

# AVI-FOAMGUARD



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## MEETING THE CHALLENGE

*AVI-FOAMGUARD* is the first system designed for quick, safe depopulation of infected poultry while minimizing human contact with diseased animals.

If avian influenza strikes a commercial broiler or turkey farm in the U.S., the industry and agriculture departments must react immediately to prevent spread of the disease.

Commercial producers face an enormous challenge in safely and quickly destroying infected broiler populations. Guidelines are still being developed, but some regions require

depopulation of every facility in a two-mile radius of an infection—which could mean up to 100 houses and over 2.5 million birds.\*

No method has been proven to achieve this required depopulation quickly and effectively, with little or no risk to human operators—until now.

## QUICK, SAFE DEPOPULATION WITH ONE OPERATOR

*AVI-FOAMGUARD* depopulates an average poultry house in fewer than 30 minutes—with just one operator and a driver.

Researchers, industry, and veterinarians now know that foam with a certain bubble size is a practical, effective, and humane method for effecting mass depopulation. Foam with the right bubble size creates an occlusion in the trachea of birds, causing hypoxia in as few as two minutes.

But delivering foam into a broiler house—with the right bubble size and at the right volume to achieve effectiveness—has been a hurdle.

Kifco's *AVI-FOAMGUARD* overcomes this hurdle. Combining Kifco's proprietary self-guided WaterReel® technology, a gasoline-pow-

ered booster pump, a chemical injection pump, and one or more industry-standard foam generators mounted on a specially adapted trolley, the equipment delivers a water-based, medium-expansion foam with small, dense bubbles.

Using proven technology, U.L.-listed non-toxic foam, and fool-proof controls, Kifco's *AVI-FOAMGUARD* allows crews to depopulate a large commercial broiler house in less than an hour. Local producers, state agriculture departments, and emergency management personnel can quickly learn to operate the equipment and can rely on its ease of use.

## SAFE. SIMPLE. 100% EFFECTIVE.

Field-tested and developed with input from the poultry industry, the *AVI-FOAMGUARD* has been proven 100% effective in depopulating poultry houses.

Developed with the advice and review of commercial producers, poultry researchers, veterinary professionals and agricultural agencies including USDA, Kifco's *AVI-FOAMGUARD* offers a proven solution to the challenge of emergency mass depopulation.

Specially designed to reduce the number of personnel who must enter a facility, the *AVI-FOAMGUARD* greatly reduces biosecurity risk over traditional methods. From set-up to clean-up, Kifco's *AVI-FOAMGUARD* requires only a two-person crew to operate, represent-

ing an enormous savings in cost and time. Even better, only one operator needs to enter a facility.

Dispensing a large volume of foam in a short period, the *AVI-FOAMGUARD* gives commercial producers a simple method that quickly suppresses infected poultry without unduly stressing poultry or personnel, substantially reduces labor costs and time, and may even enhance the composting process necessary to deactivate viruses.

\* Information provided by the Delmarva Poultry Industry (DPI).



## OTHER METHODS AREN'T PRACTICAL

**Whole-house depopulation is a monumental task.**

Current methods—including whole-house CO<sup>2</sup> gas poly-tents or live-haul cage depopulation—waste valuable time. They expose large crews to unnecessary risk of exposure. Other methods such as cervical dislocation are stressful to both poultry and personnel.

Using any of these methods in the event of an outbreak would require a significant crew and would result in substantial costs. Moreover, such methods continually expose crews to sick or virus-infected animals.

### POLY-TENT METHOD

- **Unsafe** – CO<sup>2</sup> gas is harmful to humans even in small doses, and personnel are exposed to sick animals for lengthy periods.
- **Labor-Intensive** – Requires as many as 25 people, all wearing protective clothing, masks, and goggles.
- **Costly** – Due to extensive use of CO<sup>2</sup> and the need for multiple personnel at each facility.
- **Hazardous** – Especially dangerous in compromised structures or bad weather, and risky for personnel overheating in chem-suits.
- **Wasteful** – Polyethylene sheeting must be destroyed after each use, adding time and cost and creating an environmental hazard.

### LIVE-CAGE METHOD

- **Dangerous** – Brings sick or infected animals outside the poultry house, increasing risks of a wider infection.
- **Unsafe** – Requires use of harmful CO<sup>2</sup> gas, and personnel must handle sick animals for hours in stressful conditions.
- **Labor-Intensive** – Requires between 8 and 16 crew members at each house.
- **Expensive** – Adds costs for equipment, hauling, and personnel.
- **Complicated** – Carcasses must be returned to house for composting or hauled to landfills that charge to take them.

*“I’m favorably impressed with the capabilities of the AVI-FOAMGUARD. Fieldale Farms is buying the equipment for various needs, including whole-house depopulation in the event of infection, for house cleaning, and for disinfection.”*

**Steve Collier**  
Vice President of Operations  
Fieldale Farms

*“Foam is a proven method for depopulation. The AVI-FOAMGUARD system effectively and easily achieves whole-house depopulation without undue stress to poultry—and with minimal exposure of its single operator.”*

**Bud Malone**  
Poultry Extension Specialist  
University of Delaware

*In 30 minutes, AVI-FOAMGUARD covers an average broiler house to an average height of over three feet—more than adequate to ensure 100% effectiveness.*



# FOAM DISEASE CONTROL SYSTEM

## FEATURES & BENEFITS

Kifco's *AVI-FOAMGUARD* has unique advantages over alternative methods for achieving mass depopulation.

