



# COMPLETE BROILER SYSTEMS

PROVEN & DEPENDABLE



- HOUSING
- FEED SYSTEMS
- WATERING
- ENVIRONMENT



# FEED SYSTEMS



## Bulk Feed Tanks

GSI is the world's largest manufacturer of corrugated, galvanized steel storage tanks, hence, 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, GSI has variety of bin sizes to fit your specific needs.

## Bin Roof

Cumberland offers you choices of 30° or 40° bin roof to adapt to any application. Both 30° and 40° roofs feature reinforcing ribs at each roof seam for added strength and rigidity.

## Unloader

Designed to fit below 16" (406mm) plastic and 22" (559 mm) metal boots, Cumberland standard unloaders are available for 2.2" (55mm), 3" (75mm), 3.5" (90mm), and 5" (125mm) Flex-Flo™ or 4" and 6" rigid auger systems. All Cumberland unloaders have a 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. They also feature a heavy duty ball bearing for increased service life and reduced maintenance.



Single Unloader Shown with optional swing away bottom for 100% clean out



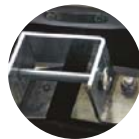


## Lid

- Available for 30° and 40° roof profiles
- Plastic lid that is rugged and durable
- Factory assembled for easy installation
- Simplified clamp-band installation of lid assembly to peak ring
- Reinforced rubber bumper provides additional protection to peak ring
- Internal magnet adds additional force to keep lid closed
- Clamp-band design allows installation in 360° orientation



**Simple Clamp-Band installation with one bolt**



**Magnetic Lock**



**Protective Rubber Bumper**



**Straight Boot**



**30° Drop Boot**



**Twin Boot**

## Heavy Duty Boots

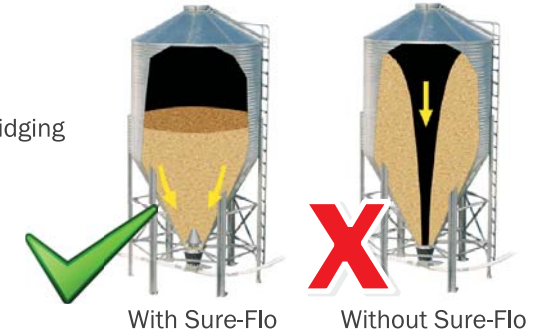
Cumberland's 16" (40.6cm) parabolic boot (available in straight boot, 30° boot, and straight twin boot) is made from the very latest in ultra high impact polypropylene for greater flexibility, dependability and durability. Most of our competitors use the older ABS plastic, which is stiff, brittle and prone to fracture, cracking and tear-out, especially where it's attached to steel. ABS is not able to be UV stabilized, unlike AP's polypropylene resin blend which contains special UV light inhibitors, further enhancing its durability.



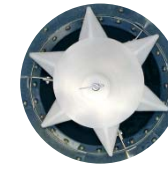
## Sure-Flo

An affordable and simple way to prevent bridging and promote even feed flow in feed bins!

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



The Sure-Flo support bracket bolts to the hopper collar of new or existing feed bins and is quick and simple to install.



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 walled molded cone enhances flow as feed passes over it.

## Bulk Feed Tank Models:

Part Number					Maximum Capacity				Overall Height		
	Model	Diameter Feet	Diameter Meters	Ring	Angle of Hopper	Bushels	Cubic Feet	Cubic Meters	U.S. Tons	Metric Tons	Feet
BFT	6	1.83	1	60°	118	147.60	44.98	2.95	2.67	11.3"	3.43
BFT	6	1.83	2	60°	178	222.21	67.73	4.44	4.03	13'11"	4.25
BFT	6	1.83	3	60°	238	296.82	90.47	5.93	5.38	16'7"	5.06
BFT	6	1.83	4	60°	298	371.43	113.21	7.42	6.74	19'3"	5.87
BFT	7	2.13	1	67°	196	244.96	74.67	4.89	4.44	14'3"	4.35
BFT	7	2.13	2	67°	278	346.51	105.62	6.93	6.29	16'11"	5.16
BFT	7	2.13	3	67°	360	448.06	136.57	8.96	8.13	19'7"	5.97
BFT	7	2.13	4	67°	441	549.61	167.52	10.99	9.97	22'3"	6.78
BFT	7	2.13	5	67°	523	651.16	198.47	13.02	11.82	24'11"	7.60
BFT	7	2.13	6	67°	604	752.71	229.43	15.05	13.66	27'7"	8.41
BFT	9	2.74	1	60°	332	413.81	126.13	8.27	7.51	15'1"	4.59
BFT	9	2.74	2	60°	467	581.68	177.30	11.63	10.56	17'9"	5.41
BFT	9	2.74	3	60°	602	749.55	228.46	14.99	13.60	20'5"	6.24
BFT	9	2.74	4	60°	737	917.42	279.63	18.34	16.65	23'1"	6.74
BFT	9	2.74	5	60°	872	1085.28	330.79	21.70	19.70	25'9"	7.85
BFT	9	2.74	6	60°	1007	1253.15	381.96	25.06	22.75	28'5"	8.66
BFT	12	3.66	2	60°	946	1177.87	359.01	23.55	21.38	21'11"	6.67
BFT	12	3.66	3	60°	1186	1476.30	449.98	29.52	26.80	24'7"	7.49
BFT	12	3.66	4	60°	1426	1774.73	540.94	35.49	32.22	27'3"	8.30
BFT	12	3.66	5	60°	1666	2073.17	631.90	41.46	37.64	29'11"	9.11
BFT	12	3.65	6	60°	1905	2371.60	722.86	47.43	43.05	32'7"	9.93
BFT	15	4.57	2	60°	1658	2064.39	629.23	41.28	37.48	25'10"	7.87
BFT	15	4.57	3	60°	2033	2530.69	771.35	50.61	45.94	28'6"	8.68
BFT	15	4.57	4	60°	2408	2996.99	913.48	59.93	54.41	31'2"	9.50
BFT	15	4.57	5	60°	2783	3463.29	1055.61	69.26	62.84	33'10"	10.31

Capacities for 6'-9' (1.83m-2.75m) diameter tanks are calculated at 40 lbs. per cubic foot (640kg/cubic meter). Capacities for 12' (3.65m) diameter tanks are calculated at 45 lbs. per cubic foot (720kg/cubic meter). Bushel capacities for 6'-9' (1.83m-2.75m) diameter tanks are calculated with no compaction and to full cubic foot (meter) capacities. 6' (1.83m), 7' (2.13m) & 9' (2.75m). Hopper Feed Tanks are designed for the storage of material having a density of no more than 40 lbs. per cubic foot (640kg/cubic meter). 12' (3.65m) Hopper Feed Tanks are designed for the storage of material having a density of no more than 45 lbs. per cubic foot (720kg/cubic meter).

