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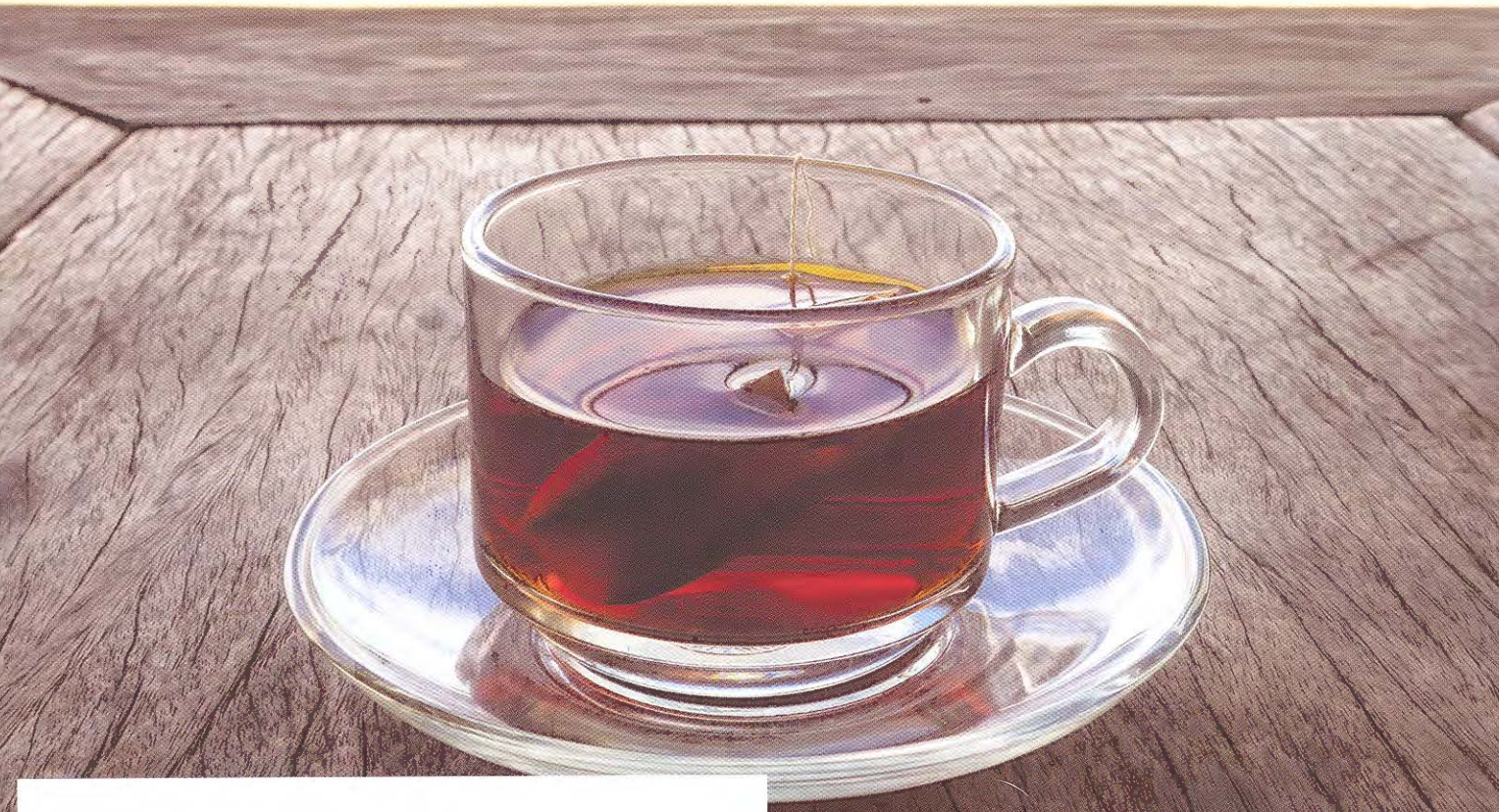
# The Rising Tide of Wellness Teas



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# HPT Blends Tea Better with Munson's Rotary Batch Mixer

Tea importer Henry P. Thomson was able to improve efficiencies and increase production with Munson Machinery's Rotary Batch Mixer. By Zachery Bridgeman

*Photos courtesy of Munson Machinery*

When it comes to tea packaging, consistency is key. Most blends consist of four to six teas, and customers expect that each time they steep their favorite bags, the resulting aroma and taste are exactly the same. Therefore, importers need a machine they can rely on to get that ratio consistently correct, and do so in a way that cuts costs and saves time.

Founded in 1912, Henry P. Thomson, Inc., is one of the largest tea importers in the U.S. Although it began on Wall Street (the American center of tea ttade back then), HPT now warehouses its products in Augusta, Ga., and sells primarily to tea packagers, who sell to restaurants, food chains and supetmarkets in southern states. Today, restaurants, food chains, supermarkets and othet smaller resellers purchase some 70 percent of HPT's custom blends from tea packers. "Many coffee roasters based in the South have complementary iced tea lines," explained Eugene Amici, president, Henry P. Thomson, Peapack, N.J. "During the 1920s and 30s, HPT became the tea department for those coffee roasters who have scaled up nationally since that time."

