

○ FEED SYSTEMS

○ WATERING

○ ENVIRONMENT

CUMBERLAND

# COMPLETE BREEDER

SYSTEMS



*Your Source for Innovative Solutions*

# Breeder, Pullet, & Male Pan Feeding

## Improve Uniformity and Feeding Efficiency...

...while reducing stressful in-house migration and mortality. By running on a continuous cycle with a constantly "charged" line, the Cumberland **Cycle Plus Pan Feeder System** eliminates "skips" in feed delivery, distributes feed evenly and simultaneously to all pans on the line, assures equal access to feed for all birds and generates less feed separation than the typical programmed feeding system.

## Hi-Lo Pullet Feeder

Feeding programs for pullets require pans to hold low volumes of feed. Cumberland accomplishes this through a specially molded waffle pan and restrictor tubes limiting the amount of feed within the feeder drop tube. This helps assure uniform feed distribution throughout the feed line.



## Breeder Pan Feeder

For breeder pan applications, Cumberland's Breeder Pan Feeder, with three different style of grills to choose from, will insure that roosters are restricted vertically and horizontally from accessing the hens feed. The breeder feeder comes with a sturdy, all plastic anti-rotation clip and a two-piece drop tube for ease of installation or replacement.

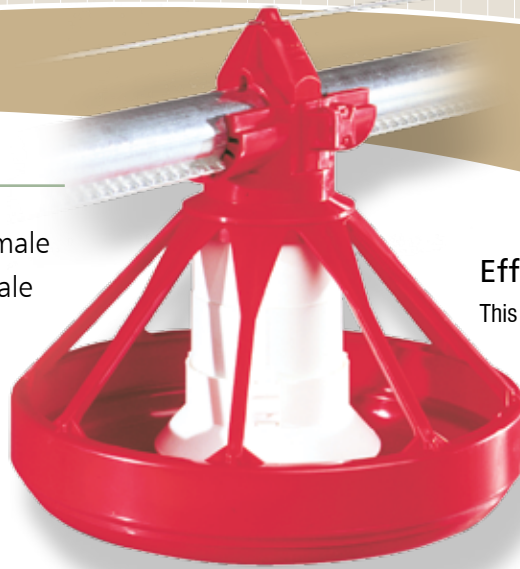
## Tubing and Auger

The rib on Cumberland's lock formed tubing gives added strength to the tube, as well as providing a solid way to hold the pans in place. The auger is manufactured from pre-flattened wire to reduce material stress and provide for a more consistent, high quality product.



## Male Feeders

The advantages of separate feeding of females and male breeders are widely acknowledged. Cumberland's Male Feeders allow you to feed male and female breeders separately. Providing separate rations for roosters is extremely important and can be easily defined with a male feeding system. This helps to maintain proper body weight increasing fertility and hatchability.

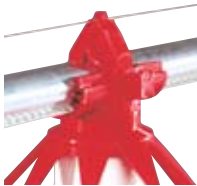


### Efficient Pan Design

This 8-spoke male feeder pan features a sturdy and durable plastic construction, shallow design for easy access, and a feed saver lip to reduce raking.

### Anti-Rotation Clip

A sturdy, all plastic anti-rotation clip is easy to assemble and, used in conjunction with Cumberland's ribbed tubing, keeps the pan stationary on the line for proper operation and reduced feed spillage.



### Slide Shutoff

An optional, all plastic, slide shut-off is available. Easy to install, the slide shutoff allows any combination of feeders to be shut-off from feed.



### Rooster Scale

For In-house male feeding weighing, Cumberland's 650 lbs. (295 kg) hanging hopper scale will provide accurate daily weighing needed for the male feeding system.



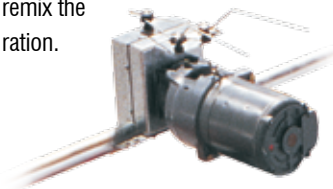
## Unloader & Agitator Arm

Unique engineering in our patented unloader allows for continuous operation while eliminating "over packing" in the delivery tube. A simple design feature (no moving parts, nothing to breakdown or replace) maintains a constant, safe level of feed while an agitator arm assures loose, unpacked feed enters the system and eliminates "rat holing" and "bridging" of feed in the hopper.



## Direct Drive Power Units

One third horsepower, direct drive, high efficiency power units provide smooth transfer of feed throughout the system, propelling the coreless auger at 100 feet per minute, while gently rotating to constantly remix the ration.



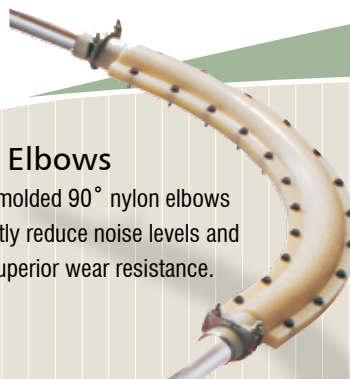
## Pan Feeding Accessories

Cumberland offers a variety of accessories to complete your pan feeding systems.



## Nylon Elbows

Injection molded 90° nylon elbows significantly reduce noise levels and provide superior wear resistance.



# Chain Feeder Systems

Cumberland offers both the direct drive and belt drive Chain Feeder Systems. These systems represent the classic, proven technique for even, low-stress distribution of feed providing equal access to feed to all birds and assuring uniform development.

With the full range of grill patterns, trough designs and connections, suspension and hopper options, Cumberland Chain Feeder Systems can be specifically configured to meet the particular needs of the individual grower and house layout.



## Features

### One Line Unloader

Utilizing the same reliable feed return wheel and shaft as the mini-hopper and maxi-hopper, Cumberland's one line unloader adds another option for uniform feed distribution. With a weight of only 27 pounds (12.25 kg), the one line unloader is easy to handle and install.



### Corner Mechanism



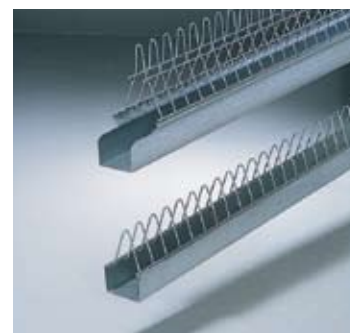
Completely enclosed in a powder coated, steel housing, the corner mechanism is specifically designed for low maintenance and high performance. Mounted on a hardened steel base plate, the corner guide rail and fluted wheel provide maximum wear resistance while assuring smooth chain movement.

### Exclusive Design



The traditional yoke weldment connecting the drive gears to the motor (an annoying source of shearing and misalignment in chain feeder systems) has been eliminated and replaced by a precision-machined design that reduces the number of parts, guarantees proper alignment and significantly enhances dependability.

### Trough & Grills



Troughs are available in two sizes: a smaller design for pullets and a larger trough (with a "feed saver" lip) for hens. Grills are available in almost any configuration to control access in any category.



## Electronically Controlled System

The Cumberland Chain Feeder System is operated electronically. The standard speed system (60 feet or 18.28 meters per minute) uses either a 24-hour pin clock or a 24-hour four channel digital timer, both of which can be pre-programmed to control all feeding and fill systems from the weigh bin, to the house, to the feeder.



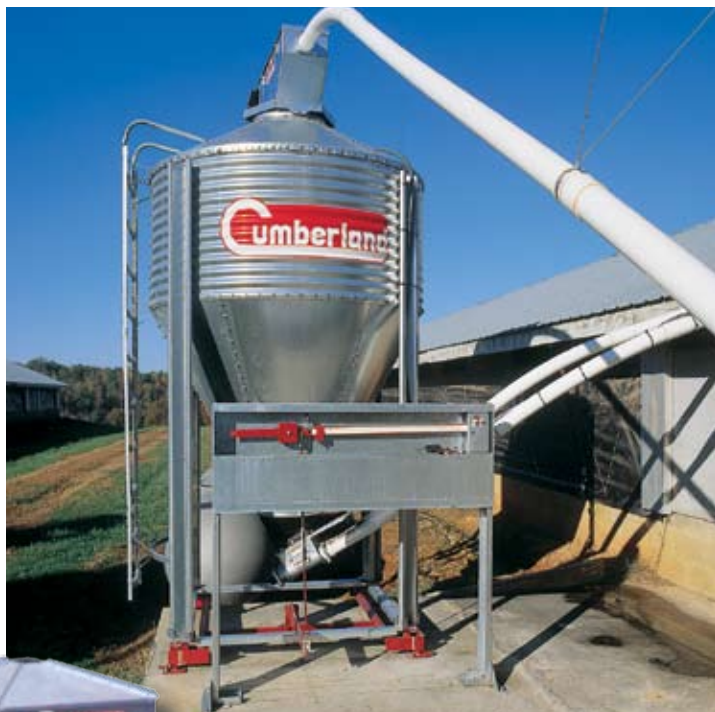
## Durable Hoppers

Cumberland's mini-hoppers are built to last utilizing highly advanced welding for strong connections and a multi-stage cleaning process including shot-blasting, electrostatic powder coating and oven baked for a durable finish. Mini-hoppers are available in a full range of formats and come standard with feed return wheels and feed level adjustments. Fill hoppers, maxi-hoppers and our new single drive unit complete our full line of feeding equipment.

