

Paxton Blower Improves Meat Crate Drying Process



Better quality of drying ensures label adhesion and sanitation.

Green Bay, Wisconsin-based Tosca Ltd. manages returnable container systems for clients in the dairy, fresh produce, beer, meat and poultry industries. Tosca provides full service to its many clients, renting all types of food and beverage containers as well as handling the repair, cleaning, tracking, logistics and management of the used containers. Tosca's highly efficient container management system requires sturdy, reliable equipment to ensure both efficiency and sanitation of large numbers of containers.

Recently, Tosca approached one of Paxton Products' regional distributors, JB Systems, for assistance in improving the drying system for its meat crates. After meat is unloaded at retail facilities, the crates in which the meat was delivered return to a Tosca facility for sanitation. The crates move through an industrial washer to remove debris and then to sanitize. After sanitizing, the crates then must be thoroughly dried—an important step since dryness both prevents mold and mildew and enables the crates to receive labels which identify the meat for delivery purposes. Tosca contacted Paxton's distributor because their existing drying system was no longer producing the necessary levels of dryness. With the old, inadequate drying system, Tosca faced either delays in the container supply management cycle in order to re-dry the crates or the possibility of rejected crates due to labels not adhering.

Tosca's original drying system utilized fourteen 7.5 hp squirrel cage blowers which delivered a total of 105hp. JB Systems recognized that Tosca needed to add the superior drying power of centrifugal rather than squirrel cage blowers. The experts at JB Systems installed two Paxton centrifugal 15hp blowers along with 2 spyder manifolds and a custom manifold with flexible nozzles to target the area where the label is being applied. The blowers run at a system pressure of 80"W/C enabling the air knives to produce sufficient power and high air velocity (33,768 FPM) to effectively shear water off the crate."

Jeem Newland, Paxton Engineer, consulted with Tosca personnel and JB Systems to customize the new drying system to Tosca's needs. Newland states, "We knew we had to target all sides of the crates to ensure complete dryness:



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- A stainless steel air knife dries the bottom of the crates before the crate enters the drying chamber.
- The spyder manifolds were installed on the sides of the conveyor to remove water from the sides and inside rib of the crates.
- A final drying step used the second 15 hp Paxton blower to power the custom-designed nozzle manifolds installed inside the knockdown machine. The manifolds dry the folded down front section of the crate. This was the only position where the system could be installed to target this area before the sides are then folded down on top of the front section.



As a result of the more efficient drying power delivered by the Paxton centrifugal blower plus the highly targeted drying abilities of the Paxton air delivery devices, Tosca's meat crates emerge from the dryer ready to receive labeling, then move into the next phase of Tosca's container management cycle. The installation of the Paxton centrifugal blower gave Tosca a higher quality of drying, resulting in improved plant efficiency and eliminating the possibility of crates being rejected due to non-adhering labels.

Tosca's new Paxton drying system out-performs the previous system because Paxton uses slightly heated air (15-20 deg F above ambient air) along with the higher air velocity and more targeted air delivery. Tosca Corporate Engineer Dan Lardinois found the Paxton system a great improvement, saying "The Paxton blowers not only outperform those previous installed, but they are also much quieter. And Paxton service was excellent throughout the entire process."



For more information on AT Series Centrifugal Blowers, [click here](#) or scan this QR code with your smart phone.



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