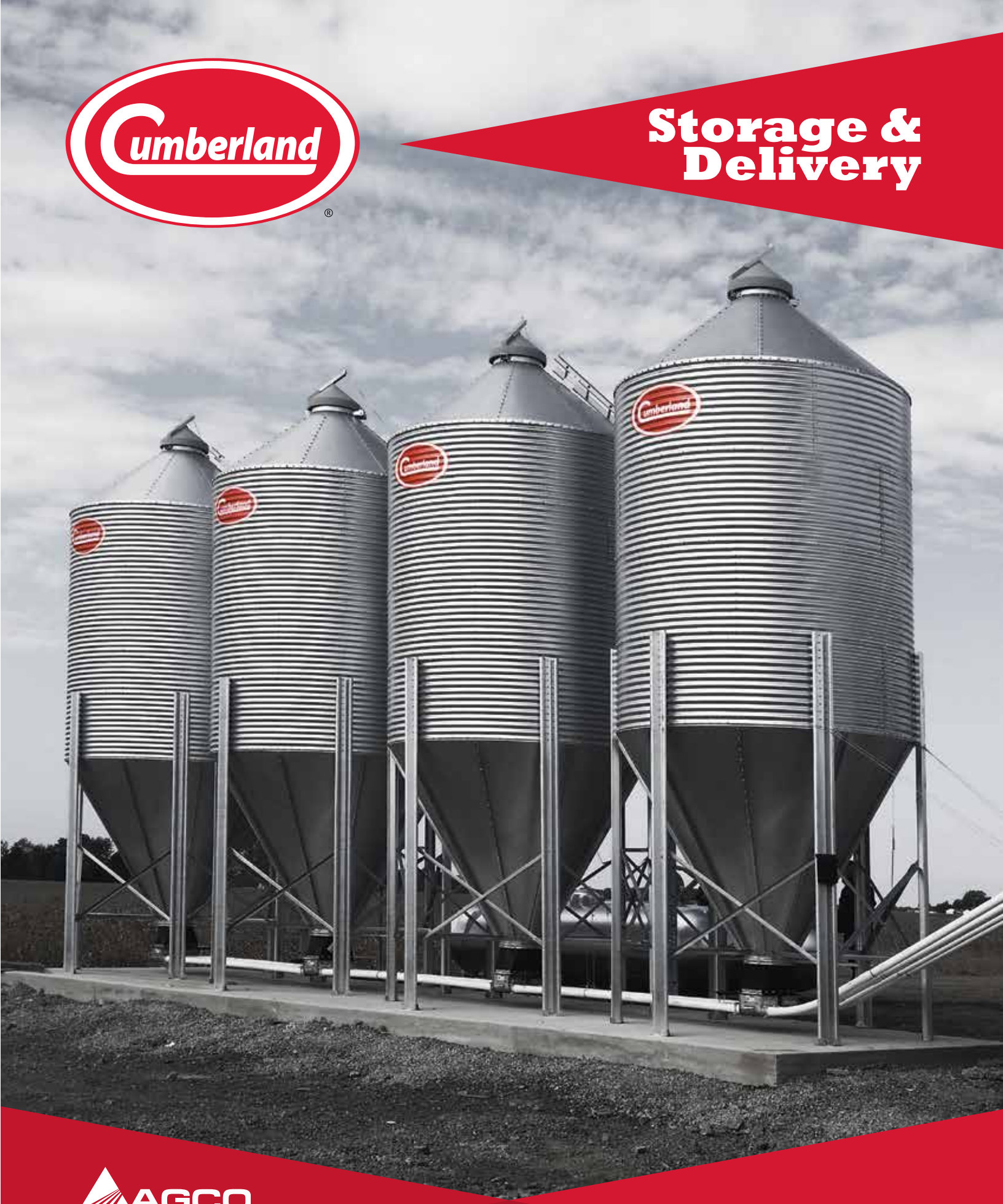
Cumberland®

Storage & Delivery



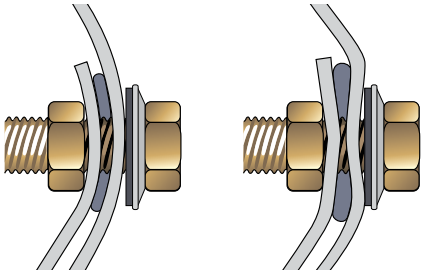
AGCO
Your Agriculture Company

HOPPERS AND BRACING

Fully galvanized, roll formed 6-bend legs, cross ties and two-piece leg anchor sections provide greater strength, stability, support and load transfer. Tank hoppers are available in 60° or 67° slopes in either a 16" or 22" hopper opening. Hopper panels are die-formed with a down-turned sealed edge for a weather-tight fit and assembled with rounded, truss-head bolts to reduce content bridging.

