

Beverage

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The Coca-Cola Co. launches 100% rPET bottle in various brands, markets

By Munson Machinery

Bringing it in-house

Biron Teas brings processing in-house with rotary batch mixer

Founded in 2015, Biron Teas sells organic artisanal teas through retail epicurean grocers, the hospitality industry and eCommerce.

Owners Andi and Roland Biron first relied on a Seattle-based co-packer to blend their tea varieties, but with cross-country shipping fees, delays and growing demand, the Macon, Ga.-based company needed to expand capacity and bring blending in-house.

Mixing teas requires gentle handling. "Because our co-packer used a V-cone mixer, I looked at this equipment first, but its swinging operation consumed too much floor space," Andi Biron said.

The tea company ultimately specified a Rotary Batch MX-3-SS Mini Mixer from Munson Machinery for its smaller footprint, and ability to produce uniform blends without product degradation or cross contamination.

Tea ingredients require gentle mixing action, short cycles

Premium tea blends require special handling at each phase. The first step is to screen dust, twigs and foreign matter from the ingredients. "With chrysanthemum flowers, we want the blossoms but must remove the pebble-hard buds," Biron said. "Ginger root also requires a thorough cleaning."

Proprietary combinations of herbs, florals, fruits and spices are loaded into the 3-cubic-foot (85 l) mixer, which is comprised of a stainless steel, horizontal drum with no internal shaft or shaft seals. Internal mixing flights impart a four-way mixing action that tumbles, folds, cuts and turns the material, causing particles to recombine 288 times a minute, with no shear or heat generation.

Natural oils and liquid flavors are metered through an integral stainless steel spray line, and pumped from a pressure pot onto a scale for accurate liquid additions by weight.

Biron says the mixer blends 70 to 80 pounds (32 to 36 kg) batches of tea blends with or without liquid additions uniformly in three minutes.

"Organic artisanal teas, especially blends with herbs, wild flowers, oils and berries, can't be crushed or pulverized," Biron explained. "The mixer gently tumbles and turns a delicate — and sometimes sticky — tea mix into a uniform blend without pulverizing or powdering."



🔥 Biron Teas' 3-cubic-foot (85 l) capacity Rotary Batch Mini Mixer blends teas with or without liquid additions in three minutes with no shear or damage to delicate ingredients, Munson Machinery says. (Image courtesy of Munson Machinery)



🔥 The Rotary Batch Mini Mixer's tumble-turn-cut-fold action achieves uniformity in three minutes with no product degradation, according to Munson Machinery. (Image courtesy of Munson Machinery)

The blending action prevents segregation of materials, regardless of size, shape or bulk density. "Chamomile and ginger can be especially difficult to mix, but the mixer does the job, which is essential for uniform flavor," Biron said.

The mixer's internal flights also serve to elevate and direct blended material through a discharge gate, with no residual or product waste.

"The mixer can be cleaned rapidly between blends," Biron said.

Because certain tea mixes incorporate natural flavors, oils and other ingredients that cling, selecting a mixer with a large drum access door for interior access was important.

Organic and bio-certified packaging supports sustainability

Biron produces traditional and unique artisanal tea blends. The organic certification of each ingredient and lot numbers are tracked and managed.

After blending, each special tea mix is scooped into a tea-bagging machine, yielding about 20,000 bags in each batch.