



4 steps to perfect blending – with optimal yield and minimal losses

BEVERAGE, MIXING & BLENDING

Continuous blending is ideal for many kinds of beverages, but producers are still looking for opportunities to further reduce product losses and water consumption. They also want solutions that allow for more flexible plant layouts.

Continuous blending is widely used in the manufacture of all kinds of beverages, including still drinks, juices, nectars, enhanced water and even sensitive carbonated soft drink (CSD) products.

Seeking to improve their cost-effectiveness and sustainability, beverage producers are looking for smarter blending that saves time and money. In particular, they seek to get the highest possible yield on their ingredients and to reduce product losses. In more arid areas, saving water is important. They also want to ensure a consistent output – a blend with the required Brix level.

Producers face two major challenges: When blending begins, the mix contains excess water, which must either be discarded, taking with it some concentrate, or captured for re-use. Secondly, the greater the physical distance between blender and pasteurizer, the greater the potential product loss. The need to minimize this distance constrains plant layout options.

Product recovery systems have been available for some 20 years, but through continuous refinement, applying the company's complete application knowhow and line design expertise, Tetra Pak's latest blending equipment has been designed to address these challenges. It works like this:

- Pure, clean water from the pasteurizer is recovered and led back to the inline blending system, where it is mixed with concentrate and incorporated into the product.
- The mixture in the mix phase is also recovered – rather than being discarded or sent to saver tanks where there is a risk it may be overlooked – and returned to the blender.
- The inline blending control system works by sensing the sugar content in the blend. As soon as it detects some sugar, it starts to adjust the Brix level by adding more concentrate, as needed. Mass flow meters at critical points continuously measure the composition of the blend, and signal how much concentrate should be added to maintain the correct consistency.

This solution also eliminates plant layout constraints, since the pasteurizer and inline blender are integrated and can operate, essentially, as a single unit. This solution saves valuable space since its buffer tank also acts as a saver tank. By contrast, competing systems need three tanks; one each for buffer, water and mix phase. To learn more about best practices for blending with high shear mixers, do contact us by clicking on the Tetra Pak button below.

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