## Weighing Systems

### 6' Bin Scale

Cumberland offers many types of weighing systems to serve the Chain Feeder System. Choose from a 6' (1.83 m) tank scale with a 5000 pound (2268 kg) capacity or a complete load cell package for out-of-house weighing of feed.



### Platform Scale

For in-house weighing, a platform scale is available with either 1800 pound (816 kg) or 4000 pound (1814 kg) capacity hoppers.



## Direct Drive

Cumberland's direct drive system incorporates all the proven operational advantages of chain feeding with dependability and durability you can count on.

# Feed Storage and Delivery



## Bulk Feed Tanks

Cumberland is a division of The GSI Group, Inc., the world's largest manufacturer of corrugated, galvanized steel storage tanks. Therefore, you can be assured every component is made from the finest raw materials available and is manufactured by skilled professionals who have years of experience. Whatever the project, Cumberland has variety of bin sizes to fit your specific needs.

**40° roofs provide additional strength and capacity.**  
(Shown with optional pneumatic fill kit.)



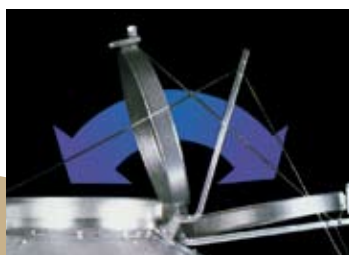
## One-of-a-Kind Drip Lip

Cumberland's new drip lip water deflection system is a one-of-a-kind, roll-formed bottom sheet edge, which forces water away from the hopper and lower boot area. Complete weather protection without a loss in capacity.



## Secure Access

Cumberland feed tanks feature the exclusive, patented "Auto-Lok" ground control access system for opening, closing, and latching the fill cap safely and easily from the ground. Our cap system comes completely factory assembled. The cap itself swings open a full 180°. The cap lies flat, parallel to the ground, completely eliminating interference with, or damage to, the cap from the fill auger.



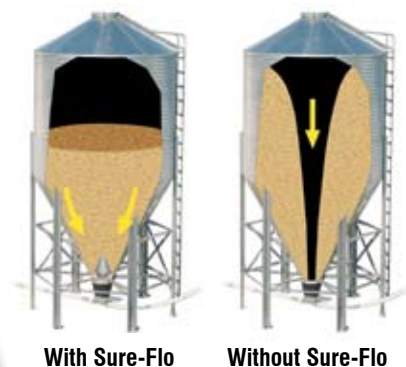
## Bin Roof

Cumberland offers your choice of a 30° or 40° bin roof to adapt to any application. Roof panels are precision manufactured using die-form tooling to provide consistent quality. Both 30° and 40° roofs feature reinforcing ribs at each roof seam for added strength and rigidity.

## Sure-Flo

Sure-Flo directs feed down the hopper of the bin rather than down the center creating a first in, first out feed flow.

- Reduces Feed Bridging
- First Feed In is First Feed Out
- Reduces Feed Separation
- Easy to Install



Sure-Flo

# Cumberland Unloaders

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



Most unloaders are available in single or double outlet models, as well as "through" & "twin through" models which can be used in tandem where two tanks are used in line.

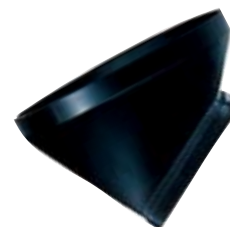
*Single Unloader shown with optional swing away bottom for 100% cleanout.*

| Flex-Flo Systems  | Model 220 | Model 300 | Model 350 | Model 500 | Model HR |
|---|-----------|-----------|-----------|-----------|----------|
| Tube Outside Diameter                                       | 2.25"     | 3"        | 3.5"      | 5"        | 3.5"     |
| Tube Outside Diameter (mm)                                  | 55        | 75        | 90        | 125       | 90       |
| Tube Corner Radius  | 5'/10'    | 5'        | 5'        | 6'        | 5'       |
| Tube Corner Radius (m)                                      | 3.05      | 1.83      | 1.83      | 1.83      | 1.83     |
| Max. Single System Length with Three Elbows                 | 250'      | 200'      | 150'      | *150'     | 150'     |
| Max. Single System Length (m) with Three Elbows             | 76.2      | 60.96     | 45.72     | *45.72    | 45.72    |
| Recommended Motor Sizes at Max. Length (Horsepower)         | .5        | 1         | 1         | 1.5       | 1        |
| Capacity (Lbs./Minute at 40 Lbs. per Cu. Ft.)               | 15        | 50        | 100       | 220       | 50       |
| Capacity (Lbs./Minute at 640 kg. per Cu. m)                 | 480       | 1360      | 2722      | 5988      | 1360     |
| 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%

## Heavy Duty Boots

Cumberland's 16" (40.6cm) parabolic boot (available in straight boot, 30° boot, and straight twin boot) is made from the very latest in ultra high impact polypropylene for greater flexibility, dependability and durability.



30° Drop Boot



Straight Boot



Twin Boot

## Clear Boots

Cumberland's clear boot allows producers to verify at a glance while driving by that feed is present in the bin. This heavy walled boot is injected molded from a specially formulated ultraviolet stabilized clear polycarbonate blend to provide years of trouble free service.



Clear Boot

## Flex-Flo™ Models

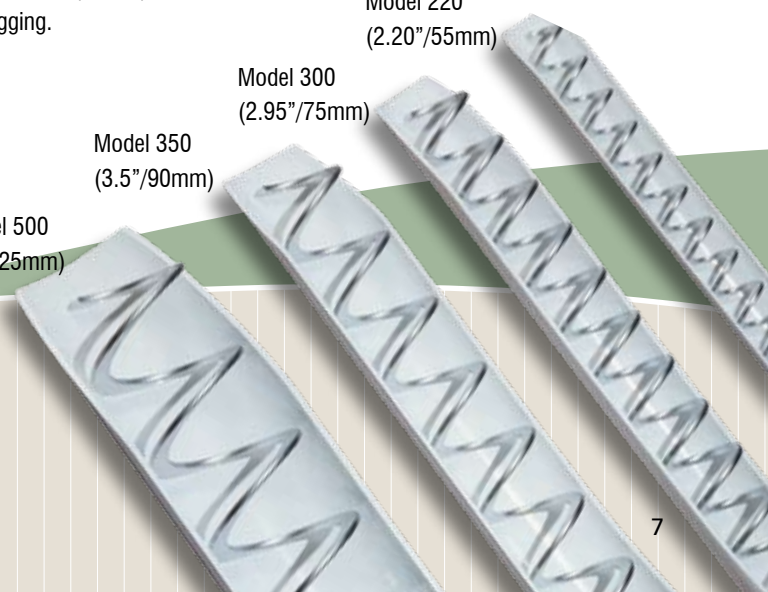
Cumberland offers five Flex-Flo models with capacities ranging from 15 lbs. to 220 lbs./minute (6.8kg to 99.8kg/min.). Whether it's ground feed, crumble feed, mash, high moisture corn, shelled corn or pellets, Cumberland has the equipment to handle it. For corn with up to 27% moisture and other hard 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.

