

# Behind THE SCENES

## Partnerships expand the use of controlled atmosphere stunning

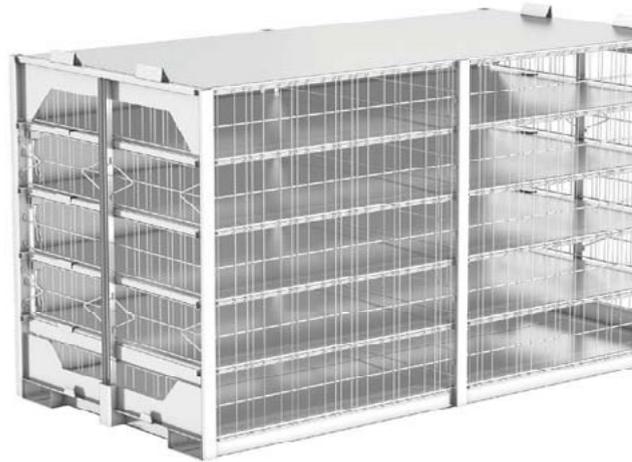
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Layers in the poultry processing industry understand the benefits of animal welfare on several levels. From ethics to increasing the bottom line, innovations concerning the health and wellness of birds means better products for consumers, profits for producers and a more pleasant existence for animals.

Temple Grandin, Ph.D., and professor of Animal Sciences at Colorado State Univ., updated a paper in 2013 evaluating humane handling and animal welfare via controlled atmosphere stunning (CAS). While listing the pros and cons of CAS on chickens and other poultry, Grandin writes, “It is my opinion that overall bird welfare would be improved with gas stunning even if there is some discomfort before the bird loses consciousness.”

CAS represents the latest application in getting birds from the farm to the shackle with the least possible amount of stress and trauma. Recently Midway Machine Technologies, Zeeland, Michigan, and Nacogdoches, Texas-

**With the Humane-Aire/  
Bright Coop controlled  
atmosphere stunning (CAS)  
system, birds are stunned  
in the transport cages  
without being handled.**



based Bright Coop Inc., worked together with Miller Poultry in Orland, Indiana, to install a Bright Coop/Humane-Aire CAS system at Miller Poultry’s processing plant. The system was developed based on Grandin’s paper.

### LOAD UP

The first step in humanely handling chickens starts with transferring birds from the floor of the house to cages for transportation. Eliminating the “handling” of birds by humans as much as possible is the best way to ensure the lowest amount of stress possible. Terry Geertman, co-owner, Midway Machine Technologies, says partnering with Bright Coop

Bryan Chris, Humane-Aire



**Bright Coop cages loaded with birds move through the Humane-Aire CAS chambers for stunning.**

was a natural fit due to Bright Coop’s years in the industry.

“Bright Coop has a wealth of knowledge and experience in the live handling of the birds from the farm to the shackle line, which is important to the success of the system,” Geertman says. “They were involved with each step of the design process, loading of the birds, to the transportation, and handling the birds at the processing plant. The equipment used to handle the cages and birds was fully redesigned from a manual operation to a fully automated system.”

Grandin commended Bright Coop on its efforts in a Nov. 4, 2017, letter to engineering manager, Francois Roux, after seeing a system in the field. The letter stated, “The installation at the processing plant I visited in the United States was excellent. Moving the entire Bright Coop through the controlled atmosphere stunning eliminates stressful shackling of live birds. The system was well designed and will be easy to maintain.”

Midway Machine provided its Humane-Aire technology developed and proven in the turkey industry and combined it with Bright Coop’s many years of proven chicken handling and transportation technology.

Bright Coop started providing live poultry handling equipment in 1951. Over the years, Bright has continued to innovate in providing effective equipment that transports birds from the farm to the shackle in the most humane and cost-effective way possible.

