to 12 inches in diameter. Additional hopper sizes may be available.
- Model BDF Feeders are furnished with a variable speed AC or DC gearmotor drive with either a 30:1 or 50:1 speed range.
- The Model BDFM is powered by a 1/2 horsepower motor, the Model BDF-1 by a 3/4 horsepower motor, and the Model BDF-1.5 by a one (1) horsepower motor. All motors are totally enclosed.
- Dust-tight, heavy-duty construction.
- Silent when operating.

Optional / Accessory Equipment...

- Various materials of construction.
- Integral supply hoppers larger than the standard sizes may be available (depending upon feeder model and material flow characteristics).
- Various variable speed (AC and DC) controllers and control modes.
- Quick disconnect construction for ease of cleanout.
- Sanitary construction to satisfy USDA and FDA sanitary codes (includes quick disconnect construction).
- High temperature construction.
- Pressure construction.

NOTE: Reference Bulletin 712 for larger Model Bin Discharger Feeders.

MODEL BDFM FEEDER CAPACITY CHART (Capacities shown in cubic feet per hour)			
Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
BDFM-A/2	0.001	0.0006	0.03
BDFM-B/2	0.0025	0.0015	0.075
BDFM-BC/2	0.0063	0.0038	0.19
BDFM-BB/2	0.009	0.0054	0.27
BDFM-C/2	0.015	0.009	0.45
BDFM-CC/2	0.023	0.014	0.7
BDFM-D/2	0.04	0.024	1.2
BDFM-DD/2	0.07	0.042	2.1
BDFM-E/2	0.1	0.06	3.0

MODEL BDF-1 FEEDER CAPACITY CHART (Capacities shown in cubic feet per hour)			
Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
BDF-1-B/2	0.0025	0.0015	0.075
BDF-1-BC/2	0.0063	0.0038	0.19
BDF-1-BB/2	0.009	0.0054	0.27
BDF-1-C/2	0.015	0.009	0.45
BDF-1-CC/2	0.023	0.014	0.7
BDF-1-D/2	0.04	0.024	1.2
BDF-1-DD/2	0.07	0.042	2.1
BDF-1-E/2	0.10	0.06	3.0
BDF-1-EE/2	0.145	0.087	4.4
BDF-1-F/2	0.23	0.14	7.0

MODEL BDF-1.5 FEEDER CAPACITY CHART (Capacities shown in cubic feet per hour)			
Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
BDF-1.5-D/2	0.04	0.024	1.2
BDF-1.5-DD/2	0.07	0.042	2.1
BDF-1.5-E/2	0.10	0.06	3.0
BDF-1.5-EE/2	0.15	0.088	4.4
BDF-1.5-F/2	0.23	0.14	7.0
BDF-1.5-FF/2	0.32	0.19	9.5
BDF-1.5-G/2	0.48	0.29	14.5
BDF-1.5-GG/2	0.7	0.42	21.0
BDF-1.5-H/2	0.85	0.51	25.5
BDF-1.5-HH/2	1.2	0.72	36.0
BDF-1.5-K/2	1.6	0.96	48.0

Capacities

The above capacity charts indicate the typical output range for each standard size metering auger available with the Models BDFM, BDF-1 and BDF-1.5 Volumetric Feeders.

Since the physical properties of the actual product being metered may have an effect upon the exact output, the stated capacities could vary.

Models BDFM, BDF-1, BDF-1.5 and BDFX-1.5 *

Metering Mechanisms *Integral to "Weight-Loss-Differential" Weigh Feeders*



A Model 405 "Weight-Loss-Differential" Weigh Feeder equipped with a Model BDF-1 Metering Mechanism.



A Model 406 "Weight-Loss-Differential" Weigh Feeder equipped with a Model BDFM Metering Mechanism.



A Model 402X "Weight-Loss-Differential" Weigh Feeder equipped with a Model BDFX-1.5 Metering Mechanism.



A Model 402X "Weight-Loss-Differential" Weigh Feeder equipped with a Model BDF-1.5 Metering Mechanism.