- **UNRIVALED SAFETY** – Two-man crew sharply reduces personnel costs, and exposure of crew to affected poultry is minimal—requiring only one operator to enter the house. There's no need to herd or handle birds, fence them, or use multiple personnel.
- **PROVEN EFFECTIVENESS** – Shown 100% effective at depopulating affected poultry in less than three minutes on average, in tests viewed by poultry producers, researchers, veterinarians, and state and federal agriculture departments.
- **SPEED** – In optimal conditions, deploys foam in a typical house in less than 20 minutes, cutting total time per facility. Start-to-finish time—from set-up to wash-down—is less than an hour per house.
- **HIGH CAPACITY** – Large model pumps as much as 4,500 cubic feet of foam a minute—rapidly filling a facility to a height of three feet or higher. Smaller model pumps up to 2,250 cubic feet per minute.
- **HUMANE METHOD** – Safer, faster system allows more humane depopulation than other methods, without unduly stressing animals or personnel.
- **SPECIALIZED APPLICATION** – Develops foam with small, dense bubbles for greater effectiveness. Foam collapses quickly after application, leaving little residue and allowing quicker windrowing and composting on farms that adopt this method.
- **SIMPLICITY** – Simply tow, foam, and go. Coupled to a water-source, the *AVI-FOAMGUARD* dispenses an enormous volume of foam in a short period. Equipment is self-retracting and shuts off automatically.
- **TRANSPORTABLE** – Self-contained and easily transported by trailer, the *AVI-FOAMGUARD* comes completely assembled. To deploy rapidly, users simply obtain high expansion foam.
- **VERSATILITY** – The *AVI-FOAMGUARD* works equally well with varied water sources, including tankers and fire trucks, pools, and on-farm pumps or irrigation systems. With its high dwell-time, chemical foam can also convey disinfectant and insecticide for broiler house cleaning and maintenance.<sup>1</sup>
- **EFFICIENCY** – *AVI-FOAMGUARD* generates foam efficiently, using up to 50% less water compared to other foam delivery methods.

## SPECIFICATIONS

MODEL	AVI-FOAMGUARD AV-E200	AVI-FOAMGUARD AV-ST3
FOAMING PLATFORM	3-Wheeled KIFCO Hydro-Trolley w/ swivel-mounted foam generators and Poul-Protex wheelguards	3-Wheeled KIFCO Hydro-Trolley w/ swivel-mounted foam generators and Poul-Protex wheelguards
AUTO-RETRACTION	KIFCO E200 Water-Reel <sup>®</sup> w/ 4HP gasoline retraction engine	KIFCO ST3-AM Water-Reel <sup>®</sup> w/ 8HP gasoline retraction engine
FOAM DISPENSER <sup>2</sup>	One (1) foam generator w/ KIFCO "FlexiMesh" screen	Two (2) foam generators w/ KIFCO "FlexiMesh" screens
FOAM OUTPUT	Med-volume (up to 2,250 cu. ft.)	High-volume (up to 4,500 cu. ft.)
WATER VOLUME	85 gpm	170 gpm
HOSE LENGTH	2" x 580' KIFCO polyethylene hard hose	3" x 640' KIFCO polyethylene hard hose
WATER PUMP	31HP gasoline booster pump w/ exhaust primer & 12v battery	31HP gasoline booster pump w/ exhaust primer & 12v battery
FUEL TANK	6 gal.	6 gal.
CHEMICAL INJECTION	12v chemical injection pump & FloJect assembly	12v chemical injection pump & FloJect assembly
TRAILER	16' landscape-style, w/ 2" ball & DOT-approved lighting	20' landscape-style, w/ 2-5/16" ball & DOT-approved lighting
ADAPTER	2.5" standard fire-thread	2.5" standard fire-thread
SUCTION HOSE	3" x 30' layflat hose	3" x 30' layflat hose

<sup>1</sup>Both *AVI-FOAMGUARD* models can accommodate an optional second injection pump for whole-house disinfection. Chemicals are purchased separately.

<sup>2</sup>Each model can be modified to accept one or more Spumifer AG-1 foam nozzles rated at 95 – 120 gpm of water flow.



## HOW IT WORKS

Kifco has manufactured high-volume water delivery systems and agricultural equipment for over 40 years. With a reputation for quality and reliability, our products are safe and simple to use.

Operating the *AVI-FOAMGUARD* requires only a two-person crew who follow the simple procedures below.



1

### Position *AVI-FOAMGUARD*

Back trailer to near door of broiler house. Unhitch trailer. Mount winch (optional) on truck tow-hitch.



2

### Tow Equipment Into House

Move truck to far end of broiler house. Walk tow-cable through house, then hook it to foam trolley. Engage winch, towing trolley through facility.



3

### Connect Water Supply

Connect water supply using standard fire-hose couplings. (*AVI-FOAMGUARD* can pull water from fire trucks and tankers, municipal water-mains, or on-farm pumps and pools.)



4

### Switch On Engine & Pump

Start retraction engine and booster pump. Switch on and prime injection pump(s). Open flow valve to start foam flow.



5

### Foam Facility

As foam fills facility, engage Water-Reel's retraction engine. Swivel foam generators to direct foam flow.



6

### Retraction & Clean-Up

Continue retracting foamer through house, up ramp, and onto trailer. Flow stops automatically on full rewind. High-pressure spray washes litter from hose. Wash foam cart, wheels, and trailer gate with pressure-washer.<sup>3</sup>

<sup>3</sup>Pressure-washer purchased separately.

**FAST. HUMANE. 100% EFFECTIVE.**



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