

Acrison®

Design Specifications
1-200-0525

VOLUMETRIC FEEDERS Model 170 Series

For Dry Solid Materials



Self-Purging • Rapid Emptying • Easy to Clean
Built to Last

*Advanced design technologies for superior
performance, quality and reliability.*

The ruggedly built Model 170 Series of Feeders - - designed with a uniquely versatile metering mechanism that features both 'Self-Emptying' and 'Quick-Discharging' capabilities - - will accurately and reliably meter a wide and diverse variety of dry solid ingredients.

Operational Overview

The Model 170 Feeder consists of a circular, wide-throat, flat bottom feed chamber that attaches directly to the outlet of a mating supply hopper. Within the feed chamber, a slowly rotating horizontal agitator (driven from below) ensures positive flow of product out of the supply hopper directly into the feed chamber. Beneath the feed chamber, housed in an integral trough offset to one side, the feeder's metering auger is efficiently and completely filled with product of consistent density by the rotational (sweeping) action of the uniquely configured agitator.

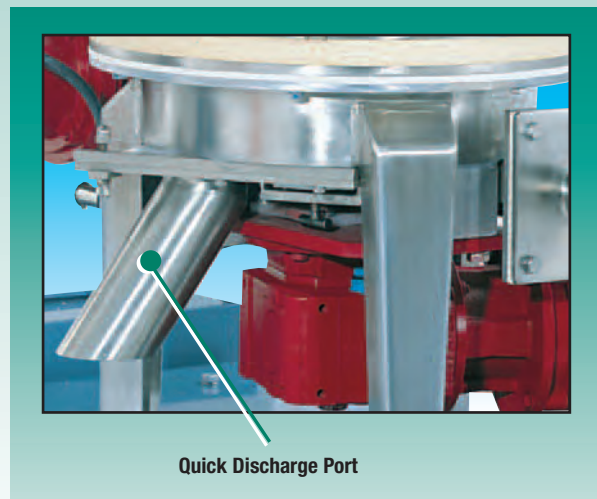
All areas within the feed chamber and metering auger trough are active; dead zones do not exist and therefore, product stagnation cannot occur anywhere within the feeder.

With only two moving parts, the metering mechanism of Model 170 feeders has the unique ability to "self empty" – when permitted to feed until empty, or to be "emptied-quickly" – when it is desired to empty the feeder rapidly. The latter is accomplished by means of a novel discharge port located in the flat bottom of the feed chamber. Clean-out is fast, simple and complete.

The Model 170 Series of Feeders utilize two separate drives – one for the agitator and one for the metering auger. The slow speed agitator is usually driven by a constant speed gearmotor, and the metering auger by a variable speed drive. However, for optimum flexibility in certain applications, both the agitator and metering auger may be powered by variable speed drives, operating in a ratio (adjustable) to each other. In either case, the gear-reduction portion of both drives is permanently lubricated.

Model 170 Feeders are available in five different model sizes and feed output capacity ranges.

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



Model 170 Series of Volumetric Feeders

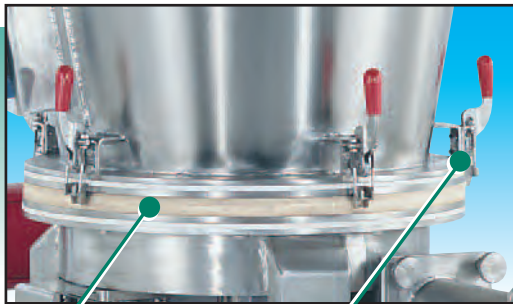
Features/Benefits

- Designed with just two moving parts.
- All product contact surfaces are 304 stainless steel.
- Excellent metering accuracy.
- No head effect.
- Self-empties.
- Rapid-emptying (via unique discharge purge port).
- Simple and easy to clean.
- Totally enclosed variable speed AC or DC motor for the metering auger drive providing a 30:1 or 50:1 speed range.
- Metering auger gearmotor drive slides-back to facilitate cleaning (certain models).
- Rugged and dependable.
- Requires minimal maintenance.
- Total feed rate output capacity ranges from 0.0012 to 240 cubic feet per hour (see pages 4 and 5 for specifics).