“The uniqueness of the Bright Coop/ Humane-Aire CAS System for chickens, is that it utilizes equipment that customers are already familiar with, but has new design features and improvements that produce a safe, consistent and genuinely humane handling of birds (no live bird handling) into the plant,” says Clem Russell, president and CEO of Bright Coop Inc.

The traditional method of getting birds from the house floor into the cage to be transported, also known as chicken catching, involves an intense amount of human labor. Bright Coop offers an alternative that furthers humane handling from beginning to end. The Apollo Generation 2 harvesting machine gently lifts birds from the house floor to the cages. Rough terrain forklifts can then load and offload cages to and from the recently designed Viking curtain side transport trailers.

Bright Coop Inc. subsidiary, Viking Specialized Trailers LLC, manufactures the Viking Poultry Curtain Sided Trailer to provide a significantly more comfortable ride to the plant, another method of furthering the humane handling goal.

“In hot weather environments, a Cline Coop Fan Trailer can be provided by Bright Coop Inc. that allows dampened cooled air to evenly flow through the entire load while awaiting the load to be completed, secured and readied for transport,” Russell says.

Bright’s cage and unloading systems maintain a certain standard and a basic componentry for the industry, but equipment can be arranged or modified to fit the layout of a specific plant. Several factors such as line speed, bird size, access and others determine the final design of the system. All things considered, systems are ultimately custom designed to suit particular plant requirements.

“The equipment layout is larger than the standard manual Bright Coop unloader, but



**CAS reduces bloodspotting significantly and provides greater yield through less trimming.**

the flexibility of the equipment will allow us to setup different layouts to fit the requirements of the customer,” according to Geertman.

Bright Coop’s long history in poultry handling and transportation has seen its equipment become the standard in a majority of US plants. Initial conversations regarding layout at particular locations are often assisted by drawings and records that Bright has on file, and with any new installation of live animal technology, the support of consultants and technicians is a critical part of the investment.

### **WORKING TOGETHER**

A processor’s decision to utilize CAS often comes because of serious thought given the cost and preparation involved with installing a new system. Miller Poultry’s dedication to producing chicken products for a customer base that finds certain attributes important, provided the basis for the company shifting to the new system.

“Miller Poultry strives to supply customers with superior quality fresh chicken products with attributes that are important to the antibiotic free and organic customer base,” says Kevin Diehl, director of operations at Miller Poultry. “CAS stunning fits well with our current list of attributes which includes Global Animal Partnership (GAP) certification, antibiotic free (ABF), organic, non-GMO project verified and air chilled to name a few.”

Miller Poultry’s dedication to GAP certification, antibiotic free, organic, non-GMO project verified, etc., provided Bright Coop and Midway Machine Technologies with a broad spectrum of products. This allowed the three companies to fine tune the system throughout the process.

“Miller is very unique because they have many different types of birds (ABF, organic...) and bird sizes. So, it was important to make sure we could handle all the variations with CAS,” Geertman says. “The results were better than we expected, with all the varieties and sizes working well in the system. This gives us an advantage knowing the system has the flexibility to work well with other producers and processors. The owner and staff at Miller Poultry are one of the finest in the industry. They have depth and ability to solve problems and be successful in any situation.”

The collaboration between Miller Poultry, Midway Machine Technologies and Bright Coop proved valuable to each company involved. By working together throughout the process, each company played a role in developing the system with greater detail devoted to certain aspects wanted relative to specific processing methods and standards concerning humane handling.

“For the development, Miller provided the information and results needed to be successful,” Geertman says. “Proper animal handling methods are critical in this process and a small problem can be the difference

between success and failure. Miller has extensive experience in animal welfare practices and does the audits to back it up.”

Depending on the individual situation, installation of CAS systems can take from six months to one year from the time of serious commitment to operation. Plants need to prepare for the new system and engineering support is provided to be successful.

“We remodeled with significant upgrades to an existing live receiving building to allow adequate space for the system in a totally enclosed, climate controlled building,” Diehl explains. “We also made significant changes to the shackling area focusing on animal welfare and employee comfort.”