Warning: Cumberland hopper tanks are designed for free-flowing material only. Soybean meal, meat scraps and many other materials are not free-flowing and should not be stored in these tanks. Check with your material manufacturer or dealer to ascertain the flowability of any material you intend to use. When in doubt about a specific material, please consult Cumberland's engineering department for additional information. Some features shown are optional or are available only on certain models. Ask your Cumberland dealer for details.



## Bin Load Cell

- Each load cell has 10000lbs capacity.
- Lightning protection at each load cell.
- Accuracy over the entire linear range.
- Accuracy and durability to withstand lightning, wind and temperature fluctuations.



Target Load Cell Support



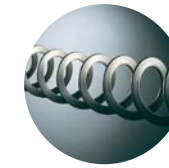
Target Load Cell

## Flex-Flo System

Cumberland offers five Flex-Flo models with capacities ranging from 15 lbs. to 220lbs./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.

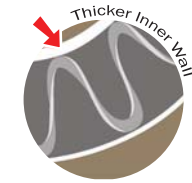
## Special Blend

Cumberland polyvinyl chloride (PVC) tubing is extruded and formed in our own facility, to exacting standards and under our own quality control. Blended PVC allows us to formulate the optimum compound for UV stabilization, strength and wear resistance.



## Quality Auger

Cumberland augers are coiled in-house from high tensile steel. The wire used is flattened prior to hardening, providing for a more consistent, high quality product.



## Around the Bend

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 Models

	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)	0.5	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%



## Extension Hopper

For applications requiring distances greater than the standard length of any given system, extension hoppers are available that can expand the delivery range to practically any distance and can provide access at 90° from the main line.

Direct Drive Unit with Extension Length Transfer Capability



Direct-Drive Unit



Direct-Drive Unit & Straight Transition Boot

## Flow Hammer

Feed bridging has become a common event in the poultry industry as feed rations change due to fluctuating input costs and the use of alternative feed stuffs to lower cost and gain feed efficiency. The “Flow Hammer” is a reliable and affordable solution that easily adapts to most existing feed bins. This patent pending product aids in the prevention of out of feed events in all phases of poultry production.

- Helps minimize feed bridging events to keep feed flowing consistently to animals.
- Can be installed on a full or empty bulk feed tank.
- Low maintenance and simple installatio (no field modifications to the tank are required).
- Control unit has both timed and sensor controlled 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.
- 240 volt power supply required.
- Simple and concise control units, with test mode.
- Control unit can be remotely mounted or tank mounted with optional leg bracket.



Over 500lbs/sec



While high frequency vibration devices are effective in promoting feed flow, their use can result in loosened hardware and metal fatigue potentially resulting in structural failure. The FLOW HAMMER’s low frequency/high impact design promoted feed flow without damaging your feed bin or voiding its warranty.

**Patent Pending**

Designed and manufactured by AP in the USA

# PAN FEEDING

## Hi-Lo Plus



Hi-Lo Plus is the farm-tested result-proven feeding pan, carrying and maintaining all the successful features from years of practice and experience. Putting the birds' comfort and farmers' convenience at first place, the

new Hi-Lo Plus is thoughtfully engineered for assuring both farmers' and birds' satisfaction. The iconic high-low adjustable feature and swing-able design provide birds an ergonomic feeding position throughout the entire life cycle. The unique structure smartly makes assembling the pan easy for every farmer yet satisfies the GSI's highest quality and performance standards.

### Features:

#### External adjustment ring



- easy adjustment
- remain feed hygiene

#### Easy installation



- smart and easy, save labour and time

#### Upgradability



- lower your upgrade cost to maximise your ROI

#### Smooth edge rim design



- reduce waste, bird safe

#### Detachable drop tube



- convenient installation, sturdy connection with tube

#### Swingable



- flexible for birds and convenient for cleaning

## Hi-Lo Classic Pan & Hi-Lo VIII Pan



Two-Stage pan performance inside one complete feeder is the idea behind Cumberland's revolutionary Hi-Lo\* Pan Feeding System. The Hi-Lo pan feeder represents a unique concept in the poultry industry, using one feeder to take

from day old through adult. The first ten days of a broiler's life are critical. The Hi-Lo pan feeder starts on the house floor, presenting a lip height of 2.1" (5.33 cm), the average height of traditional "chick lids". As the birds grow and the feed line is raised, the Hi-Lo expands into a 3.5" (8.89 cm) deep pan. The higher wall and feed saver lip prevent waste from raking and billout.



The **telescoping drop tube** automatically compensates for uneven floor conditions. The drop tube is available in either the standard one piece or optional two piece design.



#### 360° Action

The drop tube and grill combination allow play in 360°, reducing bruising and injury to the birds.



#### Feed depth control

Feed depth control measures directly off the bottom of the pan, assuring all birds a consistent and even supply of fresh feed.



#### Two-stages

Collapsed (2.1") and Expanded (3.5")

## EZ Flood Pan and M Series (7 & 14 spoke design)

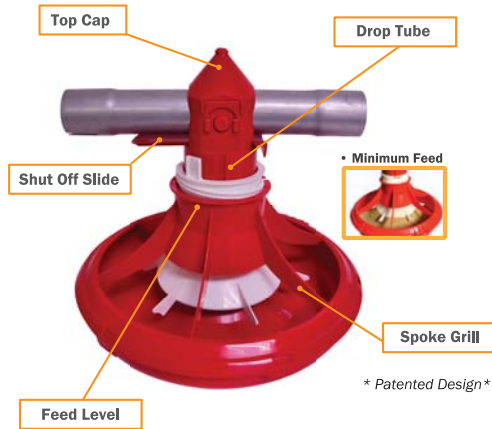
The EZ flood pan, 7 & 14 spoke M Series pan is suited for day old chick through adult. It is made from high quality plastic material with high corrosion resistance and UV resistance capabilities.

### NOTE:





## MY Pan



A comprehensive feeding pan that is easy to install and operate. Designed for day-old chick until harvest. A feeding pan that is **MY Pan**

- Detachable Drop Tube
- 6 Stages Rotating Feed Level
- Flood Window
- Anti Scratch Fin
- Optional Shut Off

\* Patented Design\*

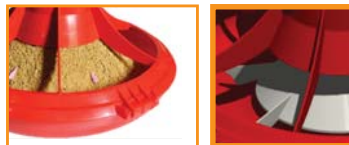
### Non Flood Minimum Feed Position

When the feeder is winched up above the floor, the flood feed window will shut off and minimize the feed to flow through the saving ring.