EXCLUSIVE TO CUMBERLAND HOPPERS

The upper eave, where the hopper is joined to the sidewall, is specially die-formed to conform to the shape of the sidewall corrugation. Most other manufacturers depend on crimping and bolt pressure to force the connection which produces corrosion-prone distortion and dimpling of the sidewall.



CONFORMED CRIMPED

DRIP LIP WATER DEFLECTION

Cumberland's Drip Lip Water Deflection is a one-of-a-kind, roll-formed bottom sheet edge, which forces water away from the hopper and lower boot area.

RIGID ROOF PANELS

Feed tank roof panels are precision manufactured for easy installation and feature reinforced ribs at each seam for added strength and rigidity on both 30°and 40° bin roof options.

FACTORY FORMED FILL KIT

Cumberland's exclusive pre-punched, extruded lip roof panel, available for the optional pneumatic fill kit, eliminates the inconvenience of field-cutting the openings for the fill and exhaust tubes, and insures secure, moisture-proof seals.

Bulk Feed Tanks

Cumberland is a part of GSI, the world's largest manufacturer of corrugated, galvanized steel storage tanks. The ability to leverage over 35 years of bin manufacturing experience and technology allows Cumberland to provide quality feed storage and delivery systems that address a wide range of design and capacity requirements.

STURDY LADDERS

A unique, non-interfering safety rail and fully die-formed, sectional side ladder provide solid, comfortable access. Sidewall ladders are available in 2' and 9' sections for quick assembly. Ladder rungs are dimpled for better footing in inclement weather. Roof ladders feature handrails that extend the length of the ladder for added security.

REQUIRED FALL PROTECTION

Stay in compliance with current fall protection requirements for feed tank eave heights of 24' and taller with flexible cable vertical safety systems and feed tank safety cages.

Optional view windows are available for easy acknowledgement of the feed level in the bin at a glance.

RUGGED BIN LIDS

Factory assembled for easy installation, Cumberland's feed tank lid features a durable LLDPE construction and swings fully open on 7' diameter bins and larger.

- Available for 30° and 40° roof profiles
- Simplified clamp-band installation of lid assembly peak ring
- Clamp-band design allows installation in 360 ° orientation
- Retro-fit packages available for 20" and 22-1/2" O.D. peak rings

Cumberland's feed tank bin lid is easily opened and closed from the ground using a simple pull chain system.

An internal magnet provides additional holding power to keep the lid closed.

A reinforced rubber belting bumper provides additional peak ring protection.

Optional snow guard helps deter blowing snow from entering the tank.

Flex-Flo™ Feed Delivery Systems

Cumberland offers five Flex-Flo™ models with capacities ranging from 15 lbs. to 220 lbs./minute (6.8kg to 99.8kg/min.). Whether it's ground feed, crumble feed, mash, high moisture corn, shelled corn or pellets, Cumberland has the equipment to handle it. For corn with up to 27% moisture and other hard to flow materials, Cumberland also offers a Flex-Flo™ High Roughage system which incorporates a special combination of a 3" (75mm) auger in a 3-1/2" (90mm) tube to reduce plugging.

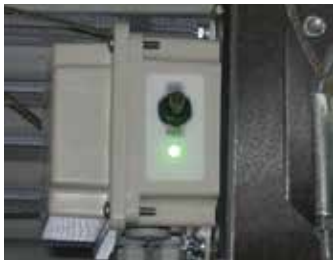
Flex-Flo Control Units

- Fixed 30 second motor delay for electronic safety switch
- Uses proprietary sensing technology for operation
- Auger relay (Max 25 Amp load) rated for 1-1/2 HP Flex-Flo motors
- Operating status indicated via Bi-Color LED
- Easy one wire, one terminal installation
- Controls single phase or three phase motors
- Additional contactor included for feed monitoring
- 240 volt, 50 Hz or 60Hz

Constructed from non-corrosive materials for long life and durability

Retrofit electronic sensor

Clear access door for quick and easy visual inspection



Bi-Color LED allows quick verification of operating status

Tube Anchors available for Flex-Flo™ 220, 300, 350 and 500 models

Feed Tank Boots

Cumberland's 16" (406 mm) parabolic boots, available in straight, 30°, and straight twin models, are made from ultra high impact polypropylene for greater flexibility, dependability and durability. All metal 22" (559 mm) double and triple boots are also available.