Model 220  
(2.20"/55mm)

Model 300  
(2.95"/75mm)

Model 350  
(3.5"/90mm)

Model 500  
(5"/125mm)



# Nipple Drinker Systems

## High Quality, Low Maintenance

Cumberland's nipple drinker system includes the 360° side-to-side nipple valve toggle action, plus an increased flow rate with vertical lift action. Cumberland nipples use a stainless steel upper pin for water flow control, giving longer life and a more precise flow rate. Cumberland's experience and engineering continue to bring to you a complete watering system loaded with innovations, features and low maintenance reliability, providing for large healthy birds and dry floors.

### End Kit: CW-9500

- Extra strong design.
- Tall flexible sight gauge allows easy pressure reading.
- Garden hose drain.



### Connection: CW-5020

- External sealing "O-ring" connection allows unobstructed water flow.
- No glue necessary.
- 1.05" (27 mm) large volume pipe.
- Simple push together assembly.
- Keyed connection from regulator to end assembly.
- Light resistant water pipe prevents algae.

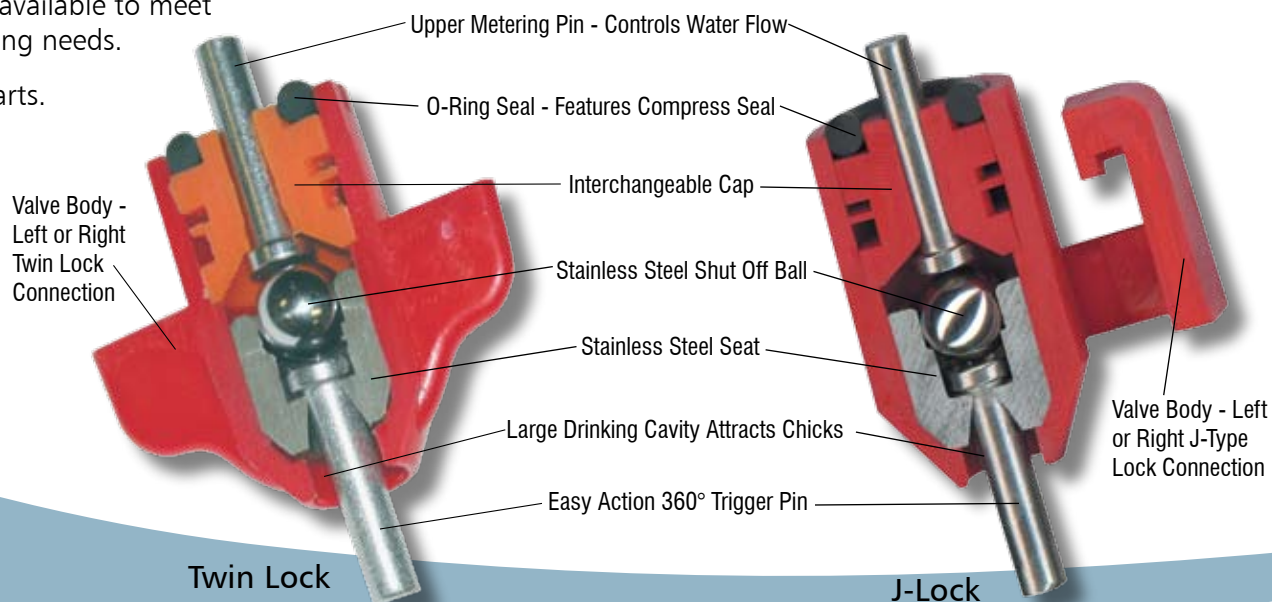


### Aluminum Support Rail

Folding hangers or rail alignment clip hold the watering tube/nipples firmly in place while allowing the support tube/aluminum rail to freely slide should it expand or contract in changing climates.

## Twin Lock/J-Lock Nipple Valves

- 6 different styles available to meet everyone's watering needs.
- Only 3 moving parts.
- Four times easier action.
- Quick and easy assembly for Twin Lock (no wrench required).





Patent Pending

Water Pipe Notch

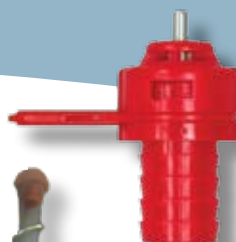
## Drinking Cups

The easy to install drink cup is available as an option on our watering systems.



## Air Vent: CW-9510

- Extra strong design.
- Tall flexible sight gauge allows easy pressure reading.
- Garden hose drain.



## Self Sealing Cap

Self sealing cap at clear sight tube to prevent water spillage.

## Cumberland Water Regulator

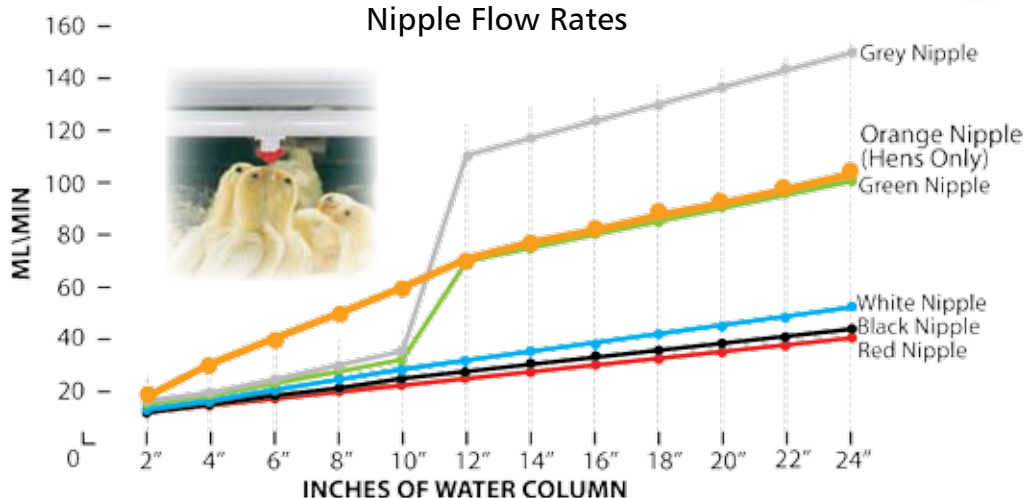


## Manual Flush

Cumberland's unique Water Regulator is designed for greater versatility and ease of use, no by-pass necessary.



## Nipple Flow Rates



## Removable End Cap

The Cumberland Regulator can be easily removed from the watering line without interfering with the suspension of the watering line. With the unique in-line design, this regulator can be used as a mid-line regulator by simply removing the end cap.



Flushing of the Cumberland Watering System requires **NO EXTRA PLUMBING AND VALVES.**

# Mechanical Nesting Systems

## Front Roll-Out Nesting Systems

### Front Nest Access

The Front Roll-Out Nest features convenient front access for egg collection in the event of a power failure. It allows for easier cleanout, maintenance and belt inspection without extensive and time consuming disassembly.

