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MOLINE® ADVANTAGE

BAKERY TECHNOLOGY UPDATE FALL 1998

High Volume Icing and Glazing Techniques

"We've Got You Covered"

The tempting sheen of lightly glazed donuts . . . creamy chocolate atop bismarks . . . sticky, white icing drizzled over sweet rolls . . . the finishing touches on your baked goods can make or break product appeal to consumers browsing their local grocery store shelves.

On everything from cookies to yeast-raised glazed donuts (which alone make up nearly 15 percent of in-store supermarket bakery sales), icing and glazing are undeniably important. Poor processing techniques can lead to melting, cracking, adhesion problems, waxy taste and reduced shelf life—not exactly the results a profitable baker desires. Reliable equipment and careful timing make all the difference.

Although similar in their sweet-tasting result, glazing and icing application and processing

See Icing and Glazing Techniques *on Page 2*

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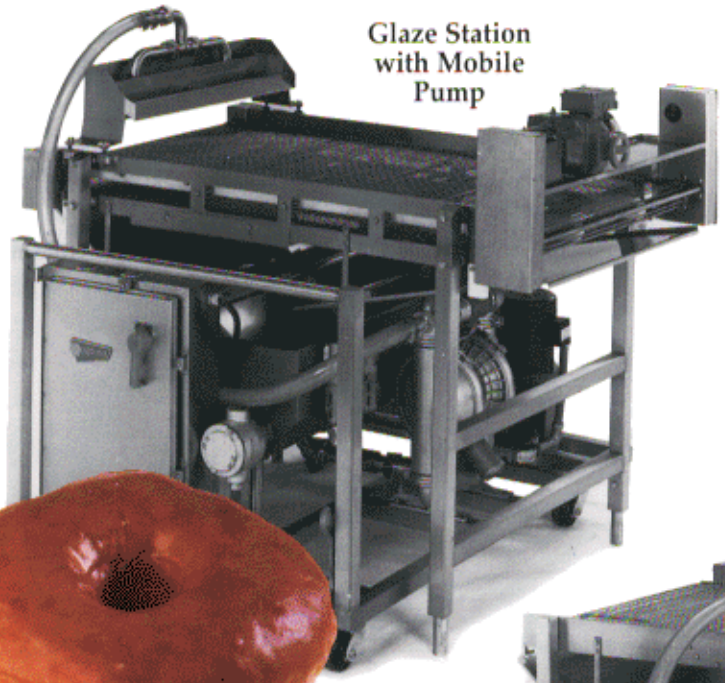
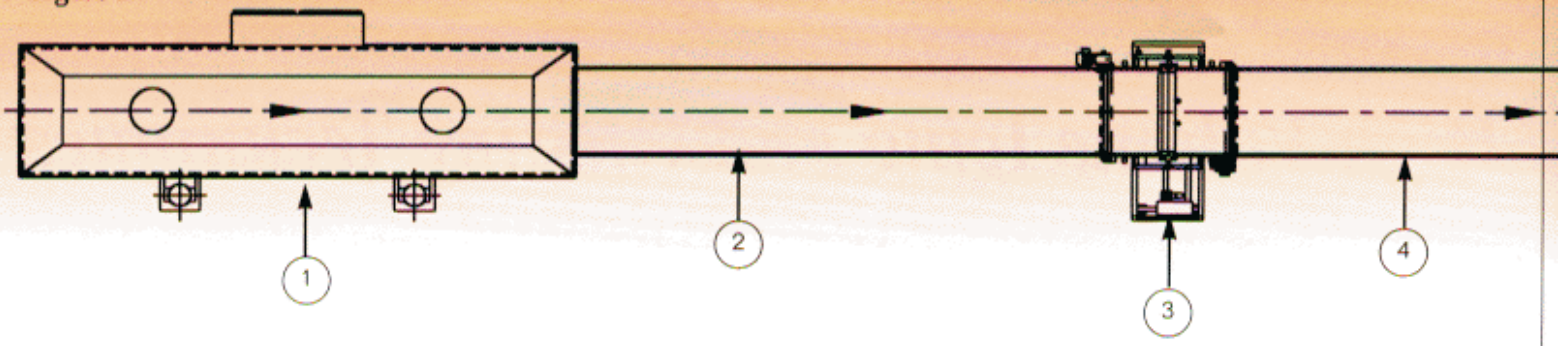