Options

- Various AC and DC variable speed motor controllers and control modes.
- Quick Disassembly/Re-assembly Construction (certain models).
- Sanitary Construction to meet USDA and FDA codes and requirements.
- Swing-out and tilt-back hoppers to facilitate clean-out (certain models).
- Vibrating hopper with Acrison's unique Isolation Pad for promoting the flow of difficult-handling products (certain models).
- Hazardous area electrical construction.

Model 405-170-0
"Weight-Loss-Differential"
Weigh Feeder



Isolation Pad

Quick Disconnect Clamps



"Active Hopper" Option

Based on product handling characteristics, certain Model 170 Feeders may be equipped with Acrison's exclusive "**Hopper Isolation Pad**", which allows the feeder's integral supply hopper to become *uniformly active* when a gentle, high frequency vibration is applied to it. In turn, positive flow of even the most difficult-handling products (from within the feeder's supply hopper and into the feed chamber) is ensured.

"Quick Disassembly/Re-assembly" Option

To further enhance, expedite and simplify total clean-out, certain Model 170 Feeders are available with "**Quick Disconnect Construction**" so that cleaning can be performed in just minutes, by allowing rapid and complete access to all internal areas.

For ease of removing certain major components and/or to facilitate accessibility, this option typically includes captive knobs on the feeder's discharge spout, a threaded metering auger attachment to its drive shaft, and a quick removable conditioning agitator. In addition, most Model 170 Feeders are designed so that the metering auger's gearmotor drive slides back for full access to the rear portion of the metering auger trough, allowing complete and thorough clean-out.

Also for ease of removal, the hoppers of the Models 170-00, 170-0 and 170-1 Feeders are available with quick-release clamps. In addition, the hopper of a Model 170-0 Feeder can also be furnished with a tilt-back (hinged) attachment, while the hoppers of both the Models 170-0 and 170-1 Feeders are available with a swing-out configuration, both of which make the task of clean-up even easier (illustrated on pages 6 and 7).

Model 170 Volumetric Feeders

The Model 170 Dry Solids Feeder Series includes 5 Model Sizes.



Model 170-00



Model 170-0



Model 170-1

Model 170-00 Feeder

The Model 170-00 Feeder is designed with a 9 inch feed chamber and a feed range capability of approximately 0.0012 to 6 cubic feet per hour. As standard, the Model 170-00 is furnished with either a 0.5 or 1 cubic foot supply hopper.

This model feeder is available as one of the integral metering mechanisms for use with Acrison Models 406 and 407 "Weight-Loss-Differential" Weigh Feeders.

Model 170-0 Feeder

The Model 170-0 Feeder is designed with a 13.5 inch feed chamber and a feed range capability of approximately 0.0076 to 19 cubic feet per hour. As standard, the Model 170-0 is furnished with a 2 cubic foot supply hopper, although a larger hopper is available as an option.

This model feeder is available as one of the integral metering mechanisms for use with Acrison's Model 405 and 407 "Weight-Loss-Differential" Weigh Feeders.

Model 170-1 Feeder

The Model 170-1 Feeder is designed with an 18 inch feed chamber and a feed range capability of approximately 0.084 to 51 cubic feet per hour. As standard, the Model 170-1 is furnished with a 4 cubic foot supply hopper, although a larger hopper is available as an option.

This model feeder is available as one of the integral metering mechanisms for use with Acrison's Model 402 and 407X "Weight-Loss-Differential" Weigh Feeders.

Model 170 Feeders feature a “Self-Emptying” design and an innovative “Discharge Port” to enable rapid emptying, when desired.



Model 170-2



Model 170-3

Model 170-2 Feeder

The Model 170-2 Feeder is designed with a 24 inch feed chamber and a feed range capability of approximately 0.28 to 118 cubic feet per hour. As standard, the Model 170-2 is furnished with a 10 cubic foot supply hopper, although larger hoppers are available as an option.

This model feeder is available as one of the integral metering mechanisms for use with Acrison's Model 402X "Weight-Loss-Differential" Weigh Feeder.