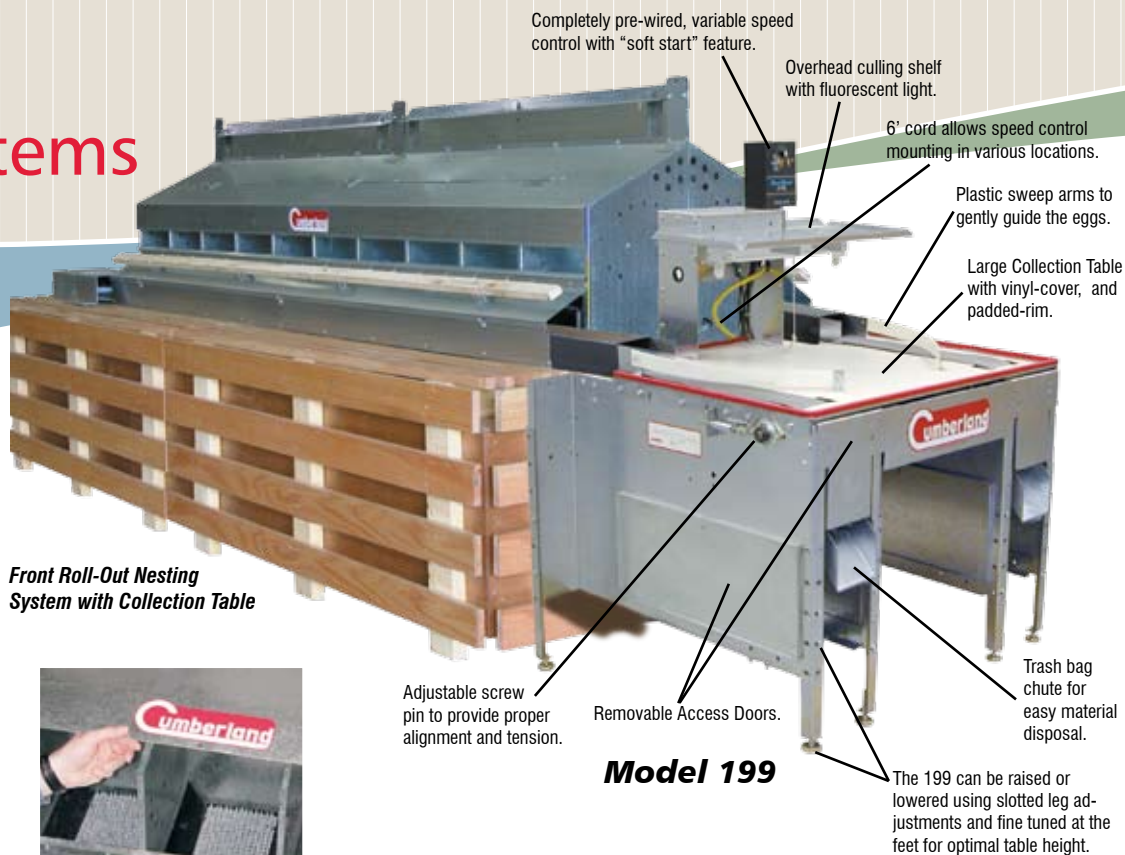


*Front Roll-Out Nesting System with Collection Table*



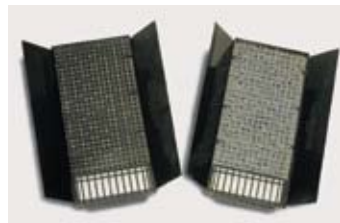
### Hinged Lid

The Front Roll-Out Nest features a hinged lid which conveniently lifts or closes to block nest access.



### Durable Nest Pads

The front roll-out nest offers the grey crushed leaf or rubber finger nest pads with a durable, easy to clean, plastic nest bottom.



## Front and Center Roll-Out Nesting Features



### Return Idler

Belt rollers are made of heavy-duty plastic and are adjustable with a simple screw pin. A fiber brush clears debris off the return belt.



### Belt Tightener

Each table features a spring loaded, self-adjusting belt tightener with automatic shutdown and a front clean out with a belt brush to continuously remove debris from the line.



### Aisle Trays and Covers

Grey vinyl aisle covers significantly reduce maintenance costs by eliminating the expense of continuously replacing corroded metal aisle covers. Vinyl covers are available for recessed or non-recessed nest installations. Heavy duty galvanized aisle trays are also available.



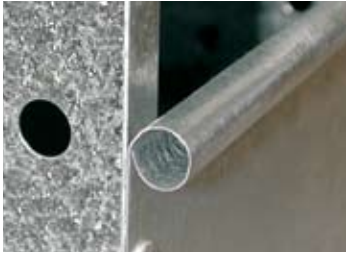
### Nest Bottom Rods

The nest bottom rods support the nest bottom without the need for ledges that can cause litter build up. Adjustable nest bottom rods will help facilitate safe egg roll out.

# Center Roll-Out Nesting Systems

## Rolled Metal Edges

All exposed metal edges are hemmed or rolled to eliminate bird injury or bruising.



## Anti-Roost Device

A simple but effective anti-roost device, and a steep pitched roof, keep birds from roosting on the houses.



## Wooden Perch

For Center Roll-Out nests, Cumberland offers an optional wooden perch, with double-riveted support brackets to eliminate sway. The perch can be raised and locked to control accessibility.



## Nest Pads

Cumberland's rubber finger or grey crushed leaf nest pads are easy to clean and provide a comfortable and inviting laying area. Both designs promote proper roll-out with minimal egg contact. Pads are available for 10 and 12 hole nests.

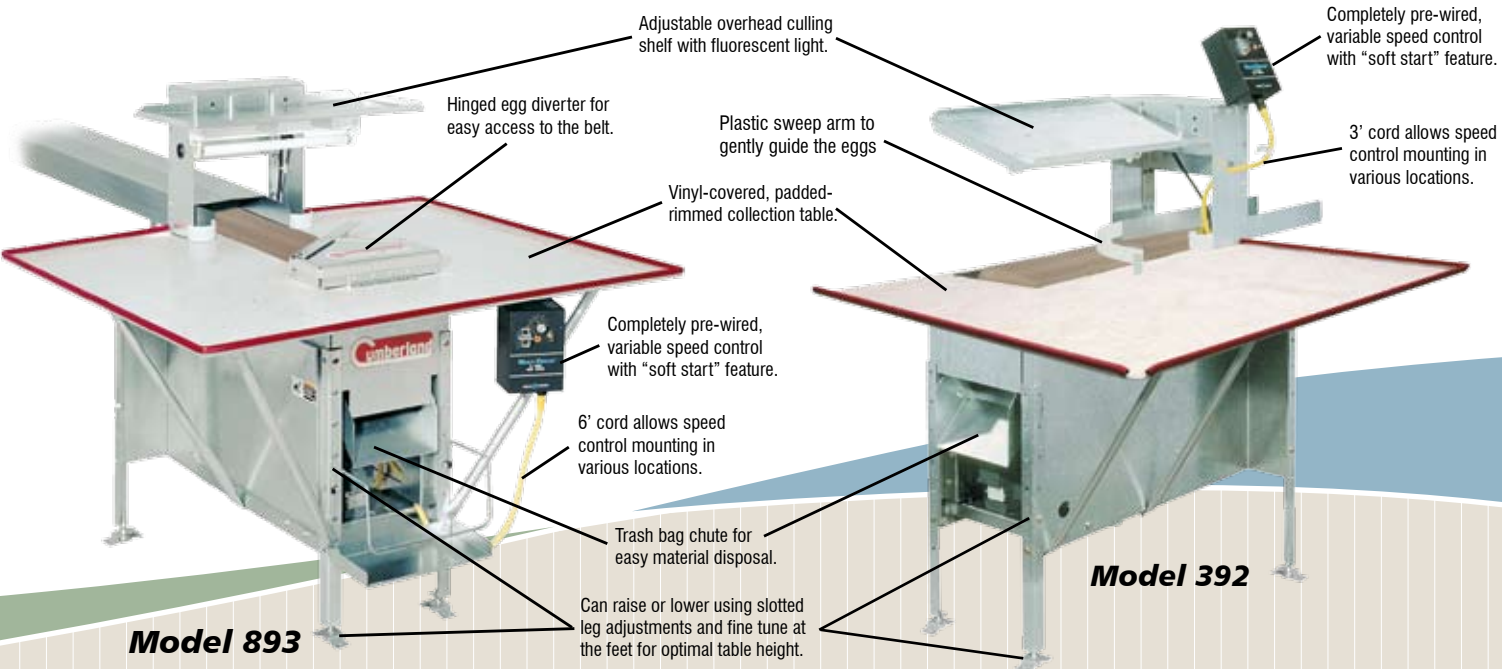


## Nest Bottoms

Our plastic, corrosion resistant nest bottom has large openings from the front of the nest to the back keeping litter from building up without losing any strength. It's contoured design helps funnel eggs to the belt with ease.