Glaze Station with Mobile Pump

Icing Station with Mobile Pump

Icing and Glazing Techniques

Figure 1

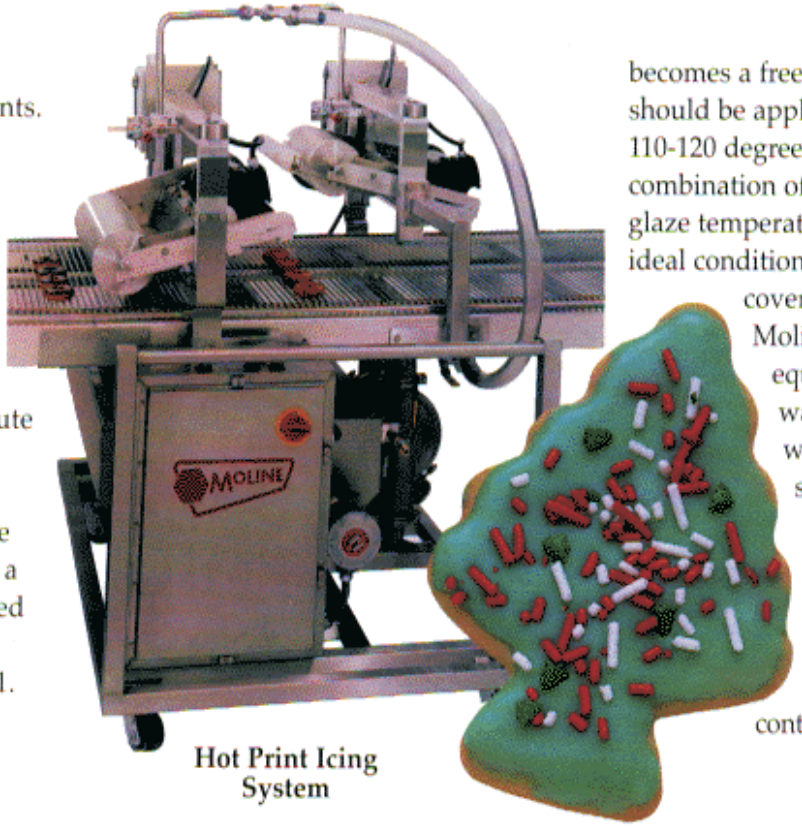


techniques vary considerably in wholesale production environments.

Glaze Processing

Glaze is a transparent coating consisting of 20-25 percent water mixed with sugar, hard fat flakes and a stabilizer. It should be applied to fried products approximately one minute after cooking, allowing time for product to shed excess frying oil and reach an internal temperature of 160-170 degrees Fahrenheit. In a continuous system, this is achieved with a Set Conveyor prior to the glaze station as shown in Figure 1.

After boiling and mixing, glaze becomes a free-flowing syrup that should be applied at a temperature of 110-120 degrees Fahrenheit. The combination of the internal product and glaze temperature variables provides ideal conditions for proper glaze coverage and retention. Moline automated glazing equipment includes a washdown duty conveyor, waterfall applicator, heated supply vat and closed loop pumping system.