### Flood Feed Position

The design of High & Low concept window gives maximum flood feed when it is seated on the floor. The shallow pan is designed with a feed-saving lip that prevents waste and allows day old chicks to access the feed easily.



## i-Plus 3 Control Pan



After first 8 days brooding, suspend the feeder line 1 cm every 3 days.

Cumberland offers a variety of control pans for your feeder line. Choose from I-PLUS 3, proximity switch, micro switch, the new plunger style, or Cumberland's exclusive control pan. All control pan models are durably constructed and assure consistent feed regulation.

The i-plus 3 control pan feeding system utilizes infrared technology to sense and detect the level of feed in the control pan for proper and reliable operation. **Infrared technology** requires no moving mechanical mechanism or sensitivity adjustments.



As the i-plus3 Control Pan fills, the infrared beams detect the feed levels.



When the feed level breaks all three of the infrared sensors, the auger will stop automatically.



When the feed drops below the infrared sensors, the auger will re-start automatically after **60 seconds** delay.

## Tubing & 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.



## Poultry Boots

Heavy fabricated, galvanized, single and double outlet boots are available for end or center house feeding applications.

## Hopper Feed Level Switch



Feed Level Switch

Traditional micro switch hopper level controls are available to regulate feed delivery.

# WATERING SYSTEMS

## Watering Line Components



\*Round pipe system for demonstration

- |                         |                                   |                        |
|-------------------------|-----------------------------------|------------------------|
| <b>1. Sight gauge</b>   | <b>5. Nipple</b>                  | <b>9. Regulator</b>    |
| <b>2. End kit</b>       | <b>6. Conduit support pipe</b>    | <b>10. Flush</b>       |
| <b>3. Shocker cable</b> | <b>7. Air vent</b>                | <b>11. Water inlet</b> |
| <b>4. Drinker cup</b>   | <b>8. Regulator mount bracket</b> |                        |

## Water Regulator

Flushing of the Cumberland Watering System requires no EXTRA plumbing and valves. The Cumberland Regulator can be easily removed from the watering line without interfering with the suspension of the watering line. The heavy-duty housing of the Cumberland Water Regulator design will accept higher incoming water pressure and help prevent any leakage where housing is bolted together. Operational square pipe adaptor kit is available for Square Pipe Systems.



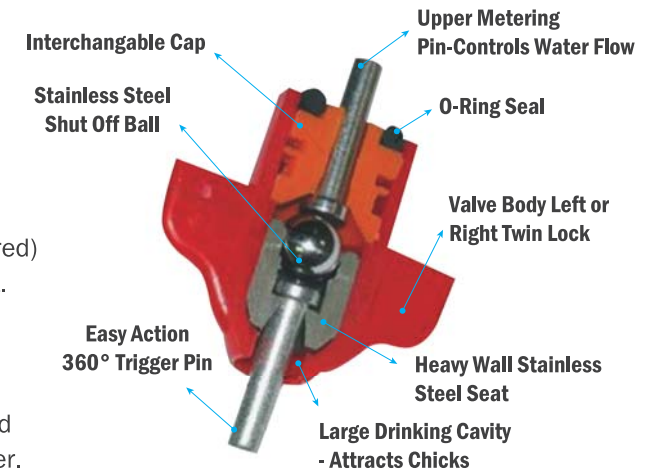
**Convenient Flush**  
GSI unique Water Regulator is designed for greater versatility and ease of use, no by-pass necessary. (Manual version shown on the left)



**Removable End Cap**  
This regulator can be easily removed from the watering line without interfering with the suspension of the watering line. With the unique in-line design, it can be used as a midline regulator by simply removing the end cap.

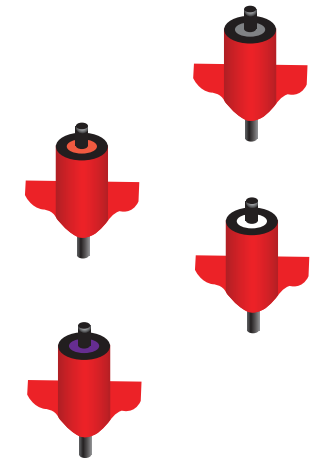
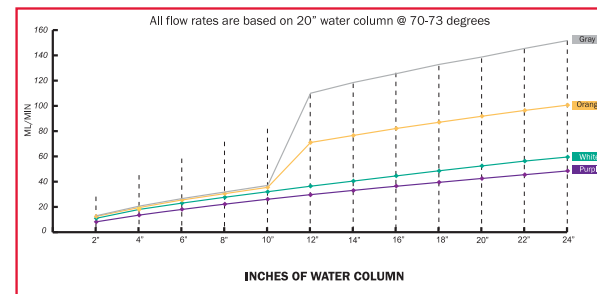
## Twin Lock Nipple Valves

- 6 different styles available to meet all watering needs.
- Only 3 moving parts.
- Extra long life.
- 360° toggle.
- Four times easier action.
- Quick and easy assembly (no wrench required)
- High precision stainless steel ball and seat.
- Lower pin drinking cavity attracts chicks.
- Standard Twin Lock connection interchanges with other brands.
- The double locking feature compresses and seals the o-ring uniformly around the drinker.



### Twin Lock Design | Stainless Nipple Valves

<b>Grey</b>	<b>CW-9580T</b>
<b>Orange</b>	<b>CW-9440T</b>
<b>White</b>	<b>CW-9197T</b>
<b>Purple</b>	<b>CW-10233T</b>



## Self Sealing Cap



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

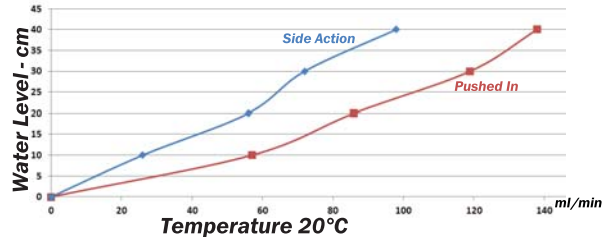
### Water Systems

Cumberland's experience and engineering continue to bring you a complete watering system loaded with innovation and features that promote large healthy birds and dry floors.