30° DROP BOOT

STRAIGHT BOOT

TWIN BOOT

TRANSLUCENT BOOT

DOUBLE METAL BOOT

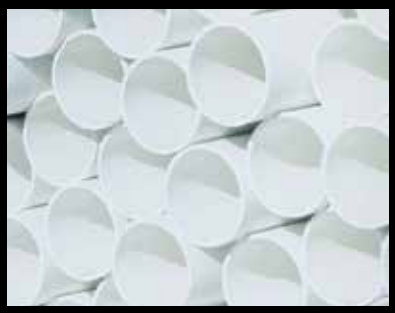
TRIPLE METAL BOOT

Boot Unloaders

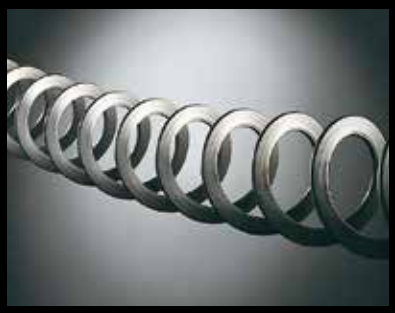
Designed to fit below the plastic 16" (406mm) and all metal 22" (559 mm) double and triple boots, Cumberland's standard unloaders are available for 2.2" (55mm), 3" (75mm), 3.5" (90mm), and 5" (125mm) Flex-Flo tubing. All Cumberland unloaders have an ultra high impact, polypropylene slide-gate above the auger to meter feed or serve as a complete shut off. A convenient inspection/clean out plate, located on the side, is easily removed with two wing nuts.

SHOWN WITH CLEAR BOOT OPTION

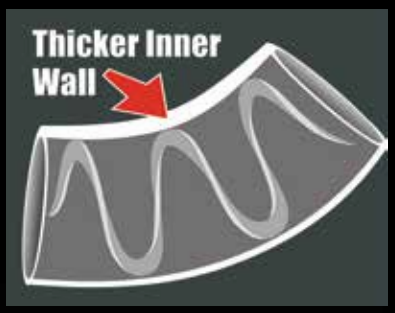
Manufactured in-house to our own exacting standards



Blended PVC tubing is extruded and formed at our own facilities allowing us to formulate the optimum compound for UV stabilization, strength and wear resistance.



High tensile steel augers are coiled using wire that is flattened prior to hardening for a more consistent, high quality product.

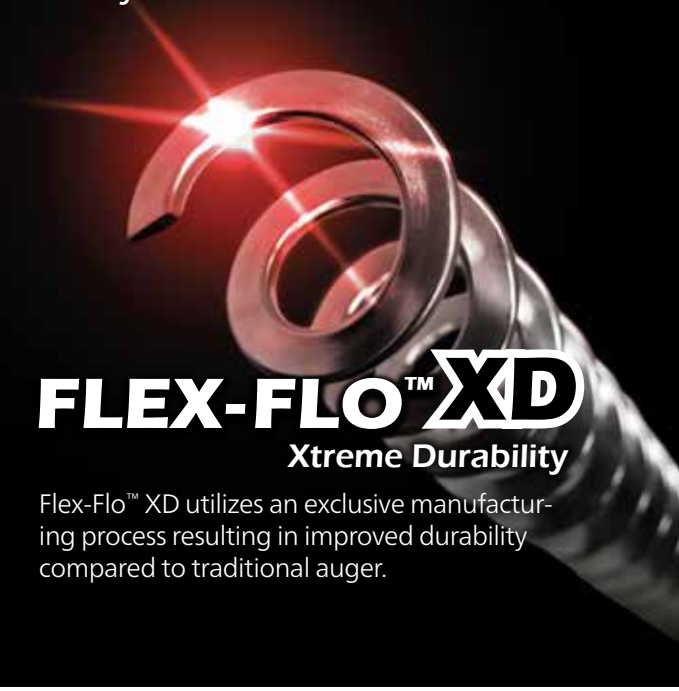


For moving feed up in the air and around corners, Flex-Flo™ tubing is available in specially formed elbows with increased wall thickness on the inside of the elbow for strength and wear resistance.