# Center Roll-Out Collection Tables



# Galvanized Fans

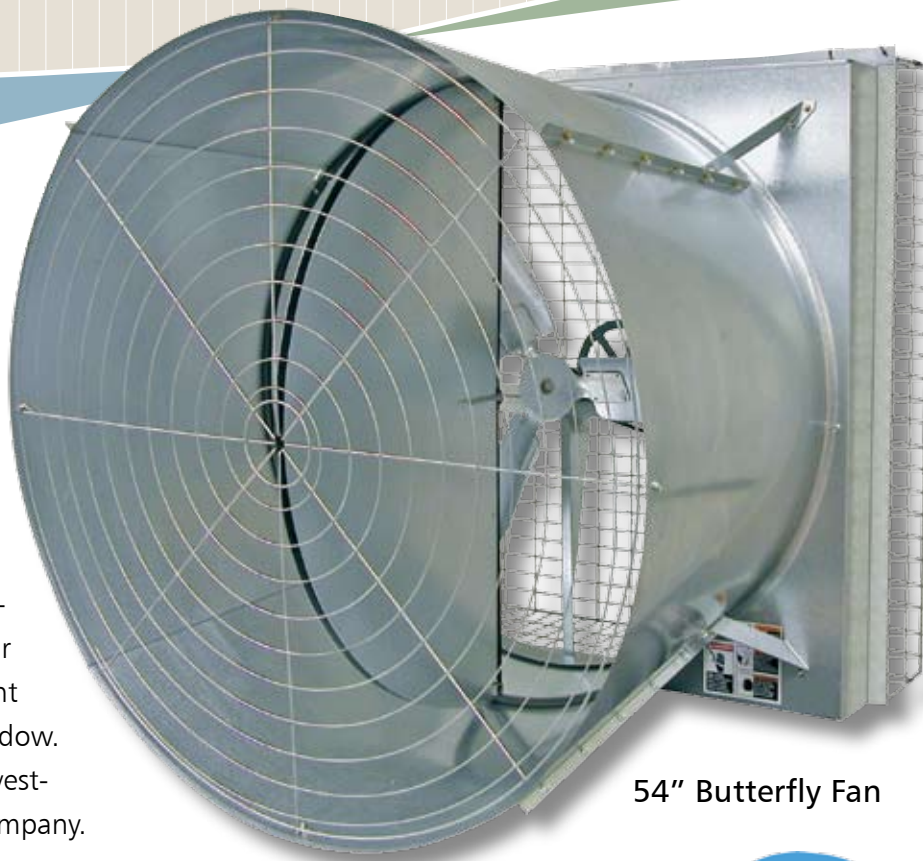
## Lower Cost... ...Increase Profits

Cumberland ventilation systems are the perfect solution for more efficient, high performance, climate control in poultry production facilities. Our equipment has been field refined and industry proven to be extremely effective in reducing bird stress caused by overheated or poorly ventilated houses. Even if your building is well ventilated, inefficient equipment can blow healthy bird profits right out the window. If you're looking for a better return on your investment, look to Cumberland, your ventilation company.

### Butterfly Fan Features

*A balance of performance, features, and value come with Cumberland's 50" & 54" Butterfly fans.*

- Simple Butterfly style shutter structure improves fan performance and stability.
- Butterfly design eliminates the need for the traditional louver shutter, which are prone to dust buildup.
- During fan operation, the air forces the shutter doors open to provide full fan performance.
- Uses a magnetic shutter panel ring to alleviate movement of shutter doors while not in operation. In turn, the sealing area is reduced 50% or more compared to the traditional louver style shutter, resulting in lower heating cost during winter months.
- Critical stainless steel moving parts enhance stability, reliability and long lasting performance.

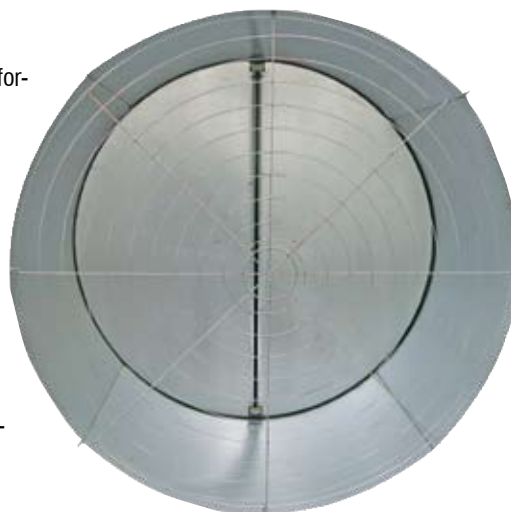


54" Butterfly Fan



### Arched Side Cone Panel

Cumberland's unique arched side cone panels allow you to mount fans closer together on field installations.



*Front shutter doors offer protection from harsh weather conditions such as wind and moisture while the fan is not in use.*

# Look to **Cumberland** for a Better Return on Your Investment.

## Slantwall Fans

Cumberland offers 36" and 50" galvanized steel belt drive and direct drive slantwall fans to efficiently and effectively maintain optimal environmental conditions. All galvanized fans are constructed of heavy gauge, G-90 grade galvanized steel and use totally enclosed "TEAO" motors designed for high efficiency and continuous duty cycles. Galvanized fan propellers are aerodynamically balanced for maximum air flow.



## Drive Train

- Standard with all belt drive fans
- Large, cast iron, high quality greasable pillow block bearings to be used for longer life.
- Large Pulleys allow for longer belt life and smoother operation.
- Easy Access for belt removal.
- Automatic style belt tensioner to always ensure proper belt tension.



## Cone Fans

Optional discharge cones can boost fan output by as much as 10-15%, greatly increasing efficiency. Made of all galvanized steel, cones are available in easy to ship and assemble four-piece segments for 36" & 50" models.

## Box Fans

Cumberland box fans feature heavy duty galvanized steel housings, grill guards, venturis and propellers. Offered in 36" (14" and 19" depth) or 50" (21" and 25" depth) diameters, these fans are available in either direct drive or belt drive models.



# Fiberglass Fans

## Fiberglass Fans

Cumberland's fiberglass ventilation fans are available in 36" and 50" diameters, with and without cones. These fans are manufactured using a "Resin Transfer Molding" (RTM) process for a smooth finish on both interior and exterior surfaces of the fan housing. The motor mount and internal framework of the fan is constructed of corrosion resistant, heavy gauge aluminum and assembled with stainless steel hardware. The basic fan



### The Boss Cone Fan

Cumberland's 52" fiberglass cone fan is the newest generation of ventilation equipment. The Boss Fan was designed for poultry facilities that desire high capacity and efficiency. Choose from the more economical galvanized steel propeller or the premium stainless steel propeller. Both styles of propellers are balanced for maximum airflow. Upon request, housings can be shipped in a two-piece knockdown version, along with the four piece cone dramatically reducing freight cost. Other features include vinyl coated guard, stainless steel square tubing, and stainless steel hardware.



includes a heavy vinyl coated guard, shutter, all aluminum and stainless steel mounting hardware.

### 52" Fiberglass Belt Drive

The belt drive Boss Fan offers an automatic belt tensioner that provides smooth operation and maintains constant belt tension. Features include easy access for belt removal, fiberglass housing and cone, stainless steel square tubing, motor base and mounting hardware. Like all Cumberland belt drive fiberglass fans, cast iron pulleys and greasable pillow block bearings are standard features.



### Drive Train

Drive shafts of 1" material allow for large, cast iron, greasable pillow block bearings to be used for longer life. Large pulleys allow for longer belt life and smoother operation.



### Composite Propellers

Props are made of a tough composite fiberglass. Engineered with a true airfoil design, these propellers increase the overall efficiency of the fan providing optimum airflow effectiveness.



