

A PACKAGING PERSPECTIVE IN FROZEN FOODS

FIVE THINGS TO CONSIDER WHEN CHOOSING EQUIPMENT FOR YOUR FROZEN FOODS PACKAGING LINE

By Triangle Package Machinery Company

When you're packaging frozen foods, selecting the right equipment to package your product requires a lot of thought and research. You may have different considerations than companies that package other types of products, such as rice or cereal. Frozen food packagers are typically more concerned about sanitation, durability and reducing product waste.

Over the years, Triangle Package Machinery has installed more than 500 machines in various frozen food markets. Our rugged, durable equipment thrives in harsh environments. Here are five considerations to keep in mind when evaluating solutions for your frozen foods packaging line:

1. Improved sanitation. Look for machines that are designed and constructed to withstand the rigors of the sanitation process, as well as design elements that allow for better accessibility. What level of sanitation does your cleaning process require? Are your machines wiped down each day or do you use a caustic washdown process? To address the needs of our frozen foods customers, Triangle's vertical form fill seal (vffs) baggers are available in three levels of sanitation, including stainless steel, stainless steel washdown and models that meet strict USDA and 3-A sanitation standards.

Are there surfaces on the top of the machine where water or product can collect? Are there sharp edges that can lead to product build-up? To avoid such hazards, cross members on Triangle's X-Series vffs baggers are turned 90°, and all edges have a finished edge that is ground smooth. These features facilitate water and product shedding, as well as ease of cleaning. On our 3-A certified baggers, all stainless steel is electropolished.

Our baggers also include air-purge to achieve positive pressure in our motors and control box cabinets, as well as to keep out moisture. Whenever possible, IP67 or greater sensors are used.

2. Rugged machine designs. Our X-Series vffs baggers are sanitary by design and built to stand up to daily cleaning and harsh environments. This leads us to the next point: durability. When you choose equipment that is designed for optimal sanitation, not only is the cleaning process easier and less time consuming, you're also getting a more reliable machine that will provide less downtime. VFFS baggers that are ruggedly built, offer quick changeover and better sanitation result in less downtime and improved OEE.

If you're looking for equipment that will stand the test of time, look for solid stainless steel rather than aluminum. Frozen foods packagers should also make sure that aluminum does not come in contact with their product and is only used where necessary. On our bagging machines, the use of aluminum is minimal. Any aluminum used is anodized or specially treated to 3-A standards or above to withstand cleaning agents.

3. When choosing a scale or weigher, look for models that offer high accuracy and less product giveaway. Scales come in many varieties, such as radial, inline or belt-fed models. Whether you're packaging IQF seafood, vegetables, poultry or meat, choosing a filler that offers expert product handling, high accuracy and less product giveaway will help improve production and OEE.

In addition, sealed bearings on our scale buckets helps prevent freeze-up.

How well can you control the product flow to your scale? Our inline scales offer several advantages over traditional radial scales, including improved accuracy and fewer missed cycles, as well as less product choking and giveaway. Because they're designed with three infeed trays to distribute product rather than a single spout, our inline combination weighers offer more control over product flow, with accuracy rates of +/-1 gram.



When one customer, which produces frozen, blended meal kits, decided it was time to replace an old, inaccurate weighing system, they turned to Triangle for suggestions. Product giveaway with the company's previous scale was a problem. With our Model A918 weigher, offers precise product control from the supply tray to the final feeder, they were able to significantly reduce giveaway and improve efficiency. And, by incorporating two Triangle weighers with their existing Triangle Model XYT15 bagging machine, the company could take advantage of the weighers' blending capability. The new system allows anywhere from one ingredient at a time to four ingredients, depending on the recipe. Perhaps most importantly, the customer is enjoying much higher production and accuracy.



4. Solutions that offer flexibility and can grow with you as your business grows. Is the ability to run various package sizes and styles important to you? What about three years from now? Running more SKUs makes quick and easy changeover an important consideration. Look for machines that enable operators to quickly and easily switch film structures, bag sizes or styles. To facilitate fast changeover, our baggers are designed with several features that allow line operators to easily switch sealing jaws, forming tubes, or film rolls.

Our frozen food customers often run a combination of food service bags and retail packages, so it's also important that their retail packages look aesthetically pleasing in a frozen display case. To catch the attention of retail shoppers, many customers choose to run Stand-Up Pouches, zippered bags, quad-seal/4-corner, or flat bottom bags. Our Model XYRJ vffs bagger, which we introduced just a couple years ago, has been a popular choice among frozen foods packagers for this very reason. It features an easily rotatable sealing jaw that allows food packagers to run pillow bags, 3-sided seal pouches, Stand-Up Pouches (SUP) and zippered bags, all on the same bagging machine.


5. Machines that offer ease of use and remote operation.

As more manufacturers offer smarter machine technology, frozen foods processors can take advantage of benefits like remote access, servo motors and RFID technology. Rather than spending each minute of a shift monitoring a machine in a freezing cold environment, remote access on our machines allows customers to connect via a VPN network from other areas within the plant.

In addition, the use of more servo motors to replace mechanical parts helps to simplify set-up, which reduces an operator's learning curve and increases machine speeds. We're also continually improving the capabilities of our HMI panels, such as adding RFID technology, built-in instruction manuals and the ability to store more recipes, making them easier for operators to interface with the machine. ■

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