FLEX-FLO™ SPECIFICATIONS

MODEL NUMBER	220	300	HR	350	500
Tube Outside Diameter	2.20″ 55mm	3″ 75mm	3.5″ 90mm	3.5″ 90mm	5″ 125mm
Tube Outside Diameter (mm)	55	75	90	90	125
Tube Corner Radius	5′/10′	5′	5′	5′	6′
Tube Corner Radius (m)	3.05	1.53	1.53	1.53	1.83
Max. Single System Length with 3 Elbows	250′	200′	150′	150′	*150′
Max. Single System Length (m) with 3 Elbows	76.2	60.96	45.72	45.72	*45.72
Recommended Motor Sizes at Max. Length (HP)	.5	1	1	1	1.5
Capacity (Lbs./Minute at 40 Lbs. per Cu. Ft.)	15	50	50	100	220
Capacity (Kgs./Hour at 640 kg. per Cu. m)	6.8	22.7	22.7	45.4	99.8
Extension Length (Motor End of First System) w/o Elbows	300′	235′	185′	185′	*185′
Extension Length (Motor End of First System) (m) w/o Elbows	92	72	56	56	*56

** For High Moisture Corn Reduce System Length by 50%*



FLEX-FLO™ XD

Xtreme Durability

Flex-Flo™ XD utilizes an exclusive manufacturing process resulting in improved durability compared to traditional auger.

Extension Hoppers

For applications exceeding maximum auger size distances, extension hoppers are available to extend the overall length of the Flex-Flo system. Extension hoppers can be installed at 90° from the original auger to make turns and extend Flex-Flo augers without using elbows.

IR-Plus™ Feed Sensor

The IR-Plus* is specially designed to work with the Flex-Flo feed delivery system and Cumberland i-plus3 control pan. With no moving parts or sensitivity adjustments, the IR-Plus utilizes infrared sensors to accurately detect feed flow to shut off fill systems when the hopper is full.

*U.S. Patent 8,056,506

Drop Tube Kits

Cumberland's original drop kit is available for all Flex-Flo™ systems providing a totally enclosed outlet drop.

The Kwik-Attach drop kit is easy to install and attaches securely to avoid feed spills. This kit allows for complete clean-out of feed and can be adapted with actuators for remote operation.

Easily Manage Your Feed Inventory

Eliminate the dangerous task of climbing bins to check feed levels and decrease labor cost with a Cumberland Bin Scale System.

Precision Bin Scale

The PRECISION* Bin Scale offers EDGE control users extensive feed management benefits with remote access. Receive low-feed notifications as well as 180-day history on the controller including bin weight, auger run times, feed deliveries, and more.

The PRECISION load cell is rated at 10,000 lbs. (4,500 kg.) and offers convenient, reliable, and accurate bin weighing. Installation can be easily made on an empty bin with the convenient built-in lifting mechanism and Precision is pre-calibrated for simple setup.

*Patent Pending

Feed-Link™ Bin Scale

The Integra Feed-Link System provides a cost-effective method of monitoring and managing on-site feed inventory either at the site or from a remote location. Feed-Link can be easily adapted to new or existing facilities to provide accurate real-time data regarding feed inventory levels and feed consumption.

The Feed-Link ™ display unit can be mounted either on the bin or inside the house up to one hundred feet away. The digital display can be set to display pounds, kilograms or percentage of full. The display unit also serves as the interface to perform a simple calibration procedure after the system has been installed.

FEED-LINK™ SPECIFICATIONS

Input Power	110/220 Volt - 50/60 Hz
Display Resolution	20 lbs. - 10 Kg. - 1%
Display Temperature Range	-5 to 150°F / -20 to 65°C
Water Pulse Meter	1 gal. / 3.8 liters per pulse
Maximum Weight Per Load Cell	
Standard Load Cell	5,000 lbs. / 2,250 kg.
High Capacity Load Cell	10,000 lbs. / 4,500 kg.

5,000 OR 10,000 LB. FEED-LINK LOAD CELL

5,000 LB. FEED-LINK LOAD CELL WITH LIFTING

10,000 LB. FEED-LINK LOAD CELL WITH LIFTING

Four models of load cells are available; a standard unit (with or without lifting) for up to 5,000 lbs. (2,250 kg.) per bin leg and a high capacity model (with or without lifting) rated at up to 10,000 lbs. (4,500 kg.) per bin leg. The compact designs of the load cell assemblies only increase the overall height of the feed bin by approximately three inches (eight centimeters). All Feed-Link load cells are compatible with the EDGE 3-wire bin scale system.