## Galvanized Fan Performance Values

| Model        | Dia. | Drive  | Type      | HP   | 0.0 Static Pressure |          | .05 Static Pressure |          | .10 Static Pressure |          | BESS Lab Test # |
|--------------|------|--------|-----------|------|---------------------|----------|---------------------|----------|---------------------|----------|-----------------|
|              |      |        |           |      | CFM                 | CFM/Watt | CFM                 | CFM/Watt | CFM                 | CFM/Watt |                 |
| G50CBF16GA   | 50"  | Belt   | Butterfly | 1.5  | 25238               | 27.4     | 23524               | 24       | 21807               | 20.8     | 4309            |
| G50CBF16GAHE | 50"  | Belt   | Butterfly | 1.5  | 23915               | 30.2     | 22131               | 25.9     | 19937               | 22.1     | 4310            |
| G50CBF16GAHF | 50"  | Belt   | Butterfly | 1.5  | 26913               | 24.2     | 25427               | 21.5     | 23603               | 18.9     | 4308            |
| G54CBF16GA   | 54"  | Belt   | Butterfly | 1.5  | -                   | -        | * 31800             | 22.6     | 29450               | 19.8     | 6218            |
| G54CBF16GAE  | 54"  | Belt   | Butterfly | 1.5  | -                   | -        | 27500               | 25.9     | 24720               | 21.7     | 6223            |
| G54CBF16GAU  | 54"  | Belt   | Butterfly | 1.5  | -                   | -        | 25000               | 28.8     | 21850               | 23.3     | 6222            |
| CGSB36       | 36"  | Belt   | Slantwall | 0.5  | 10578               | 19       | 9984                | 17.1     | 9379                | 15.5     | 98273           |
| G50SL16GA    | 50"  | Belt   | Slantwall | 1    | 22373               | 18.6     | 21042               | 17       | 19595               | 15.5     | 98283           |
| CGSD36       | 36"  | Direct | Slantwall | 0.5  | 10417               | 17.5     | 9747                | 15.8     | 9105                | 14.2     | 94-0015         |
| CGSD50       | 50"  | Direct | Slantwall | 1.25 | 20400               | 19.2     | 19300               | 17.5     | 18100               | 15.8     | 94328           |
| CGBB3614     | 36"  | Belt   | Box       | 0.5  | 10171               | 19.6     | 9615                | 17.8     | 8969                | 15.8     | 00128           |
| CGBB5021     | 50"  | Belt   | Box       | 1    | 20861               | 20.9     | 19486               | 19.1     | 18071               | 17.4     | 94276           |
| CGBD3614     | 36"  | Direct | Box       | 0.5  | 10950               | 19.3     | 10280               | 17.7     | 9560                | 16       | 94131           |
| CGBD5021     | 50"  | Direct | Box       | 1.25 | 20450               | 1909     | 19200               | 17.8     | 17910               | 15.9     | 94283           |
| CGSBC36      | 36"  | Belt   | SW Cone   | 0.5  | 11341               | 20.9     | 10653               | 18.4     | 9898                | 16.4     | 98275           |
| G50SCL16GA   | 50"  | Belt   | SW Cone   | 1    | 24700               | 22.5     | 23100               | 20       | 21500               | 17.7     | 3168            |
| G54SCL16GA   | 54"  | Belt   | SW Cone   | 1.5  | 28900               | 27.1     | 26700               | 23.6     | 24300               | 20.4     | -               |

\* Performance values of this fan at .05" static pressure exceeds the BESS Lab test capabilities and were calculated through regression analysis of CFM and CFM/Watt measurements.

Ultra High Efficient

## Fiberglass Fan Performance Values

| Model     | Dia. | Drive | Cone | HP  | 0.0 Static Pressure |          | .05 Static Pressure |          | .10 Static Pressure |          | BESS Lab Test # |
|-----------|------|-------|------|-----|---------------------|----------|---------------------|----------|---------------------|----------|-----------------|
|           |      |       |      |     | CFM                 | CFM/Watt | CFM                 | CFM/Watt | CFM                 | CFM/Watt |                 |
| APPB-36   | 36"  | Belt  | No   | 0.5 | 10952               | 16.1     | 10152               | 15.4     | 9339                | 14       | -               |
| APPB-36C  | 36"  | Belt  | Yes  | 0.5 | 11232               | 18.2     | 10905               | 17.5     | 10135               | 15.8     | -               |
| APPB-50   | 50"  | Belt  | No   | 1   | 21508               | 17.6     | 20160               | 15.7     | 18707               | 14.4     | -               |
| APPB-50C  | 50"  | Belt  | Yes  | 1   | 24282               | 23.4     | 22760               | 21       | 21129               | 19       | 01251           |
| F52CL16GA | 52"  | Belt  | Yes  | 1.5 | 29529               | 23.3     | 28100               | 21.5     | 26600               | 19.5     | 03167           |
| F52CL16GE | 52"  | Belt  | Yes  | 1.5 | 24671               | 32.6     | 22796               | 28.2     | 20819               | 24.5     | 02493           |
| F52CL16SA | 52"  | Belt  | Yes  | 1.5 | 29500               | -        | 28100               | 21.5     | 26600               | -        | -               |

Ultra High Efficient

## Fan Shutters

Available in a variety of sizes and materials, we have a shutter to fit your particular requirements be it low light, low maintenance or low cost. The true airfoil design of our shutter blades make them extremely effective allowing for very little performance loss. Simple to install and built to last a lifetime, Cumberland shutters can provide an easy and affordable means of controlling incoming light and building climate.

### Cumberland Shutters

Cumberland PVC shutters come in white or black, and are very low maintenance and easy to clean. The black shutters are used in reduced lighting applications. Galvanized shutters have galvanized frames, with epoxy painted blades to reduce rusting, allow easy cleaning and provide additional protection. Aluminum shutters offer great durability in any environment. They have no parts to rust, and are practically maintenance free.



Galvanized Epoxy Painted

Aluminum

PVC (White)

PVC (Black)

# Cooling Systems

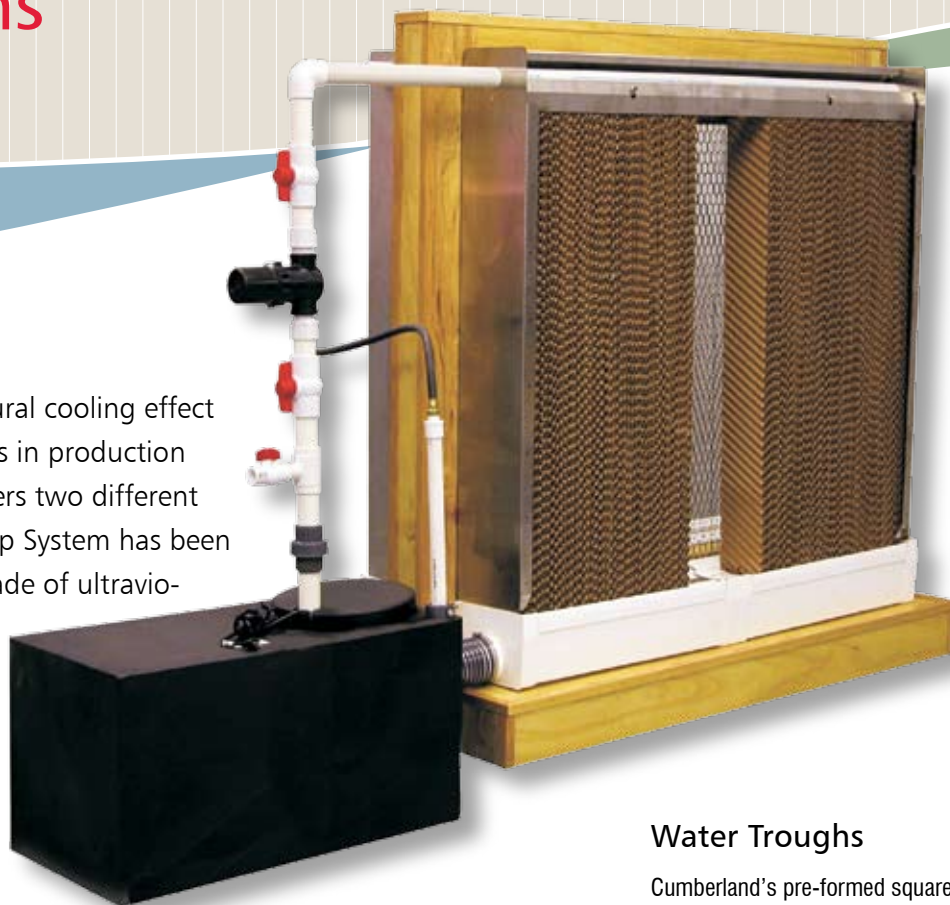
## Open Top System

### Komfort Kooler

Komfort Kooler systems utilize the natural cooling effect of evaporation to combat seasonal dips in production caused by heat stress. Cumberland offers two different styles of Komfort Kooler. The Closed Top System has been an industry favorite for many years. Made of ultraviolet stabilized PVC, this system offers great durability and longevity for the poultry environment. In addition, Cumberland's rapidly growing Open Top System is available. This design offers the grower easy access to manage and maintain their evaporative cooling system and utilizes a combination of PVC and the highest quality of stainless steel for years of dependable operation. Komfort Kooler Systems will adapt to new and existing poultry facilities.

