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CONSIDERATIONS FOR IMPLEMENTING MACHINES FOR CAKE DECORATING

A White Paper by Unifiller Systems Inc.



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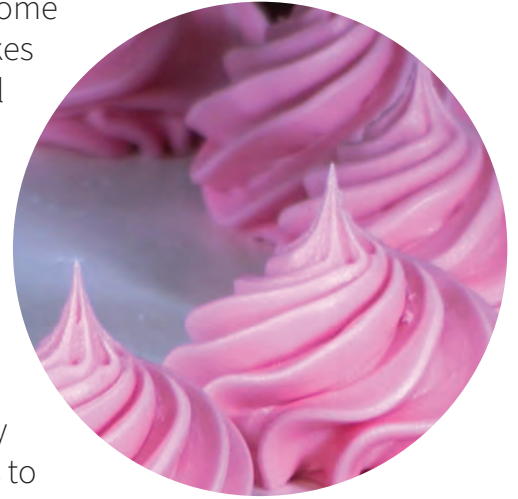
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INTRODUCTION: KEEPING UP WITH DEMAND

Whether we're talking about retail, food service, or even home baking, cakes remain a dominant dessert. It's no wonder; cakes are versatile as a celebration food, ubiquitous at any and all types of social gatherings, and as a grab-n-go snack food in the form of patisserie cakes, cupcakes, cake pops, or individual cake slices.

Considering this high consumer demand and competitive landscape in the baking industry, aesthetics are an important part of the marketing process. After all, it's the attractive, clean designs of the cakes sitting in grocery store displays or on bakery counters that highlight this dessert's appeal—and it's all thanks to the decorating done behind the scenes.



The Cake Market

Last year in 2019, the global cake market was valued at USD 42.94 billion and is forecasted to grow at a CAGR of roughly 3.3 percent from 2020 to 2027, according to a market analysis report by [Grandview Research](#) in July, to reach USD 333.87 billion by 2024. Another report by [Mordor Intelligence](#) shows that cakes (unsurprisingly) dominate the desserts category. It also records a rise in in-store bakeries at supermarkets despite COVID-19's impact on food consumption. With a limited floor area, many bakeries are turning to automated machines, which are often built compact in size and versatile for usability.



The demand for artisanal cakes has long been overshooting bakers' capacity to manually produce large quantities of quality cakes and this demand doesn't look like it's going to slow down any time soon. Many baking businesses are opting or have already opted to purchase cake decorating machines to help streamline this part of the production process.

Automated systems are a huge boon to the baking industry, but it's worth noting that a lot of careful planning typically goes into preparing bakeries' products to integrate with new tech before reaching the ideal cake-decorating process. Let's take a look at important considerations bakeries should make before implementing new machines.

CONSIDERATIONS FOR IMPLEMENTING A CAKE-O-MATIC 1000i FOR ROUND CAKE DECORATING

Round cakes are one of the most common cake designs out there, frequently produced by all types of bakery producers. They typically come in 6, 8, 10-inch sizes (smaller cakes are also currently trendy due to COVID-19 social restrictions), all of which can be iced by Unifiller's **Cake-O-Matic 1000i** in seconds.

2.1 PREPARING CAKES FOR THE MACHINE

The most important consideration for ensuring proper COM use is to ensure operators prep the naked cakes for the machine. Unlike a human decorator, the COM is designed to make repeatable motions for accurate and consistent icing, so its range of motion is fixed. Each cake must be consistent in height and shape, evenly stacked (if they are layer cakes), centered, and glue-iced to the cardboard. Ensure that any domes on cake tops are levelled before giving to the COM. Using a cake slicer to level cake tops would be an additional but effective measure to ensure consistency in cake height.

“Bakers mostly focus on quality of taste and texture during cake production and don’t think about these manual things until they’re looking to incorporate automated equipment to the process. The best way to avoid problems down the road is to make these preparation practices standard,” says Natasha St-Pierre, Technician at Unifiller.



WHY IS GLUE ICING SO IMPORTANT?

Glue icing ensures your cake layers stay fixed to the cardboard during mid-fill, top, and side-icing application, ensuring an even spread around the cake without air pockets.

2.2 ENSURE YOUR CAKE RECIPE IS MACHINE-FRIENDLY

Prior to implementing a machine to automate cake decorating, an important but oft-overlooked consideration is the cake and icing recipes. Are they suitable to be pumped through a machine? Chris Hatch, Business Development Manager at Unifiller, shares his insights.

CONSIDERATIONS FOR IMPLEMENTING MACHINES FOR CAKE DECORATING

A good question to ask before implementing any machine is this: how is the machine going to accept the cake at cycle rate? Answering this would require reviewing your product specifications and the compatibility your cake batter and icing with the machine.

“Most bakers who have never used automated systems don’t think about whether their cake recipes are machine friendly,” says Hatch. “Occasionally, mixing processes need to be fixed to prevent air bubbles in the batter or icing, as the product to be smooth enough to be pumped through the machine. Otherwise, touch-up will likely be required later, and that decreases the production rate.”

2.3 MACHINE ATTACHMENTS

Speed and consistency may be the goal for implementing a COM, but this can only be achieved if the icing is compatible with the machine. Getting the right equipment applicators and attachments go a long way to ensuring this. Pan Demetrakakes, Editor at [Food Processing Magazine](#), effectively sums it up: “the attributes of the product [such as consistency, viscosity, temperatures, flowability] determine what kind of nozzles should be used, the type of pump or depositor needed, and the speed with which it should operate.”