WATER PULSE METER

Each display unit has an input for a water pulse meter, allowing water consumption to be monitored using the Feed-Link software. The water consumption data is collected and stored for a rolling 24-hour period, providing you with another tool to monitor water consumption by your birds.

UNIQUE FIELD CALIBRATION SYSTEM

The unique field calibration system combined with the placement of a load cells under every leg allows for maximum accuracy in monitoring feed consumption.

Feed bridging is more common as feed rations change due to fluctuating input costs and the use of alternative feed stuffs to lower cost and gain feed efficiency. Feed bridging can cause interruptions in feeding sessions resulting in feed quality issues and requiring time consuming corrective measures. Cumberland offers efficient and effective solutions to combat feed tank bridging.

Flow Hammer™

The Flow Hammer is a reliable and affordable solution that easily adapts to most existing feed bins. This patented* product aids in the prevention of out-of-feed events in all phases of swine production.

- Helps minimize feed bridging events to keep feed flowing consistently to birds
- Can be installed on a full or empty bulk feed tank.
- Low maintenance and simple installation (no field modifications to the tank required)
- Timed and sensor control unit modes:

  The timed mode uses an "on" time and a "cycle" time to control the Flow Hammer when the feed system is running.

  The sensor mode uses a sensing device to detect a feed flow issue and activates the Flow Hammer. Once the event has ended, the Flow Hammer shuts off.

The Flow Hammer's low frequency/high impact design pro-motes feed flow without damaging your feed bin or voiding the Cumberland warranty.

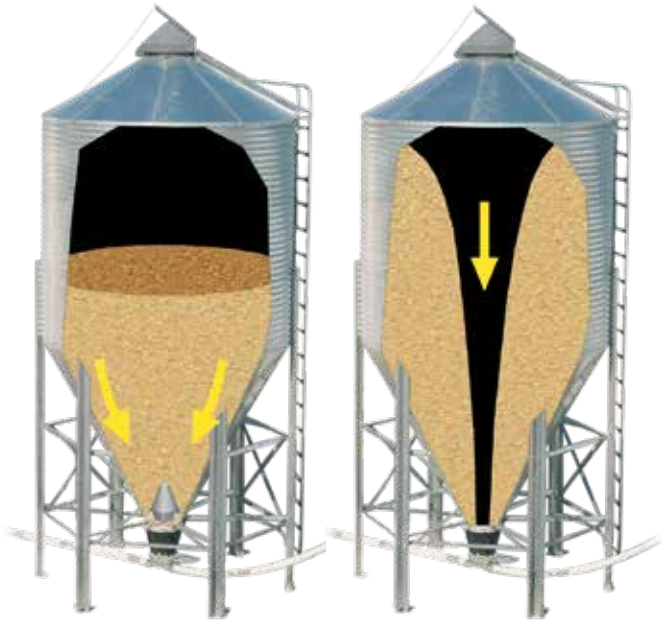
***U.S. Patent No. 9,493,300**

Control unit can be remotely mounted or tank mounted with an optional leg bracket

Delivers an impact of over 500 lbs. per second. 240 volt power required.

Sure-Flo™

An available option for 16" to 22" hoppers, Sure-Flo directs feed down the hopper of the bin rather than down the center creating a first in, first out feed flow. The gentle movement of the heavy-duty molded cone enhances flow as feed passes over it. The Sure-Flo support bracket easily bolts to the hopper collar of new or existing feed bins.