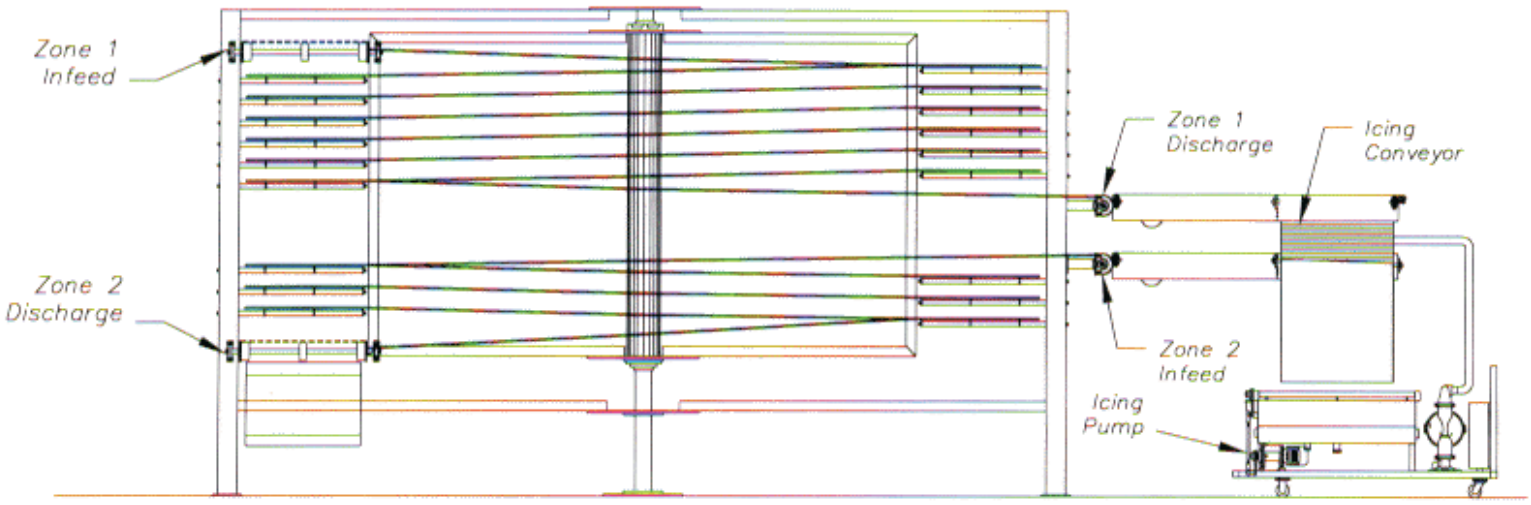


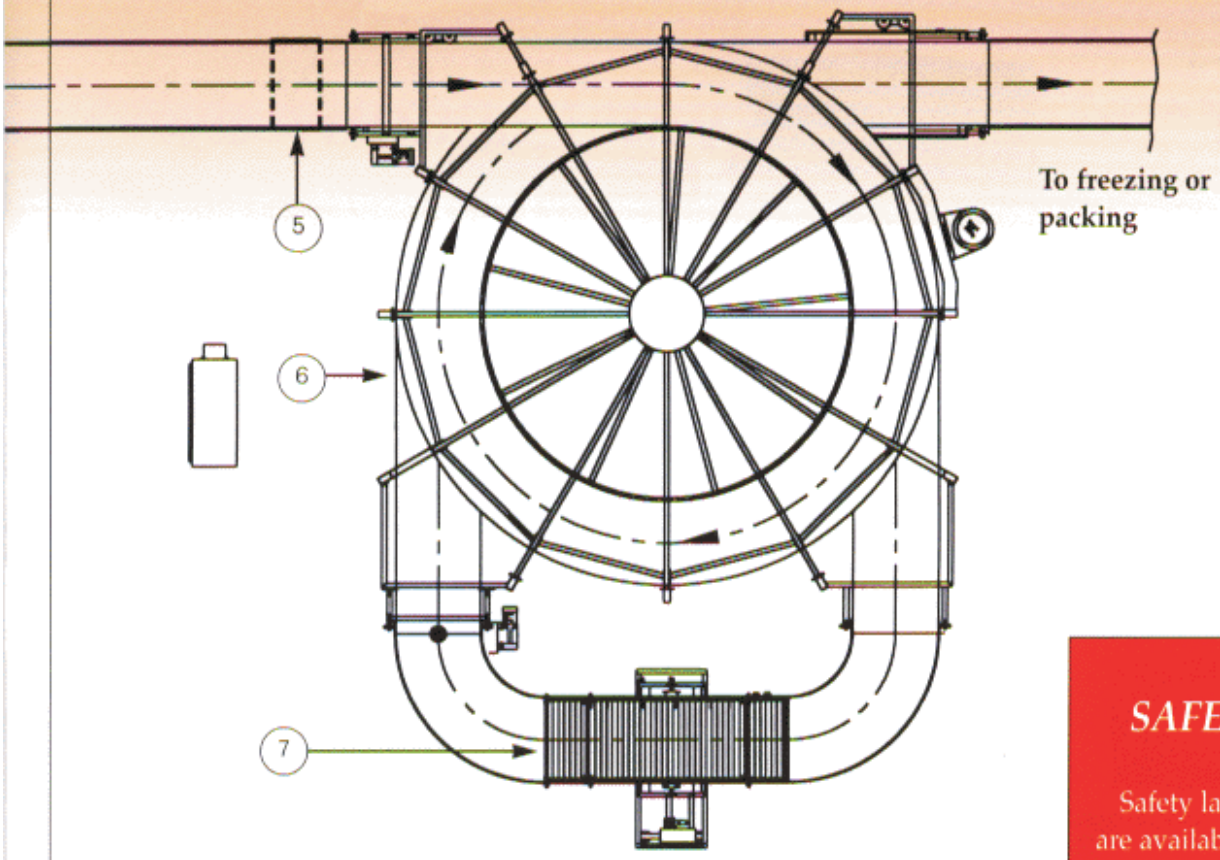
Hot Print Icing System

Icing Application

Icings are thicker than glazes, with a water content of 14-18 percent. Color

Figure 2





Legend

1 Fryer
2 Set Conveyor
3 Glaze Station
4 Drip Conveyor
5 Belt CIP Station
6 Dual Zone Spiral
7 Icing Station

and flavor range from opaque white to chocolate, to a rainbow of hues for cookies. Icings are applied in patterns that range from total coverage to top striping over a glaze base.

Unlike glaze, icing is best applied at a lower temperature. To reach the ideal internal temperature of 90 degrees Fahrenheit or less, product may need up to 20 minutes of ambient cooling first. The process is further complicated by a time requirement of up to 10 minutes—after application—for the icing to set prior to packing or freezing. As shown in Figures 1 and 2, Moline Systems often utilize a unique "Dual Zone Spiral Cooler" to meet this processing challenge.

Icings can be applied in two ways. A Flip Icer conveys product through an icing puddle and then flips it over. Flip Icers can also be equipped with a string applicator to create patterns, as shown on page 1. Alternately, a Hot Print Icing System uses a heated roller to transfer icing directly to the top of the product. This method is particularly well suited to flat products such as cookies. Hot Print Systems may also be used to ice baked items in a pan or foil.