### Open Top Design

Made of high quality stainless steel, this system will give years of dependable operation under the harshest conditions. The Open Top design allows you to see the water jets and easily check water pressure. It also offers access to the spray bar for cleaning. Pre-punched and heavy duty stainless steel components help simplify installation.



### Features

- A roto-molded holding tank offers increased water storage capacity.
- Submersible pump keeps water levels consistent for efficient water delivery.
- Automatic float valve for matching water supply with water demand.
- Easy removal of pads for cleaning.
- Wide selection of cooling pads to choose from.
- Trough support brackets for suspending the system on the sidewall.
- Center Feed Kits for longer cooling systems.

### Water Troughs

Cumberland's pre-formed square trough serves as a 3 gallon per lineal foot (44.8 liters per meter) water reservoir. Constructed of corrosion proof, ultra-violet stabilized PVC components, the trough allows unevaporated water to be recirculated back to the holding tank. A perforated tray snaps to the trough to hold pads firmly in place. Injection molded end caps and couplers speed installation.



## Closed Top System

### Closed Top Design

The Closed Top system is extruded from ultraviolet stabilized PVC for durability and ease of installation. The hinge-open cover and thumbscrews allows accessibility to spray bar and holds pads firmly in place. The spray bar bracket and water deflector insure pads are uniformly wet.



## Curtain Controller & Auto Curtain

Choose between two different styles of Curtain Machines to maintain precise control of the environment in ventilated poultry houses. The most commonly used machine is the Curtain Controller and is available with pulleys or sprockets. The traditional Auto Curtain Machine comes with a grooved drum for cable operation or a sprocket for chain drive. Both models are available in a variety of curtain speeds and feature heavy-duty construction with galvanized housings.

### Auto Curtain

Cumberland's Auto Curtains operate by wenching a cable around a grooved drum controlled by a thermostat and timer. Optional version uses a sprocket and chain drive (instead of drum) turning a pipe that runs the length of the building. This sprocket version operates by pulling the curtain or door drop cords directly around the pipe eliminating the need for cable.



Auto Curtain

Adjustable latch out switches can be installed in multiple locations to energize and de-energize a variety of equipment.

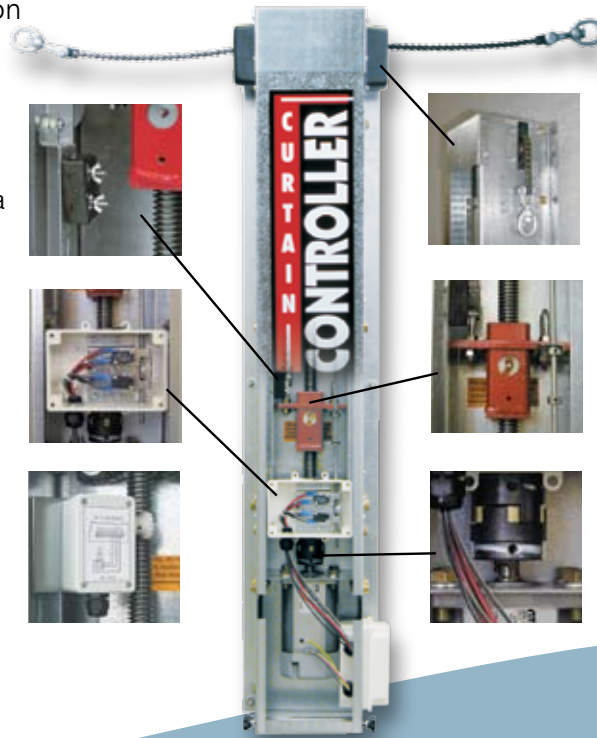
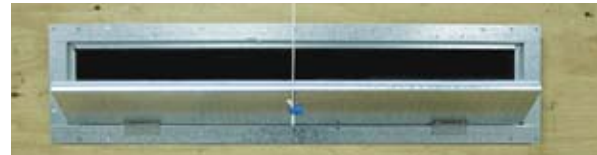
Isolated primary and secondary limit switches allow for back-up protection.

An optional shaft-mounted potentiometer provides an accurate and immediate signal to allow precise control of air inlets or curtains based on temperature, rather than static pressure.



### Vent Doors

Cumberland's vent doors are used in poultry applications where transitional ventilation is required. All galvanized construction and simple to install, these doors are maintenance free and will provide optimum circulation for many years.



Solid construction and rust resistant materials make the sprocket controller a reliable workhorse year after year.

The drive block assembly features a removable nylon insert that decreases friction for smooth travel on the drive screw.

The Curtain Controller utilizes a threaded block and drive screw directly coupled to a direct drive gear motor.

Curtain Controller

# Integrated Management Systems

## INTEGRA Controls

Precise control of the temperature, airflow, bird weight, water consumption, feed inventory and lighting is a must for achieving top profits for growers. Cumberland's Integra line of equipment combines all of these elements together into one cost effective, easy to operate management system. This fully integrated management system allows access of real-time data to ventilation, bird weight, water consumption, feed inventory and lighting for the entire site from a single location. Data can be accessed from an on-site PC or remotely via modem.

### Expert 32 Controller

- Up to two (2) time clock outputs
- Capable of operating vent doors and tunnel curtains
- Up to two (2) cooling outputs
- Up to ten (10) fan outputs
- 8 independent heating outputs
- Indicator lights show status of components
- Handles up to 6 selectable temperature probe(s) for each heating zone
- Configure a brooding and a growout setup according to "YOUR" specific needs. Select the clean mode program when the house is empty
- Adjustable empty zone set point that is independent from the main set point
- Integrated static pressure sensor for vent doors
- Summer/winter settings based on outside temperatures
- Capability of entering daily mortality into the controller
- Full mortality history of the current flock available
- Collects water consumption data per day and flock
- Fully integrated system, no fighting between components
- Adjustable fan startup delay to allow vent door pre-opening
- Day and night settings for minimum ventilation and set point
- Alarm settings for temperature, static pressure, probes, watering, and more



### Expert 64+ Controller

- 8 Hi-Lo Heat Zones
- 16 Tunnel Fan Groups
- 5 Minimum Fan Groups
- 2 Cooling Stages with Ramping
- Tunnel Curtain Capability
- Vent Door Capability
- Change ventilation with 5 different programs
- Up to 64 relay outputs with a second relay panel
- Up to 24 different times on the time clock where you can assign different relays to each clock
- Upload/Download: Program one control on a chip and easily upload all other controls on the site
- Mist ramping feature: As heat increases in the building so will your on time
- Light program: Ramping light program with variable module option (LD-7000)
- Day and night settings for minimum ventilation: Capability of having a different minimum ventilation timer for day and night
- Mortality: Capability of entering daily mortality into the controller. Full mortality history of the current flock available.



### Relay Panel

- 32 Output Relay Panel
- On/Off/Auto Relay Switches
- Open/Off/Close Switches for Curtain Relays
- Clear Protective Door
- LED on lights
- Only 5 wires between the Controller and the Relay Panel



### Controller Accessories

#### Expert-SB

Back-up Safety Relay Box - up to eight (8) stages. Back-up Safety Relay Box does not include thermostats.