WITH SURE-FLO **WITHOUT SURE-FLO**

Bulk Feed Tank Capacities

Dia. (Ft.)	Dia (Mtrs.)	No. of Rings	Angle of Hopper	Fill Height (Feet)		Fill Height (Meters)		Max. Capacity (Bushels)		Max Capacity (Cu.Ft.)		Max Capacity (M.Tons)		Max Capacity (US.Tons)	
				30° Roof	40° Roof	30° Roof	40° Roof	30° Roof	40° Roof	30° Roof	40° Roof	30° Roof	40° Roof	30° Roof	40° Roof
6′	1.83	1	60°	10′ 9″	11′ 3″	3.28	3.43	111	118	138.0	147.60	2.50	2.67	2.76	2.95
6′	1.83	2	60°	13′ 5″	13′ 11″	4.09	4.25	171	178	212.6	222.21	3.86	4.03	4.25	4.44
6′	1.83	3	60°	16′ 1″	16′ 7″	4.90	5.06	231	238	287.2	296.82	5.21	5.38	5.74	5.93
6′	1.83	4	60°	18′ 9″	19′ 3″	5.72	5.87	291	298	361.8	371.43	6.56	6.74	7.24	7.42
7′	2.13	1	67°	13′ 8″	14′ 3″	4.16	4.35	185	196	230.1	244.96	4.17	4.44	4.60	4.89
7′	2.13	2	67°	16′ 4″	16′ 11″	4.97	5.16	266	278	331.6	346.51	6.02	6.29	6.63	6.93
7′	2.13	3	67°	19′ 0″	19′ 7″	5.78	5.97	348	360	433.2	448.06	7.86	8.13	8.66	8.96
7′	2.13	4	67°	21′ 8″	22′ 3″	6.60	6.78	430	441	534.7	549.61	9.70	9.97	10.96	10.99
7′	2.13	5	67°	24′ 4″	24′ 11″	7.41	7.60	511	523	636.3	651.16	11.54	11.82	12.73	13.02
7′	2.13	6	67°	27′ 0″	27′ 7″	8.22	8.41	593	604	737.8	752.71	13.39	13.66	14.76	15.05
9′	2.74	1	60°	14′ 3″	15′ 1″	4.33	4.59	308	332	383.9	413.81	6.96	7.51	7.69	8.27
9′	2.74	2	60°	16′ 11″	17′ 9″	5.15	5.41	443	467	551.8	581.68	10.01	10.56	11.04	11.63
9′	2.74	3	60°	19′ 7″	20′ 5″	5.96	6.24	578	602	719.6	749.55	13.06	13.60	14.39	14.99
9′	2.74	4	60°	22′ 3″	23′ 1″	6.77	7.04	713	737	887.5	917.42	16.10	16.65	17.75	18.34
9′	2.74	5	60°	24′ 11″	25′ 9″	7.59	7.85	848	872	1055.3	1085.28	19.15	19.70	21.11	21.70
9′	2.74	6	60°	27′ 7″	28′ 5″	8.40	8.66	983	1007	1223.2	1253.15	22.19	22.75	24.46	25.06
12′	3.66	2	60°	20′ 8″	21′ 11″	6.29	6.67	887	946	1109.7	1177.87	20.15	21.38	22.18	23.55
12′	3.66	3	60°	23′ 4″	24′ 7″	7.10	7.49	1126	1186	1407.7	1476.30	25.57	26.80	28.15	29.52
12′	3.66	4	60°	26′ 0″	27′ 3″	7.91	8.30	1365	1426	1706.1	1774.73	30.99	32.22	34.12	35.49
12′	3.66	5	60°	28′ 8″	29′ 11″	8.73	9.11	1604	1666	2004.5	2073.17	36.42	37.64	40.08	41.46
12′	3.66	6	60°	31′ 4′	32′ 7″	9.54	9.93	1842	1905	2302.9	2371.60	41.84	43.05	46.05	47.43
15′	4.57	2	60°	24′ 2″	25′ 10″	7.37	7.87	1554	1658	1934.8	2064.39	35.12	37.48	38.69	41.28
15′	4.57	3	60°	26′ 10″	28′ 6″	8.18	8.68	1929	2033	2401.1	2530.69	43.59	45.94	48.02	50.61
15′	4.57	4	60°	29′ 6″	31′ 2″	8.99	9.50	2304	2408	2867.4	2996.99	52.06	54.41	57.34	59.93
15′	4.57	5	60°	32′ 2″	33′ 10″	9.80	10.31	2678	2783	3333.7	3463.29	60.52	62.87	66.67	69.26

Specifications subject to change without notice. Specifications for additional sizes and hopper openings are available.
Capacities for 6′-15′ diameter tanks are calculated at 40 lbs/cubic foot for free-flowing material. Bushels capacities for 6′-15′ diameter tanks are calculated with no compaction and to full cubic foot capacities. It is absolutely necessary to install an appropriate agitator in feed tanks storing soybean meal, cotton seed meal, hot feeds and other products not considered free-flowing material. Consult GSI engineering department when in doubt about a specific material. All BFT series feed tanks include the following standard features: Ground control fill cap (60° & 67° tanks through 15″ dia.), roof panels, 2.66 corrugated sidewalls, 16″ or 22″ hopper opening (as indicated). 16″ opening to include the appropriate hopper collar, while 22″ opening tanks do not include hopper collar.

Cumberland®

Proven & Dependable™

AGCO Your Agriculture Company
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