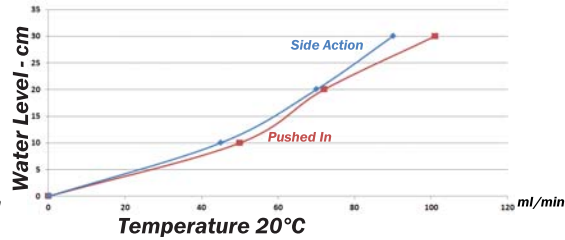




### Nipple drinker N° 10015 Water Flow Rate

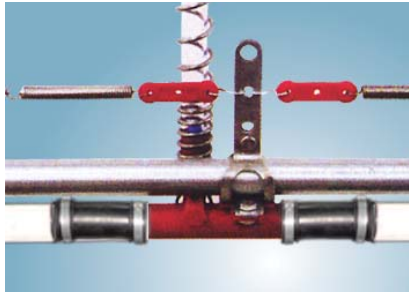


### Nipple drinker Nr. 10013 Water Flow Rate



#### Features:

- Easily triggered at 360°
- Nipple pin Fully stainless steel
- nipple with flow rate of 56-86 ml/min
- Plastic nipple with flow rate of 70-72 ml/min



### Air Vent

- Bleeds air from high spots.
- Offers mid-line sight gauge reading.
- Can be installed anywhere.



### End Kit-Auto Flush

- Extra strong design
- All flexible sight gauge allows easy pressure reading.
- Garden hose
- Require no valve at end kit to flush.



### Regulator Both Round & Square

- Delivers high volume of water at an adjustable pressure.
- Heavy construction.
- Square pipe adaptor available as an accessory.



## Evo Flow Watering System

This system feature an important innovation, using ball valve sitting on toggle pin. It has a 360° side-to-side toggle action Evo-Flow screw in nipple makes drinking four times easier than ever before, the upper metering ball precisely control the flow of water through the valve and the high quality snap on drip cup which keeps the litter dry. Cumberland experience and engineering continue to bring you a complete watering system loaded with innovations and features.

### Evo-Flow Nipple & Drip Cup

Cumberland Square Pipe Watering System equals most European manufacturer on overall performance.

- Cumberland uses a hardened high grade S.S. ball for a tighter seal and accurate flow control.
- Inner components are contained and will not disassemble during shipping.
- Evo-flow screw in nipple use all stainless steel component manufactured in USA.
- No special wrench required for assembly.



# VENTILATION FANS



## Megaflow Galvanized Fans

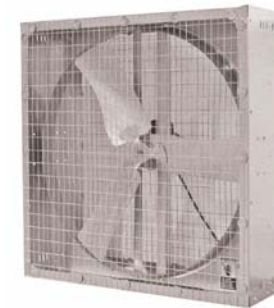
### Lower Cost, Higher Profits

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, go for Cumberland, your ventilation company.



## Slantwall Fans

Cumberland offers 50" and 52" galvanized steel belt 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 high efficiency motor for continuous duty cycles. Galvanized fan propellers are aerodynamically balanced for maximum air flow.



## Box Fans

Cumberland offers 36" and 50" galvanized steel belt 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 high efficiency motor for continuous duty cycles. Galvanized fan propellers are aerodynamically balanced for maximum air flow.



## 51" & 69" Euro Fan

GSI 51" & 69" Euro fan are designed for multiple application and provide excellent air circulation.

- Stainless Steel fan blade for excellent corrosion resistance
- V-belt plastic safety protection cover
- Plastic venturi for better corrosion resistant and easy to clean for optimal hygiene
- Robust and strong internal X-support structure
- Materials resistant against aggressive climates
- Galvanized shutter with Centrifugal Shutter opening system
- Fully concealed and maintenance free bearing

*\* 6 blade cone fan only available in 52" model.*



**3 Blade Cone Fan    6 Blade Cone Fan**

## 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" & 52" models.



## Galvanized Fan Performance Values

Model	Hz	Dia.	Drive	Type	HP	.05 Static Pressure		.10 Static Pressure		Remarks
						CFM	CFM/Watt	CFM	CFM/Watt	
X-36GB	50	36	Belt	Box	0.5	7867	34.4	7260	30.5	Wire Grill
X36GSHB	50	36	Belt	Box/Shutter	0.5	6476	26.9	5812	23	PVC Shutter
X36GCB	50	36	Belt	SW CONE	0.5	7444	33.2	6667	27.8	PVC Shutter
X50GSHB	50	50	Belt	Box/ Shutter	1.5	18820	14.8	17396	13.4	PVC Shutter
X50GCB	50	50	Belt	SW CONE	1.5	21420	19	19680	16.9	PVC Shutter
X52GCB	50	52	Belt	SW CONE	1.5	21522	19.6	19558	17	PVC Shutter
X52GCB	50	52	Belt	SW CONE	1.5	23688	23.1	22181	20.8	Aluminium Shutter

\* All test with PVC shutter. \* All 50Hz fan result are test by GSI Asia fan test chamber. \* All model are available in 60Hz except X50G6B-A

## Euro Fan Performance Values

Model	Hz	Dia.	Drive	Type	HP	.04 Static Pressure		.12 Static Pressure	
						CFM	CFM/Watt	CFM	CFM/Watt
X51G6B-SS	50	51"	Belt	Box	1.5	22,765	13.39	20,949	12.32
X69G6B-SS	50	69"	Belt	Box	2.0	40,909	19.48	36,826	17.54

## Megaflow External Damper Fans

### Lower Cost, Higher Profits

The Mega Flow External Damper Fan (Mega Flow ED) follows in the footsteps of its top of the line Mega Flow predecessors, boasting the industry's highest performance in a galvanized fan. The External Damper line has been completely redesigned and engineered from the ground up to insure optimum levels of both quality as well as performance. Increasing air flow during operation and providing an unsurpassed complete seal when closed.

Our innovative AddAire butterfly style shutter system comes in standard on all Mega flow ED models. Due to the fact that minimal dust and debris is collected by the AddAire Shutter, the efficiency and performance of the unit will remain at their optimum levels for the life of the fan.

- Doors remain fully opened under extreme static pressure due to the patented AddAire wings.
- Magnetic shutter panel ring eliminates movement of shutter when not in use and creates a complete seal.
- Super efficiency totally enclosed air over energy efficient motors.
- Four piece galvanized cone for ease of installation.
- Available with gold label cog v-belt with automatic belt tensioner or powerwrist links belt.
- Pillow block bearings.



## Light Trap

### Features:

- High light reduction
- PVC extrusion profile protects against sunlight and high temperatures
- Resistance to corrosion and deterioration
- Easy installation and maintenance

## 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 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. Aluminum shutters offer great durability in any environment. They have no parts to rust, and are practically maintenance free.

