

# Bagel Feed, Count and Batch System



## Standard Features . . . . .

- ◆ All Stainless Steel Construction
- ◆ FDA/USDA Approved Heavy Gauge ABS Plastic Disc
- ◆ Food Grade Vinyl Nitrile Matting for Gentle Handling
- ◆ Dual-Drive, Variable Speed Prefeeder Belts
- ◆ Backup Ring
- ◆ Fully Synchronized Sensor Package
- ◆ Touchscreen HMI Control Package
- ◆ PLC Control (Allen-Bradley)
- ◆ Custom Batch/Count Chute with Take-Away Box Shifter Conveyor



The Frozen Bagel Count/Batch System was designed to feed, singulate, count, and batch several different sizes of frozen bagels at an output rate of 400 parts per minute. The system included a special dual belt prefeeder, an FT-60 Centrifugal Feeder (Food Grade), an exit conveyor and a custom batch-count system with box roller conveyor. An HMI touchscreen operator control package was also provided.

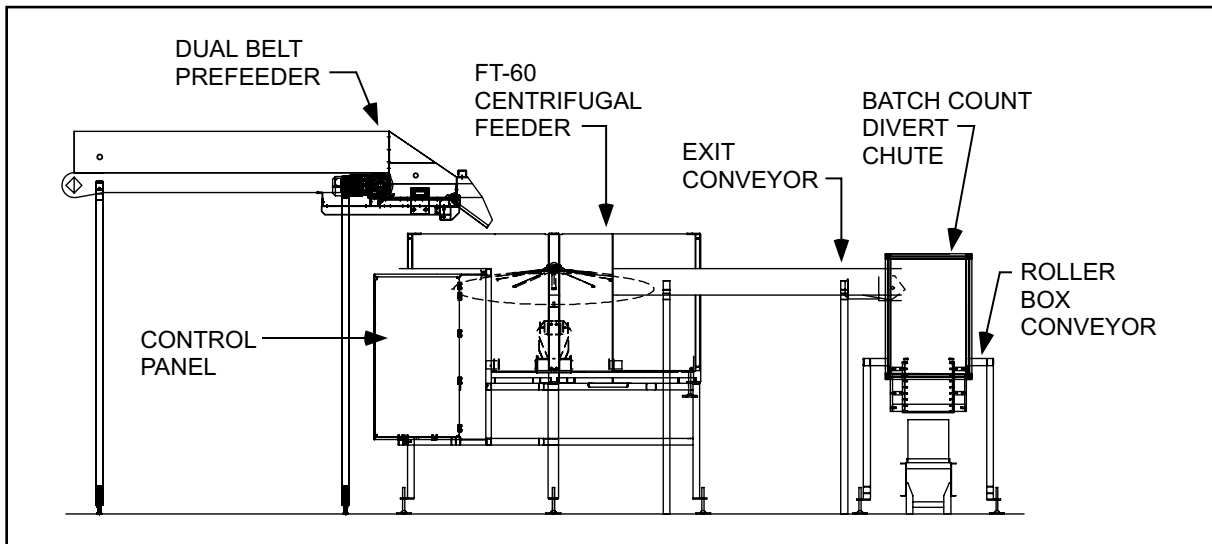
The dual belt prefeeder used variable drive speeds to help provide the necessary space and product separation for the downstream feeder. The feeder bowl's centrifugal force aids in loading bagels along the feeder rim for singulation and orientation. Once in a single stream, diameter-to-diameter, the bagels will exit the feeder onto the conveyor to go to the count-batch system. A batch sensor is mounted near the exit of the feeder, positioned to look through the area between the backup ring and the feeder rim and counts the space between the bagels as they pass through the sensor location. Once a predetermined count is reached, a set of inhibit cylinders will gently push the bagels off the rim and back into the reservoir area of the feeder bowl for recirculation.

*(Continued on Reverse)*

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The conveyor deposits the bagels into the count and batch chute where the bagels accumulate in one of two hoppers. Once the set number of bagels per hopper is reached, a delay inhibits bagels (back in the feeder bowl), and bagels can now be released into waiting boxes or bags. The hopper is designed with a drop chute that funnels the frozen bread bagels down into the open cavity of an awaiting box. A coordinated box shifter is clocked to the hopper count batch system, and up-stream feeder operation.

Once bagels are completely in the boxes, the box shifter will advance, moving the full boxes downstream, and placing empty boxes under the drop chute for the next batch of bagels. A series of sensors help determine the movement of bagels and boxes around the system.



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