

Discover depositing solutions

Q: How has technology affected depositing and filling equipment?

A: With respect to depositing and filling equipment, the greatest impact technology has had is with the controls. Through the years, technological advancements in controls have driven the cost down and greatly increased the acceptance of programmable logic controllers (PLC), operator interfaces, plant-wide interfaces and servo motors. Through this technological leap, depositing and filling machines run faster and are easier to troubleshoot, sequence and control. This improvement in technology led to more sophisticated depositing and filling machine integrations than would have been practical years ago with outdated mechanical and air pilot controls.

Q: How can depositors handle delicate filling operations, such as those used for pie fillings?

A: Depositors for products containing large, soft particulates must have

large product flow paths. The flow paths must be smooth with gentle internal radii, and the product flow path must be as short as possible with no reduction in diameter or area.

Q: What type of depositor is best used for filling products with particulates?

A: Through the decades, piston depositors have been designed with the features mentioned above.

Q: Describe how different types of depositors can handle a broad array of products from liquids to dry ingredients.

A: Hinds-Bock depositors are very versatile in that they can run products as thin as water or brine to as

thick as fruitcake batter, mashed potatoes or axel grease. Large ports and other features already mentioned allow Hinds-Bock depositors to accommodate large particulates, and all of these features give the machines a great deal of versatility. In addition, Hinds-Bock manufactures dry ingredient depositors and high-fat streusel depositors.

Q: How can depositors and fillers be customized to accommodate lines with multiple product changeovers?

A: Most U.S. bakeries use the same line to run multiple pans and products. Several key features allow the depositors to be rapidly changed over from one pan or product to the next. Quite often, machines are manufac-





tured with positive shut-off spouts. The centerline of these positive shut-off spouts can be quickly adjusted without tools by simply moving a cam lever and sliding the spout to the proper centerline. The automatic cycling controls integrate within the depositor's control platform and automatically adjust the pan pitch. This change is made by simply accessing the SKU number with the operator interface panel. The deposit weight can be adjusted manually by turning a handwheel, or automatically by pushing a button. Further automation is integrated with an upstream or downstream checkweigher.

Q: How can depositors address lines that run at variable speeds?

A: Variable speed lines typically are equipped with a shaft encoder, which feeds pulses to the PLC integrated within the depositor's control platform. As the conveyor speeds up or slows down, the depositor automatically adjusts its speed to match that of the conveyor. This is quite common on depositing lines where the spouts or the entire depositor travels with the pan or the target during the deposit cycle, which increases the speed of the depositing line and ensures clean deposits and proper deposit shapes.

Q: How has automation of depositing and filling equipment improved production efficiency for bakers?

Ask the expert:

Lance Aasness, vice president, sales and marketing

1) What types of depositors and fillers does Hinds-Bock produce?

Hinds-Bock manufactures a large family of both standard and custom designed piston depositing machines, as well as servo driven pump filling machines. In addition, Hinds-Bock manufactures dry ingredient depositors, streusel depositors, icing machines and complete custom depositing lines.

2) What are some of the latest Hinds-Bock technological advances that benefit the baking industry?

Our new line of moist, high fat streusel depositors allow for the automatic depositing of high fat streusel, which typically tends to pack or bridge. This automatic depositor greatly reduces labor and increases both accuracy and speed.

3) How can I learn more about Hinds-Bock and its depositors and fillers?

Please feel free to contact Hinds-Bock at:
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For more information, contact Hinds-Bock at 425-885-1183 or visit www.hinds-bock.com

A: The automation of depositing and filling equipment leads to a quantifiable improvement in uptime, increasing efficiency in yield for the bakeries that operate these machines. This uptime is typically tracked and documented. Modern depositors incorporate features for rapid sanitizing, which minimizes downtime between product changeovers. Modern controls speed up the troubleshooting process as compared to the older style of mechanical or pneumatic air pilot controls.

Q: Describe the automated features that enable a muffin depositor to produce 18,000 lb. per hour.

A: The largest muffin lines typically fill multiple pockets in multiple pans simultaneously, and the conveying and indexing of these pans is handled by a large, substantial conveyor. This conveyor uses controls that recognize each flight

of the conveyor and sequences additional automation, such as tray placers, paper cup denesters, pan oiler, dry ingredient depositors and streusel depositors. These features include a PLC, pan sensors, shaft encoder and operator interface.

Q: How are depositors and fillers meeting bakers' expectations for sanitary equipment?

A: Depositors and filling machines are usually manufactured from high quality stainless steel and at times use food approved plastic or metal alloy parts. Institutional lines of bakery depositors include features that allow even the largest bakery depositor to be quickly disassembled for sanitizing in minutes without tools. Hinds-Bock machines incorporate tilting hoppers, quick remove piston strongbacks, tool-free product valve removal and tool-free rapid spout removal.