## Butterfly galvanized fan performance values

Model	Dia.	Drive	Phase	0.0 Static Pressure		0.05 Static Pressure		0.10 Static Pressure		0.15 Static Pressure		0.20 Static Pressure		BESS Lab Test #
				CFM	CFM/Watt	CFM	CFM/Watt	CFM	CFM/Watt	CFM	CFM/Watt	CFM	CFM/Watt	
77-0125-IB	52"	Belt	3	30,700	24.9	29,000	21.9	27,300	19.4	25,400	16.9	23,000	14.5	05332-C
77-0128-IB	52"	Belt	3	29,300	25.0	27,500	21.9	25,700	19.3	23,500	16.8	21,100	14.3	05334-C
77-0144-IB	54"	Belt	1	31,800	23.7	30,300	21.2	28,700	19.0	27,000	17.0	23,900	14.0	14157
77-0153-IB	54"	Belt	3	32,000	23.7	30,600	21.4	29,000	19.2	27,200	17.1	25,300	15.2	14165

\*77-0125-IB,77-0144-IB,77-0153-IB were tested in 60Hz  
\*77-0128-IB was tested with 50 Hz

## Mega Flow External Damper Fans

AddAire is a patent pending feature that allows the butterfly style doors to be fully opened and remain fully opened under extreme levels of static pressure.



# ATTIC VENTS & VENT DOORS SYSTEMS

## Have You Ever Consider Using Attic Heat as Green Solar Energy for Brooding ?

Cumberland's Attic Vent System is precision engineered to extract solar heat from the attic space so it can be used as a valuable heat source to reduce BTU's of heat supplied by brooder or heater. This unique and innovative design is cost effective, green energy, durable and easy to install.

### Operation

Vents are operated with a linear actuator or curtain machine and are controlled by your ventilation controller.

### Unique Door Design

Exceptional air mixing due to the curved door profile which provides proper air velocity directing warm air from the attic into the house.

### House Conditions

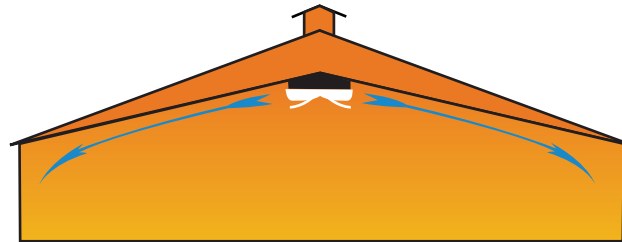
Significant benefits to GSI's Attic Vents are drier litter and lower ammonia concentration levels, thus providing a better in house environment for the bird.

### Fuel Savings

Mixing warm air from the attic with house air during minimum ventilation reduces fuel consumption as compared to using cold air through sidewall inlets. Fuel savings can vary depending on management, house construction and climate.

### Retrofit Friendly

The Attic Vent System is designed to be retrofit friendly in most drop ceiling poultry houses.



### Specifications:

- 3.5" discharge opening equals 2500 CFM @ .10 static pressure.
- Full discharge opening equals 4000 CFM @ .10 static pressure.

## Sidewall 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.



- Plastic curved door directs fresh air into the house along the ceiling toward the peak for gentle air mixing without downdrafts on the birds and is ideal for wider poultry houses.

Part Number	Description	CFM at 0.10SP	Rough Opening
6612-4408CN	Plastic Vent Door	1816	8.75" x 44.50"
6612-4413CN	Plastic Vent Door	2953	13.50" x 44.50"



# TUNNEL DOOR SYSTEMS

## Vertical Sliding Tunnel Door

GSI now offers Vertical Sliding Tunnel Door that is easy to install and made of high density PU/PIR Panel. The new tunnel door not only is energy efficient and airtight seal, but also save space when operates. The panel is strong and easy to clean for long service life.

The height is controlled by the rolling belt that is better in operation compared with pulling cable. Even a single motor can operate up to 3 layers tunnel door ! The tunnel door panel comes in three sizes of 2ft /2.5ft /3ft x 10ft. The sliding of 2-layer panels, vertically can reach up to 6ft opening.

### System Features

- Fully automated
- Space saving
- Airtight
- High R-value of insulation
- Smooth operation
- Low maintenance
- Lightweight panels
- Easy to clean



## Single Door Tunnel Inlet

### Black Lightweight Doors

Lightweight rigid laminate foam panel doors allow for easy installation and can be operated with a curtain machine. Doors are black for dark out conditions. Available in 4', 5', & 6' heights.

### Fully Assembled

Doors come fully assembled and can easily retrofit existing curtain tunnel inlets.

### Tight Seal

A profiled rubber seal keeps form and provides an airtight seal.

### Energy Savings

Lower energy costs! With an insulation value of R-8, tunnel doors are much better insulators versus conventional curtain inlets.



## Two Door Tunnel Inlet

### White Durable PVC Doors

Lightweight rigid PVC doors allow for easy installation and can be operated with a curtain machine.

### H-Channel & C-Channel

PVC H-Channel & C-Channel slide onto the PVC panels for proper seal.

### Tight Seal

Static pressure pulls double stitched nylon curtain up against tunnel door to create an air tight seal.

### Energy Savings

Will lower your energy cost 9 times the insulation value of conventional curtain material.



## Electronic Controller Expert LA



- Ventilation based on static pressure and temperature
- 2 timed curtain output
- Up to 16 relay output
- Feeder, heater runtime and water monitoring are saved in memory for up to 75 days
- Upload and download chip to easily transfer all the settings (up to 15 different programs)
- 2 air inlets, 2 natural curtain outputs and 2 tunnel outputs
- Energy saver features
- Seamless ventilation step between stages
- PC programmable (optional)
- Minimum ventilation curve strategy and status LED
- Stage 1 fan ramping feature
- Up to 8 inside and 2 outside temperature probe
- 4 heating stage with Hi/Low for up to 75 days
- Light program
- Two 0 -10 volts outputs
- 1 cooling stage with programmable cycle timer and relative humidity (RH) override feature when the maximum RH set point is reached.
- Clean mode can be activated for empty rooms
- Alarm monitoring
- 3 controller programs that can be changed manually, by age and by outside temperature
- Copy and paste feature within control
- Memory chip
- Multiple password protected user levels or optional no passwords
- Sensor calibration
- Misting, age and mortality
- Longer histories (timed and dated)
  - Room temperature 60 days
  - Inside probe temperature 10 days
  - Outside temperature 75 days
  - Humidity 75 days
  - Heater run time 75 days
  - Feeder run time 75 days
  - Daily water consumption 75 days

## Bird Scale



- Easy to use
- Push-button access to information
- Gives important daily information: -
  - Average & Number of weight
  - Standard deviation, Uniformity and daily gain
- Weigh your birds 24 hours a day
- 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
- Help you reduce mortality
- Help you reach your desired TARGET

Attractive platform encourage birds to hop onto the scale. The more weight hits each day, the more accurate the house average weight will be. This Broiler Hanging scale kit include the bird platform and the LCT-1 load cell.