## **BENEFITS AND ROI**

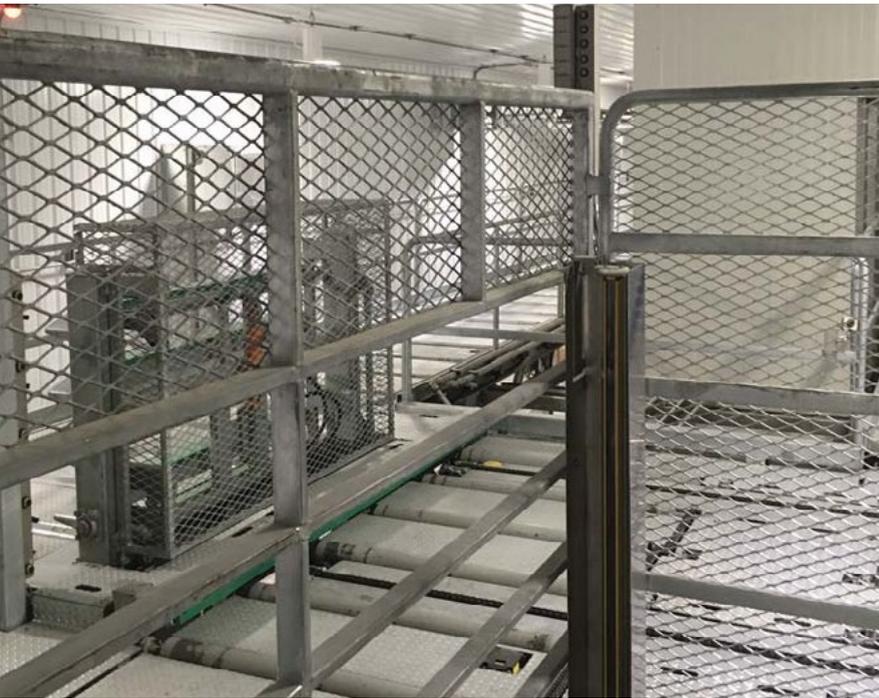
The benefits of CAS for Miller Poultry spread across the operation from animal welfare to the employees and in product quality. Whether it comes directly in the form of an increase in the bottom line, or happier employees and chickens, CAS fits with Miller Poultry’s overall business goals and mission.

“The Bright/Humane-Aire stunning system allows the chickens to be rendered unconscious in the module in which they are transported from the farm to the processing plant,” Diehl says. “The chickens are then removed from the module and shackled while being unconscious unlike conventional stunning practices. This greatly improves the environment of the shackling area for employees as the room no longer needs to be darkened and the chickens are not resisting being picked up and shackled causing less dust in the area.”

By moving chickens through the CAS process while still in cages, shackling live birds is eliminated. This lowers the stress

*“CAS stunning allows for a more consistent bleed out with less product damage including broken bones and blood spots in the muscle which decreases the amount of trimming needed.” – KEVIN DIEHL*

## TOOLS OF THE TRADE



**The cage inspection area allows stunned birds left in the cage after unloading to be removed manually.**

on birds significantly and increases yields.

“We feel we’ve been very successful in enhancing and improving animal welfare,”

Geertman says. However, some processors’ animal welfare practices are respectable and pass audits with traditional handling. For these companies the investment in CAS may not be warranted, but for the bottom line, a greater yield means more high-quality, sellable product.

Geertman says with chicken processing in particular, the greatest portion of the return on investment comes in the larger yields of quality meat. Diehl says, “CAS stunning allows for a more consistent bleed out with less product damage including broken bones and blood spots in the muscle which decreases the amount of trimming needed, ultimately increasing yield and available grade A whole chickens for consumption.”

This is where chicken processors see the greatest advantage regarding the investment in a CAS system.

“At the end of the day our goal is to make the system from farm to shackle sustainable with an ROI, to make it easier for the processors to invest,” Geertman says. 