#### SP-Module

Static Pressure Module

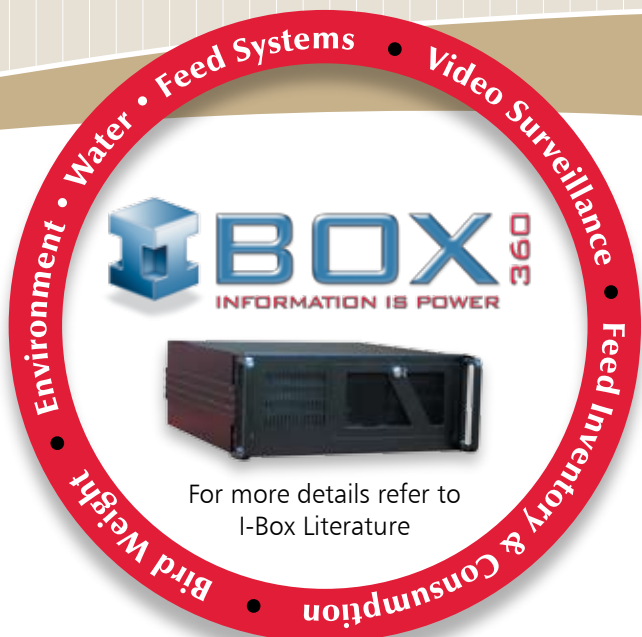
#### WMC-Meter

Water Meter F/Water Monitoring Controls



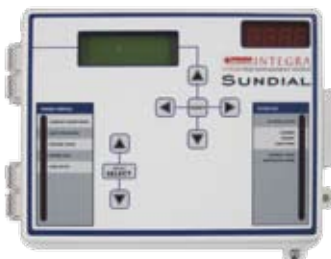
#### Probe-Hum

Humidity Sensor Probe



For more details refer to  
I-Box Literature

## Sundial Light Dimmers



## Programmable Light Control

### Power Module

- Light intensity can be different in zone 1 & 2 or identical.
- Two resistive loads of 3500W each.
- Manual Mode: Can be used as a stand alone unit.
- Auto Mode: Light intensity in the selected zone(s) is automatically adjusted by the master controller. Communication between both controls is established by using a 0-10V signal.
- Pre-programmed curve for incandescent lights.
- Compatible with Expert32ES & Expert64+

- LCD Display
- 10 Light Programs
- 6 Sunrise/ Sunset Cycles
- Light Peaks
- Automatic/Manual Mode
- Computer Control
- Backup Battery
- Password Protection

## Alarm Systems



### AA-800

Agri Alert 800 Alarm System -

- Alarm for 8 Zones
- 8 programmable Numbers
- Maximum Surge Protection

### AA-2400

Agri Alert 2400 Alarm System -

- Expandable 8 to 24 Zones
- Alarm History
- Outdoor Temp. Compensation
- Dial-Out & Monitoring System

### AA-9600

Agri Alert 9600 Alarm System -

- Expandable 8 to 24 Zones
- 8-Zone Extension Box (up to 6)
- Agnet Windows Software
- Sophisticated Lightning Protection

## Alarm Accessories

### AA-24Ext

Agri Alert 2400 Extension Card

- 8 Zone (Up to 2 per AA-2400)

### AA-96Ext

Agri Alert 9600 Extension Card

- 8 Zone (Up to 2 per AA-9600)

### AA-Battery

Agri Alert Rechargeable Battery

- 7A/H (AA-9600 and AA-2400)

### AA-24Power

Agri Alert 800/2400, Power Pack

### AA-96Power

Agri Alert 9600, Power Pack

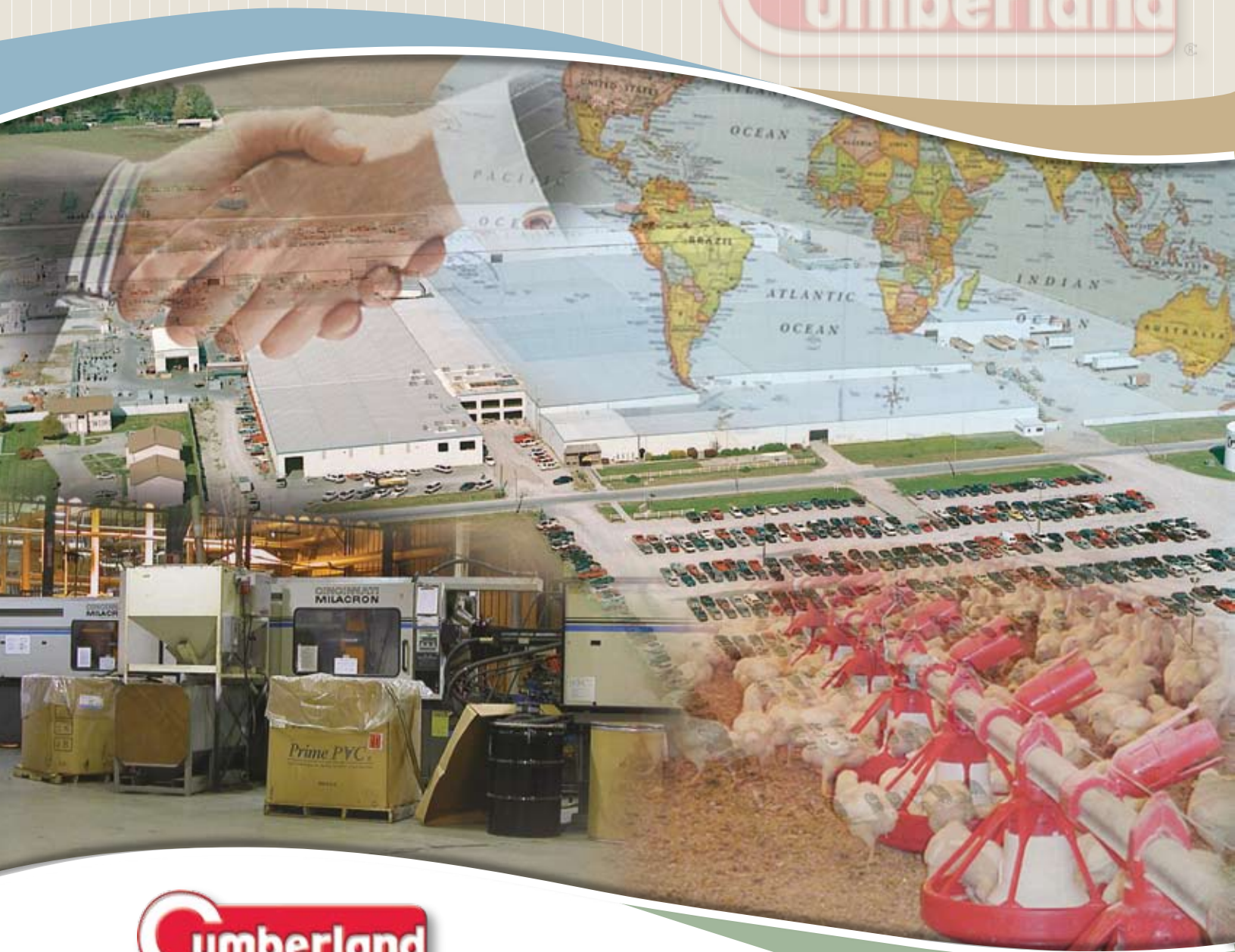
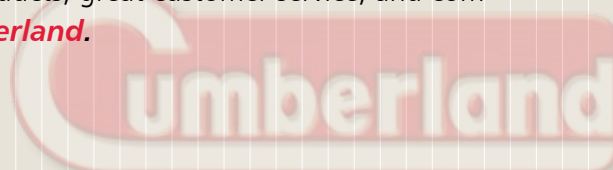
## Feather Weight Bird Scale



- Weigh your birds 24 hours/day
- Give you accurate data
- Help you reduce mortality
- Help you reach your desired TARGET weight
- Featherweight can have up to 4 platforms - 2 in each house. Each platform has an independent reading. Any platform can be assigned to house 1 or house 2.
- Load cells are not on the floor, giving you a precise reading every time.
- Easy to use
- Push-button access to information.
- Gives important daily information:
  - Average weight
  - Number of weight
  - Standard deviation
  - Uniformity and daily gain
- PC Compatible

# Why Choose **Cumberland** for your Poultry Needs?

Cumberland is a Division of The GSI Group and has been in the poultry business for over twenty years. Our corporate facility located in Assumption, IL houses over 1000 employees and has over one million square feet under roof. Also, located within a seventy-five mile radius of our corporate office is another five satellite manufacturing facilities. To support our international sales and needs, we have two manufacturing facilities located in Malaysia and Brazil, with respective offices and warehouses located around the world. You can be sure Cumberland will be here to service your poultry needs **today and tomorrow**. Cumberland's complete line of cutting edge products, great customer service, and commitment to excellence, the choice is simple...**choose Cumberland**.



*Your Source for Innovative Solutions*

a division of  
**THE GSI GROUP**



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