- Maximum weight 50kg
- Trade quality Load Cell
- Load cell is located above the platform away from the litter
- Litter and manure build up do not influence weighing accuracy
- No electrical wires under the platform

## TC4-4SD - 4 Steps Controller



- Four ON/OFF climate controller for fan or heat.
- Up to four fan outputs.
- Up to two heat outputs.
- Minimum ventilation ON/OFF timer.
- Automatic temperature reduction.



## TC4-8SD Four on/off stage controller



- 3 digits display with pilot light indication status
- Minimum ventilation cycle
- Temperature curve
- Up to four independent temperature probe inputs
- Computer Compatible
- Overvoltage protection
- Parameter protection(Lock Mode)
- Can be powered with 115/230 Vac (50&60Hz) or 12Vdc

## TC5-8SDA - 8 Steps Controller



- Eight ON/OFF climate controller for fan or heat
- Up to eight fan outputs
- Up to two heat outputs
- Up to one cooling output
- Minimum ventilation ON/OFF timer
- Automatic temperature reduction
- Optional: humidity sensor
- Alarm

## Agri Alert 128 Touch



### **Easy Monitoring & Convenient**

- 7-inch colour touch screen allows all zones to be seen at once
- Internet connectivity provides remote access, eliminating your need to go to the barn every time it notifies you\*
- Email and SMS\* notifications
- Simple icon & symbol to navigate

### **Worry-Free**

- Phone dialer provides dependable delivery of alarm notification even if you don't have internet
- Built-in security makes sure only authorized users can adjust the system

### **Cost Saving**

- 128 zones lets you monitor a large site with a single system\*
- Fully compatible AA9600 replacement

### **Customizable System**

- Modular architecture allows you to design a system that's the right size for your operation

## Alert Alarm III



- It detects high limit and low limit set point temperatures. If any of this do not meet the requirement, it will trigger the alarm signal.
- It can be equip with 2 temperature sensors and 2 auxiliary inputs from other controllers.
- It has built in battery backup that can last up to 2 hours.
- Has its own siren backup.
- Power Supply : 120VAC or 240VAC 50/60 HZ
- Temperature Range : 0 – 55 degree Celsius
- Outputs : 1 @ 12VDC and 1 AMP Inputs
- 2 thermistor temperature another TC4-4SD board to work as slave.

# CONTROLLING SYSTEMS

## EDGE Controller

“Next Generation Controls for IoT Smart farming”



EDGE® is a single platform that is versatile and intuitive allowing it to handle all control applications. The unique design makes EDGE the only controller on the market that can be configured to match your operation's specific requirements. It is also flexible enough to be adapted to new construction or existing system upgrades. Throughout your animals' growth stages, you and EDGE are in control, managing and monitoring ventilation, cooling, heating, lighting, feeding and watering systems.

### Key Features:



Three levels of protection, including triple redundancy and built-in backup mode, which we make it the safest, most reliable controller in the industry.



LED temperature probes, a patent-pending technology that simplifies installation and eliminates the hassle of having to individually identify the location of each probe.



Online remote access via GSIEdge.com, enabling farmers to manage and administer multiple sites and houses from the comfort of their home, house or other off-site location.



Fully dimmable lighting, which works with any lighting technology and controls lighting from low-end output to 100%.



The ability to train employees on one system that will work the same anywhere in the world.

## Environmental Electrical Control Panel



Complete Unit

### Wall mount control system

This control systems range from:

- Ventilation Control Systems
- Lighting Control Systems
- Feeding Control Systems
- Winching Control Systems

### Optional large cabinet for whole house control panel

- Evolution Secondary Sensing Systems
- Lighting Distribution Control Systems
- Feeding Distribution Control Systems
- Ventilation Control Systems
- TC5 - 8SDA
- Lifting eyebolts
- Divide Mounting plate
- Base / plinth, complete 100mm high.



## Relay panel manual motor starters for control systems

This Manual motor starters provide protection against:

- Overload
- Phase failure
- Short circuit
- Undervoltage

Fuseless protection saves costs, space and provides for quick reaction under short circuit condition, switching the motor off within 3 ms. It is therefore an easy to handle, cost effective protection solution.





# LIGHTING SYSTEMS

Environment condition has a major role in poultry industry. A well controlled lighting system will help birds to grow accordingly hence increase productivity.

**Introducing the GSI LED light backed by advanced technology, safe and low energy consumption.**



## DLS6W & DLS9W

- UL water resistant and EnergyStar approved.
- Every unit sold with two gaskets for waterproof/ dustproof performance.
- Blastproof polycarbonate cover.
- 88 lumens per watt, highest lumen per watt bulb available in industry.
- Deep dimming down to 1%.



## DLS12W

- Use with adjustable waterproof socket
- UL approved
- Deep dimming down to 1%
- Incredibly even light distribution and great light output for both floor and cage applications!



Soft elastomer material provides complete dust and waterproof seal for bulb and socket preventing any corrosion.

	DLS6W	DLS9W	DLS12W
Wattage	6 watts	9 watts	12 watts
Equivalent incandescent wattage	75 watts	100 watts	100 watts
Lumen Output 2700k	550	840	1100
Beam Angle	180 Degree	160 Degree	270 Degree
FireProof/water Resistant	yes/yes	yes/yes	yes/yes
Estimated Life	35,000	35,000	25,000
Lens Cover	Polycarbonate	Polycarbonate	Polycarbonate

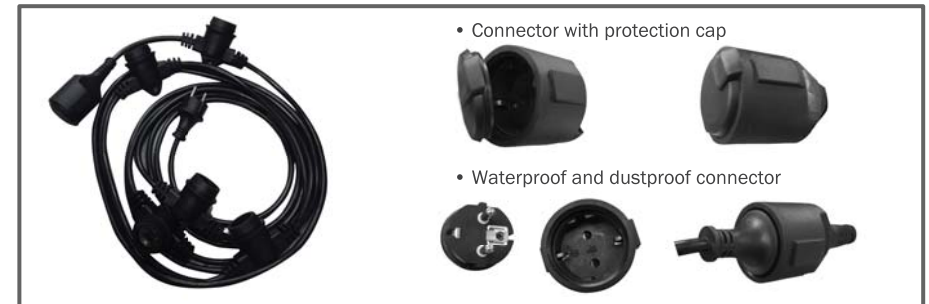


## Socket

**(Able to fit on pitched ceiling and flat ceiling)**

GSI Sockets Offer Solution to Socket Corrosion & Uneven Light Distribution

- Holds socket in place
- Provides complete waterproof seal for junction box connections.