In addition, bakers should consider the kind of top decorating they want when selecting machine attachments. Do you want twisted rosettes or drizzles or sprinkles? Do you want to make a specific pattern or shell border? Each would require a different nozzle to deposit and apply the product. To decide which applicators are a good fit, consider the following questions.



CONSIDERATIONS FOR LARGER CAKE LINES

When it comes to decorating large batches of cupcakes and other small, single-serve desserts, product specifications are even more important. Their journey through the machine is unique from larger cakes (such as sheet cakes), because their numbers and proximity to each other on the conveyor require absolute accuracy in deposit sizes as well as clean product cut-offs. As such, the viscosity of the icing and fillings, batch sizes, particulates, and product temperature--all need to be compatible with the depositor size and design if the line is to run smoothly. Whether you are using buttercream (cream cheese icing, fudge icing), whipped cream, mousse, or custard, the machine must be configured to the specific attributes of the product.



ARE YOU MIXING BUTTERCREAM ICING TO REMOVE ALL AIR BUBBLES?

Doing so ensures an even and consistent distribution of icing during the midfill and top and side-icing processes. ([Watch Video Here.](#))

ARE YOU SOAKING YOUR CAKES WITH SYRUP SPRAY?

Spraying a fine layer of syrup adds a nice moisture to cakes, and this step can be automated with a [Syrup Sprayer](#) machine prior to running the COM.



ARE YOUR CAKES FRESH OR FROZEN?

If frozen, give them some time to thaw, so that the buttercream can fix itself to the layers. A frozen cake may be too immovable to work with the TSI function.

ARE YOU RUNNING DIFFERENT ICING FLAVOURS THROUGH THE COM?

Consider running your lightest icing first and moving onto any darker colours to simplify changeover.

DOES THE SKILL OR EXPERIENCE LEVEL OF THE OPERATOR MATTER?

No. The COM is designed to be easy to use once it is configured for your cake. Simply place your cake layers on the turntable and touch a button to start the midfill or top-and-side-icing process.

Using the COM as a batter depositor. Since its base is similar to Unifiller's depositing systems, it can easily be configured to deposit accurate portions of batter into cake pans for baking.



STANDARDIZING PROCESS CONTROLS

Aside from the actual decorating part of machine cake decorating, Hatch also emphasizes the importance of standardizing process controls, especially for bakers that want to scale their business operations. Standardizing process controls involves establishing standard operating procedures (SOPs) and measurable key performance indicators (KPIs), because doing so would provide the following benefits:

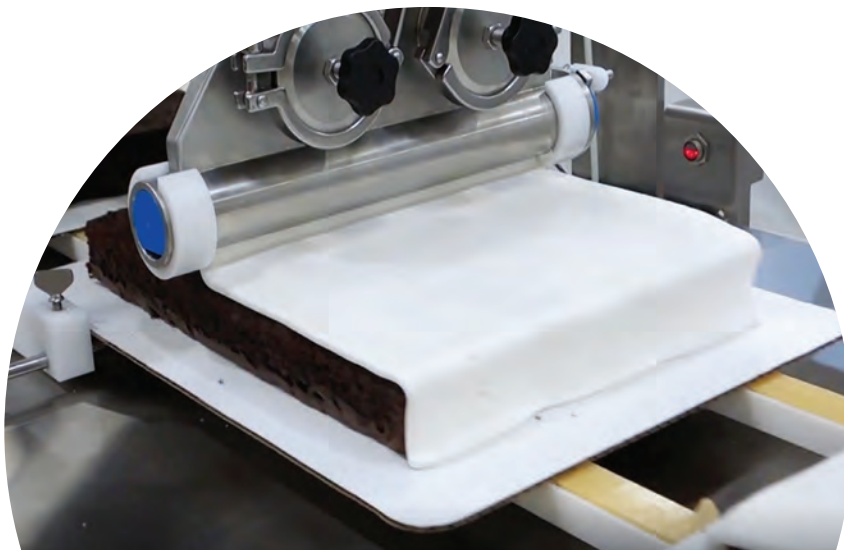
- Improve clarity between equipment operators and promote overall productivity
- Guarantee product quality and increase production rates
- Reduce food waste and inventory costs
- Help operators monitor and review data daily
- Prevent bad trends from becoming the new normal



Standardizing process controls includes looking at the big picture. This means it would be worthwhile to inspect your bakery's supporting structures. This can look like doing an audit of:

- the vendors that sell your ingredients
- the environment in which you store ingredients
- the ovens to standardize baking times to repeat the same product

Because implementing a large production line brings a huge change to the overall operation flow, changes likely need to be made to these supporting structures in order to accommodate the faster production rate and higher volume of output.



FINAL NOTE

Implementing automated systems is going to become more and more commonplace as the baking industry progresses. But prior to implementing automated systems and machines into your current production processes, specific elements of your bakery will likely need to be refitted to accept the machines' workflow. Problems arise when businesses spend a lot of money on equipment but don't spend time on process control. So, it's worthwhile to inspect your bakery operations with fresh eyes and make a thoughtful plan for machine integration.

The demand for cakes is only going to rise in upcoming years. Come up with a plan to start streamlining your bakery production today.



Sources:

<https://www.unifiller.com/service-and-support>

<https://www.unifiller.com/bakery-machine/com-cake-decorating-machine>

<https://www.mordorintelligence.com/industry-reports/cakes-market>

<https://www.businesswire.com/news/home/20200430005394/en/2020-Insights-Impact-COVID-19-Global-Pastry-Cakes>

<https://www.grandviewresearch.com/industry-analysis/cakes-market>

http://digitalbs.bakingbusiness.com/sosland/bs/2020_09_01/index.php#p/84

<https://www.foodprocessing.com/articles/2020/automatic-decorating-takes-the-cake/>

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