About 85 percent of HPT blends are fot iced tea, and Americans increasingly choose tea as an alternative to carbonated beverages with less or no sugar, said John Smith, vice president and managing director, HPT. "Iced tea is consumed in restaurants, made at home, and bought in the refrigerated sections of grocery stores and convenience stores."

But meeting such a large demand in an efficient manner hasn't always been easy. Previously, HPT had limited success with different packaging machines. Maintaining that consistency is just as critical as speed and quality of product—a difficult task due to sack-to-sack variations in imported tea. For example, said Smith, "We receive 400 sacks of an African tea, and from sack to sack the tea may be lighter or darker in color or vary in quality due to seasonal variations. Yet tbe customer expects blends that have no variation in quality from batch to batch."

HPT turned to Munson Machinery, based in Utica, N.Y., for an efficient solution, eventually settling on Munson's Rotary Batch Mixer. "Everyone in the industry says Munson is the mixet of choice for its gentle mixing and other features," said Amici.

## Hurricane Affects Operations

HPT previously outsourced its blending and packaging to a logistics company in New Orleans, but after the devastation of Hurticane Katrina in 2005, it moved its blending, packaging and distribution services to an Augusta, Ga., warehouse owned and operated by RBW Logistics.

HPT first tried a ribbon blender, but found it "destroyed the tea" due to the ribbon blender's heavy action and high-shear rotation of the agitator, explained Smith.

HPT next purchased a custom-huilt mixer in 2007, but due to design and construction shortcomings, "it failed to reduce costs as expected," said Smitb. The forward section of the mixer had to be tilted upward to promote evacuation from the discharge port. Besides that inconvenience, it also had a topside shaft that bore a large amount of weight, which created a need fot an internal shaft with bearings and seals that could contaminate material and prevent thorough cleaning. Plus, in terms of efficiency, the custom mixer did not cut it, processing a maximum of only 1,800 lbs per batch (816 kg/batch), which met current output demands, but lacked the capacity for future, higher demands.

## A Change of Pace

Relief arrived in 2014 when HPT replaced the previous custom built machine with Munson's 140 cu ft (3.9 cu m) Rotary Batch Mixer, about which Amici said, "The mixer occupies half the amount space required by the previous mixer, is mote efficient, and can mix larger batches."

HPT's suppliers process tea blends using either of two methods. One is a rolling process that twists the leaves, breaking them into sizes from 0.25 to 0.125 in. (6.4 to 3.2 mm) to powder. The othet is a cut-teat-curl (CTC) approach that produces smaller, more uniform particles, which yield more intense flavor and color.

At the warehouse, tea is received from suppliers in 90 to 140 lb (41 to 64 kg) sacks, which are opened by dtopping

them onto serrated teeth positioned above a vibrating screen, which removes oversize objects. A conveyor, outfitted with magnets to remove any metallic particles, transports the tea into the mixer.

The stainless steel Rotary Batch Mixer uses a graviry-driven mixing process in which internal mixing flights and lifters create a gentle four-way mixing action–tumble, turn, cut and fold–to produce a 100 percent uniform batch in just one to three minutes while imparting minimal energy to the material. The unit mixes continuously while loading through its stationary inlet and discharging through its stationary outlet. Internal flights lift and direct blended product to the discharge gate, evacuating the rotating mixing drum, which is free of the dead spots and shaft seals that could trap materials.

The lifters inside the rotating drum also serve to direct its contents into the discharge spout. The Munson Rotary Mixer is therefore completely self-emptying, working with gravity instead of against it. While the forward section of the previous mixer had to be tilted upward to promote evacuation from the discharge port, "the Munson machine remains level and discharges fully, eliminating wasted product and allowing rapid cleaning," said Steve Knauth, marketing manager, Munson Machinery. Also, the previous custom built machine had a topside shaft that hore a large amount of weighr, but, as Knauth said, "The Rotary Batch Mixer is supported by two external trunnion rings riding on heavy-duty roller assemblies, eliminating the need for an internal shaft with bearings and seals that could contaminate material and prevent thorough cleaning." He noted that these features are in addition to the constant tumbling action induced by the drum's rotation, which combined with the internal flights and lifters' four-way mixing action, produces a homogenous mix.

The blended tea is then conveyed to a packaging station where a storage vessel holds one batch. While that batch is being filled into 900 to 2,300 lb (40 to 1043 kg) bulk bags or 105 lb (48 kg) sacks, the next batch is being mixed. In this way the Munson mixer saves HPT a significant amount of time and energy.

## Increase in Output

Munson's Rotary Batch Mixer alleviated HPT's blending troubles without sacrificing the company's production or reputation. While the previous mixer's output was satisfactory, Munson's mixer increases output by blending between 1,600 and 2,600 lbs per batch (726 to 1,180 kg/hatch). "The Munson machine can comfortably mix our daily output of 40,000 lb/day (18,160 kg/day), and can push to 50,000 lb/day (22,680 kg/day), if needed," said Smith. It runs everyday, all day, and of course, its main advantage for HPT is the consistent quality and homogeneity it delivers from batch to batch.

"To tea packagers both large and small, our blending quality stands as one of HPT's core values," said Amici. "[With Munson's mixer], we estimate between quality and production factors, a 15 percent efficiency improvement is a workable number."


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