• Connector with protection cap

• Waterproof and dustproof connector

## Sundial 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 main controller. Communication between both controls is established by using a 0-10V signal.
- Pre-programmed curve for incandescent lights.
- Compatible with Expert32ES, Expert64 & VLC-3.

**91% Energy saving !**

1 x 9 watt LED = 1 x 100 watt incandescent bulb!

# FLOOR SYSTEMS

*Built for Durability and Strength  
Create Warm, Dry and Comfortable Environment*

GSI is the pioneer in plastic poultry slats. GSI Poultry Flooring is made from high-impact, virgin polypropylene plastic designed to replace wood or wire slats in poultry housing.

## Performance

- Our Slatted floor reduces foot pad related disease and breast blisters often experienced with wooden slats and will easily outlast them.

## Rot-Proof/Non-Porous

- Our solid plastic construction is rot/corrosion proof, resists microorganisms build-up and sheds waste efficiently.

## High Quality

- Made from high impact polypropylene plastic material for durability & easy cleaning.
- Corrosive free, does not hide contaminants or harbor bacterial growth.
- Available with or without UV protection.

## Interlock Design

- Designed with interlock system for all four sides of the slat.
- Provides secure attachment to the steel support beam.

## No Sharp Edges

- 100% consistence dimensions.
- No sharp edges or corners.

## Strength

- Strong enough to hold 120kg (265lbs) of body weight to stand or walk.

## Optional

- PVC slat support or fiberglass pultrusion cross bar and available for complete slat system package.

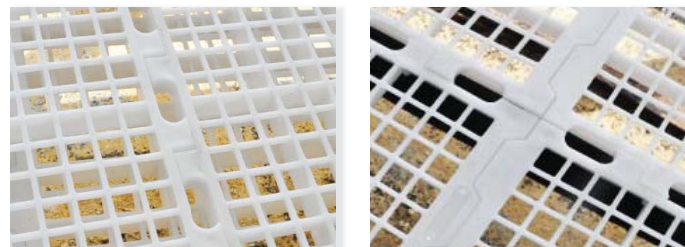
## Original GSI slats contain:



GSI Logo

Manufacturing Date

## Interlock Design



## Models



Comfort Model

Eco Model

## Specifications

Technical Data	Comfort Model (Oval Holes)	Eco Model (Square Holes)
Material	Polypropylene	Polypropylene
Dimensions	1020mm x 515mm	1020mm x 515mm
Hole Dimensions	20mm x 45mm	20mm x 20mm
Actual Weight	2.74kg / 6.04lbs	2.05kg / 4.5 lbs
Color	Natural	Natural





# HEATING SYSTEMS

## Super Saver Heater

GSI **Super-Saver XL** heating line is a line of direct fired heaters that offers **Universal Mount** models which includes variations for both inside suspension hanging and outside mounting.

The inside mount model is a gas circulating heater that is dependable and rugged construction, ideal for closed houses suitable for all ages and classes of poultry.



The inside mount model is a gas circulating heater ideal for a confinement environment.



The outside mount model is a forced air heater complete with all relevant installation hardware.

**Outside mount** is applicable with the outside mounting kit. The outside mount models are forced air heaters that come complete with all relevant brackets and accessories for installation. Its superior combustion is provided by clean, fresh outdoor air which ensures healthy and safe heating for your poultry needs. All models are available with options for **natural gas or liquid propane**.

### Super-Saver XL Specifications

Model#	Maximum Input	Ventilation	Voltage	Amps
HH-SS-225-XL	225,000 BTUH (65.9kWh)	1000 CFM (1699 m <sup>3</sup> /hr)	240 Volts	4,8 Amps



- Direct spark models available in 225,000 BTU.
- High temp aluminized steel burn chamber.
- Side swing door for easy access and maintenance.
- Diagnostic lights for troubleshooting ease.
- Standard adjustable “Y” heat deflector.
- 1/3 HP totally enclosed thermally protected motor with sealed bearings.
- Standard “1/2” gas cock installed at gas valve.
- Back-up safety sail switch.
- High limit safety switch (manual reset).
- On/Off toggle switch.
- Service-Saver enclosed control box.



The **“Service - Saver”** enclosed electrical control unit is sealed from debris such as dust and moisture and is accessible through a side swinging door making the unit easily field serviceable.



A side swinging door design gives **easy access** to internal components like the “Super-Saver” control unit and blower motor, making it one of the the easiest to service heaters on the market.



The **Electronic DSI ignition** is Standard on all Super-Saver heater models. The heating chamber is made of high temp aluminized steel for superior rust protection. The cast iron burner is enamel dipped to eliminate dust adhesion and rust. The air intake surround increases combustion and heat change efficiency.

Super-Saver XL Minimum Clearances	
Ceiling	12" (305mm)
Wall	12" (305mm)
Floor	20" (508mm)



New Style Hanging System



New Style Sloped Top



## Purafire Heater

With one of the lowest carbon monoxide outputs in the industry (CO emissions of 5 parts per million), Cumberland’s PuraFire Heaters are available in C225 (225,000 BTUH). Each heater is LP or natural gas compatible and can be mounted inside or outside any house. These heaters are constructed of tough, rust-resistant galvanized steel for long life and durability.



PuraFire igniters are available with stainless steel casings.



Thermostats, Regulators & Hoses

PuraFire’s bottom-draw intake better controls the air flow into and throughout the entire unit and provides a more efficient mix of air and gas. Cool air, channeled along the inside casing, creates a buffer that keeps the outside cooler (not hot to the touch). This air pattern results in a unique bent flame design, which greatly increases the flame’s surface area and heat chamber efficiency.

- Consistent, clean burning source of warmth with near 100% fuel efficiency.
- Thermostat operated.
- Intelligent trouble-shooting safety features.
- In case of flame failure, an automatic fan shut down stops drafts & gas control lockout prevents gas from escaping.
- 30% Gas saving vs conventional brooder.