Model 170-3 Feeder

The Model 170-3 Feeder is designed with a 30 inch feed chamber and a feed range capability of approximately 0.38 to 240 cubic feet per hour. As standard, the Model 170-3 is furnished with a 20 cubic foot supply hopper, although larger hoppers are available as an option.

This model feeder is available as one of the integral metering mechanisms for use with Acrison's Model 403 and 404X "Weight-Loss-Differential" Weigh Feeders.

Model 170 Series of Volumetric Feeders used as the integral metering mechanisms of Acrison "Weight-Loss-Differential" Weigh Feeders.



Model 406-170-00



Model 405-170-0



Model 402-170-1



Model 402X-170-2

Capacities

The capacity charts indicate the typical output range for each standard size metering auger available with the Model 170 Series of 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.



Model 405-170-0 (with tilt-back hopper)



Model 402-170-1 (with swing-out hopper)

MODEL 170-00 FEEDER CAPACITY CHART

(Capacities shown in cubic feet per hour)

Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
170-00-A	0.002	0.0012	0.06
170-00-B	0.005	0.003	0.15
170-00-BC	0.0127	0.0076	0.38
170-00-BB	0.018	0.0108	0.54
170-00-C	0.03	0.018	0.9
170-00-CC	0.047	0.028	1.4
170-00-D	0.08	0.048	2.4
170-00-DD	0.14	0.084	4.2
170-00-E	0.2	0.12	6

MODEL 170-0 FEEDER CAPACITY CHART

(Capacities shown in cubic feet per hour)

Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
170-0-BC	0.0127	0.0076	0.38
170-0-BB	0.018	0.0108	0.54
170-0-C	0.03	0.018	0.9
170-0-CC	0.047	0.028	1.4
170-0-D	0.08	0.048	2.4
170-0-DD	0.14	0.084	4.2
170-0-E	0.2	0.12	6
170-0-EE	0.29	0.174	8.7
170-0-F	0.47	0.28	14
170-0-FF	0.63	0.38	19

MODEL 170-1 FEEDER CAPACITY CHART

(Capacities shown in cubic feet per hour)

Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
170-1-DD	0.14	0.084	4.2
170-1-E	0.2	0.12	6
170-1-EE	0.29	0.174	8.7
170-1-F	0.47	0.28	14
170-1-FF	0.63	0.38	19
170-1-G	0.97	0.58	29
170-1-GG	1.4	0.84	42
170-1-H	1.7	1.02	51

MODEL 170-2 FEEDER CAPACITY CHART

(Capacities shown in cubic feet per hour)

Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
170-2-F	0.47	0.28	14
170-2-FF	0.63	0.38	19
170-2-G	0.97	0.58	29
170-2-GG	1.4	0.84	42
170-2-H	1.7	1.02	51
170-2-HH	2.4	1.4	72
170-2-K	3.2	1.9	96
170-2-KK	3.9	2.4	118

MODEL 170-3 FEEDER CAPACITY CHART

(Capacities shown in cubic feet per hour)

Model Size	Minimum Output		Maximum Output
	30:1 Speed Range	50:1 Speed Range	
170-3-FF	0.63	0.38	19
170-3-G	0.97	0.58	29
170-3-GG	1.4	0.84	42
170-3-H	1.7	1.02	51
170-3-HH	2.4	1.44	72
170-3-K	3.2	1.92	96
170-3-KK	3.9	2.36	118
170-3-M	5.3	3.2	160
170-3-N	6.7	4.0	202
170-3-NN	8	4.8	240

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



Trafford Park Facility
Manchester, UK

Acrison products...

- Models 101 and 130 Volumetric Feeders
- 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 of Weigh Belt Feeders
- Model 203B Series of 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 Dischargers
- Model 800 Series of Bulk Bag Unloaders
- Model 500 Series of Polyelectrolyte Preparation Systems
- Water and Waste Water Treatment Systems
- Volumetric and Gravimetric Feeder Controllers and Control Systems
- Accessory Equipment for Acrison Products
- Systems Engineering



Joseph Street Facility
Moonachie, NJ USA

Quality built, total performance products to satisfy
your dry solids metering/handling needs.

Acrison®

"Visibly Different... Measurably Better"

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