*See pages 6 and 7.

Volumetric Dry Solids Feeders Model BDFX-1.5

Featuring a triple auger/agitator metering mechanism

The Model BDFX-1.5 Dry Solids Volumetric Feeder has been designed for use in applications where the Model BDF-1.5 Feeder has certain limitations (e.g., when larger than the standard size hopper is used; when handling products possessing very difficult-handling characteristics, and/or when metering products with higher bulk densities than the Model BDF-1.5 has been designed to handle).

Model BDFX-1.5 Feeder

Unlike the Model BDF-1.5 Feeder, which utilizes a single (common) variable speed gearmotor to operate its two 'Conditioning Agitators' and *Metering Auger*, the Model BDFX-1.5 Feeder is designed with three independent, heavy-duty gearmotors for powering these components. Also, depending upon application parameters, the individual gearmotors may be electronically configured to operate at speeds proportional to each other.

MODEL BDFX-1.5 FEEDER CAPACITY CHART

(Capacities shown in cubic feet per hour)

Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
BDFX-1.5-D/2	0.04	0.024	1.2
BDFX-1.5-DD/2	0.07	0.042	2.1
BDFX-1.5-E/2	0.10	0.06	3.0
BDFX-1.5-EE/2	0.15	0.088	4.4
BDFX-1.5-F/2	0.23	0.14	7.0
BDFX-1.5-FF/2	0.32	0.19	9.5
BDFX-1.5-G/2	0.48	0.29	14.5
BDFX-1.5-GG/2	0.7	0.42	21.0
BDFX-1.5-H/2	0.85	0.51	25.5
BDFX-1.5-HH/2	1.2	0.72	36.0
BDFX-1.5-K/2	1.6	0.96	48.0

Capacities

The above capacity chart indicates the typical output range for each standard size metering auger available with the Model BDFX-1.5 Volumetric Feeder.

Since the physical properties of the actual product being metered may have an effect upon the exact output, the stated capacities could vary.



Model BDFX-1.5-F

Model BDFX-1.5 Volumetric Feeder

The Model BDFX-1.5 is powered by three independent heavy-duty variable speed gearmotor drives.

Model BDFX-1.5
For feed rates ranging between
0.024 and 48 cubic feet per hour.



Model BDFX-1.5

Utilizes a pair of 10 inch diameter conditioning augers/agitators.

Standard Features for the Model BDFX-1.5 Feeder...

- Product contact surfaces are 304 stainless steel.
- Drive shafts and seal components are 304 stainless steel.
- The metering auger is 316 stainless steel.
- The augers/agitators are flange-attached to their drive shafts.
- The metering auger is threaded onto its drive shaft.
- The metering auger is equipped with either an AC or DC variable speed one (1) horsepower gearmotor drive. The motor is totally enclosed.
- The auger/agitator gearmotor drives operate at a constant speed powered by 1/4 horsepower motors.
- All motors are totally enclosed.
- Standard hopper is 6 cubic feet in capacity. Additional hopper sizes may be available.
- Dust-tight, rugged-duty construction.
- Silent when operating.

Optional / Accessory Equipment...

- Various materials of construction.
- Integral supply hoppers larger than the standard size may be available (depending upon material characteristics).
- Various variable speed (AC and DC) controllers and control modes.
- Quick disconnect construction for ease of cleanout.
- Sanitary construction to satisfy USDA and FDA sanitary codes (includes quick disconnect construction).
- High temperature construction.
- Pressure construction.

NOTE: Reference Bulletin 712 for larger Model Bin Discharger Feeders.

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

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 Series Weigh Belt Feeders
- Model 203B Series Weigh Auger Feeders
- Model 270 Series of In-Line Weigh Feeders
- Models 402, 404, A405, 406, 407 and 410 Series ("Weight-Loss-Differential") Weigh Feeders
- Model Series 403 ("Weight-Loss-Differential") 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 Dischargers
- Model 170-BD-30 Bin Discharger
- Model 800 Series Bulk Bag Unloaders
- Model 500 Series 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



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