- Bottom-draw intake better controls air flow.
- “Bent flame” design greatly increases flame surface area & heat chamber efficiency.
- Outside is not hot to the touch.
- Motor assembly, blower, gas valve, control panel & other components are protected from moisture, dirt & dust.
- Swinging doors on each side allow access to all working parts.
- Even heat distribution

# EVAPORATIVE COOLING SYSTEMS

## RCS GEN 2



GSI RCS Gen 2 is the combination of simplicity and effectiveness evaporative cooling system developed after years of field study and test, ideal for areas with hot and dry climate. RCS Gen 2 is a reliable climate control solution, requiring minimum installation and crafted for simple supervision and maintenance.

GSI only choose the cellulose pads with top quality, made of a special cellulose material that provides a large surface area for high cooling capacity. Chemical impregnation protects the pads from the influence of weather.

### Key Features:



Easy convenient and flexible opening during cleaning and servicing



Top profile with perforated pipe and deflector for an even distribution on water along the pads



Design of Float Valve is to assure the compact design of integrated trough and tank



Simplified system with huge water capacity allows easy installation and maximum cooling effect with minimum hassle. 3.96 gallon per linear foot (49.2 liters per meter)



Practical clip - retainers allow a simple and quick replacement of the pads, saving time and labour



Easy installation and pipe cleaning



Bigger Spray and Pipe Design Better spray effect

## RCS GEN 1



GSI evaporative utilize the natural cooling effect of evaporation to combat seasonal dips in production caused by heat stress. Cumberland offers the Open Top System Komfort Kooler that has been an industry favorite for many years.

### Key Features:

#### Open Top Design



Made of high quality aluminum, 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.

#### Water Troughs



GSI's pre-formed square trough serves as a 3 gallon per lineal foot (37.4 liters per meter) water reservoir. Constricted for 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.

#### Komfort Kooler Jet Pump



- All jet pump kits will be factory assembled for easy field installation
- Our new motor is a 3/4hp 208/230v - 50/60Hz continuous duty CSA approved motor
- This motor will also mount to the wet end of any previous model Jet Pump Kits.



# CURTAIN MACHINES

Protect the health of your investment with a properly controlled curtain system. Cumberland's curtain machines deliver powerful performance and reliable operation with durable components to withstand a rigorous environment.

## PowerTrak Linear Drive & Systems

The superior quality & design of the PowerTrak has produced maximum performance and efficiency. This model is a second generation of super strength power pulley systems introduced by Cumberland. It has been completely redesigned with service in mind and boasts many performance & durability enhancing features while maintaining the strong points of its popular predecessors, Power Curtain & Power Vent.

## PowerTrak Optional Chain & Sprocket

Depend on the superior quality and design of Cumberland power systems for maximum performance and efficiency. A proven standard in vent applications was set with the introduction of the optional Chain and Sprocket PowerTrak which minimizes alignment problems and cable breakage in vent applications.

- Upper and lower auxiliary contacts for enhanced Evolution features.
- 15% increase in load block support surface for greater life.
- Convenient hinged springlock door that is easily removed.
- Channel lock "trak-drive" system captures load block.
- Built in head bracket with needle bearing pulleys.
- Easy adjust springcam limit switch system.
- Modular construction for ease of service.
- Greater protection from the elements.
- 5,000 pound capacity.



### Pully Assembly

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



### Load Block

Light but hard aluminium load block.



### Spider Coupling Lovejoy Coupling

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



Inner View

### High Limit Adjustment Collar

Adjustable Collar to control the travelled distance.



### Lower Limit Adjustment Collar

Adjustable Collar to control the travelled distance.



### SpringCam Limit Switch Actuator

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

### Actual View



To eliminate downtime, GSI stocks a complete line of parts and components for the PowerTrak system.

## Emergency Curtain Drop Curt-O-Matic II & III



- 5 minutes time delay.
- Simple 3-wire hookup.
- Available in 240 volt models.
- 5 years product defect warranty.
- Curtain chain kit.
- Easy installation.
- Curt-O-Matic III can be hooked up to your alarm system's electronic audible, to signal alarm if arm on system should drop.

# PREFABRICATED HOUSING

## **Our new 60-Series building can double net payback to growers when compared to conventional width buildings.**

The 100% steel construction Generation Structures definitely state-of-the-art of live production buildings. No plastic ceilings or wood walls. The structure's negative pressure ventilation is unmatched with its durable operating design features. Winter weather heat loss is minimized, optional, bi-flow selectable heat exchanger baffle system. When compared to other buildings on the market, this Generation Structures' attention to detail in building design, use of premium materials, day-to-day operating efficiency and its anticipated 35 year useful life, no greater value can be found anywhere. We are confident that once you have had an opportunity to learn more about this building, you'll agree that Generation Structures is the industry's choice in building design and production.

### **Features & Benefits:**

- Fiberglass wool insulation with R12 to R29 insulation value to save energy cost.
- GSI Quality assurance – each construction material is inspected & tested thoroughly for accuracy.
- Professionally engineered single storey, double storey & elevated slat flooring's buildings.
- Code Acceptance: Steel framing is backed by national building codes.
- Single span structure from 40ft(12m) up to 80ft(24m) width & wider!
- Made of High Tensile Structural Steel with heavy Zinc Coating for structure's rigidity & longevity.
- Flexible: Steel can be designed for longer spans that create more open floor plans & fewer load-bearing walls.
- Safety: The strength of steel offers greater protection to you & your family during inclement weather.
- Pest-Proof & Fire Proof.
- Natural Attic ventilation design for heat & moisture exhaust.
- Use 25% less energy in ventilation fans vs conventional house.
- Use 30% less energy in heating & brooding.
- Fully airtight construction on ceiling & side wall.
- Gatorshield galvanized tubing frame.
- Efficient climate control engineering.
- 50-70% reduction on Insurance claims.
- Uncompromising design standards.
- Endwall & Sidewall are "C" channel framing kits.
- Engineered Structural Tubing Truss.
- Pre-Engineered 100% Galvanized steel construction.
- Pre-engineered for components installation.
- Roll-Seal doors (Manual or automated control options).
- Thicker 4" walls. (Industry standard walls are only 3 1/2").









**AGCO GSI (Malaysia) Sdn.Bhd.** (392746-V)

Plot 218, Jalan Perindustrian Bukit Minyak 6, Kawasan Perindustrian  
Bukit Minyak, 14100 Simpang Ampat, Penang, Malaysia.

Hotline : +604 505 7598

Fax : +604 505 9879

Email : [enquiry@gsiasia.com](mailto:enquiry@gsiasia.com)

Website : [www.gsiasia.net](http://www.gsiasia.net)

Printed in Malaysia © 2017 All rights reserved. GSI reserves the right to change designs and specifications without notice.



Cumberland is a part of GSI, a worldwide Brand of AGCO