Proper finishing is critical to a quality product. Moline icing and glazing machines and cooling systems are designed to successfully handle all the process variables for superb results time after time. Please contact our Customer Service Department at (800) 767-5734 for more information.

SAFETY EN ESPAÑOL

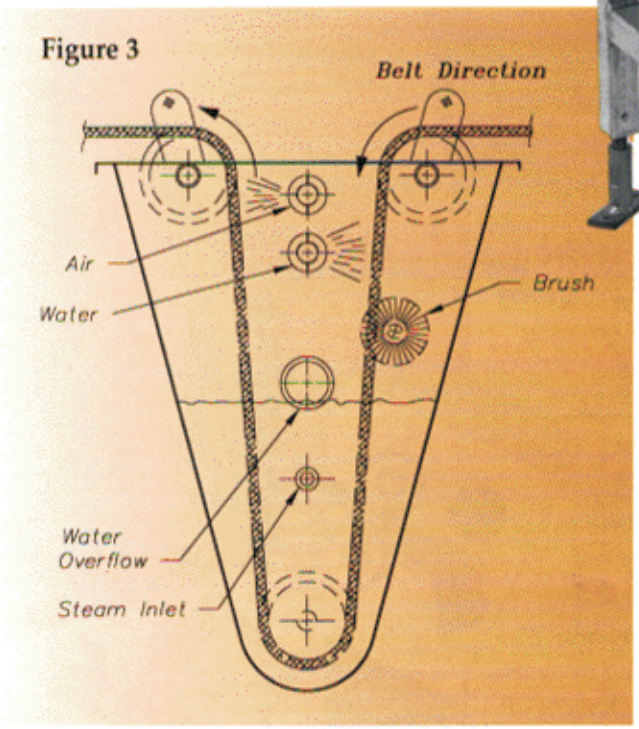
Safety labels for Moline equipment are available in Spanish. The labels are made of durable PVC material to hold up under abuse. Survey your equipment and call Moline Customer Service at (800) 767-5734 to order.

Washdown Design & CIP Systems: A Must for Glazing and Icing Equipment

Sticky, abrasive and processed at elevated temperatures—icing and glazing application creates a demanding environment that becomes the enemy of automated equipment. Maintaining a sanitary production floor in conditions such as this is a daily challenge.

Moline Conveyors are constructed entirely of stainless steel. Their stand-off mounting and NEMA IV electrical systems are designed to withstand direct washdowns on a daily basis. Conveyors can also be equipped with a Clean In Place (CIP) belt wash tank as shown in Figure 3 that combines hot water with dynamic brushing. The result? Simplified clean-up after production runs. Contact Moline for CIP details.

Figure 3



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