

## FS Shear Blender Produces Perfect Shelf-Stable Emulsions



### FS Shear Blender

*Quick and Consistent Blending*

**We've all seen salad dressings where the oil separates from the other ingredients requiring you to shake the bottle before use. For some dressings, this is acceptable, for other dressings, it is not.**

A US food manufacturer was making a dressing that needed to stay thoroughly mixed while in storage and on the grocer's shelf. Unfortunately, they were experiencing quality issues where some of the bottles stayed mixed on the shelf while others separated out.

They began researching the issue and determined their existing processing equipment was not consistently emulsifying the oils in the dressing. The oils needed to be emulsified down to a single-digit droplet size, and their existing equipment could not do this reliably.

They were using an in-tank high-shear mixer to make 600 lb batches of the dressing. All the ingredients were loaded in the top of the tank and the mixer would run until the emulsion reached its final consistency. With in-tank mixers like this, a common problem is that portions of the product don't experience the same amount of mixing as others.

They knew they needed to find a solution that provided consistent high-shear mixing. That's when they learned about the Fristam FS shear blender. The Fristam FS is an inline shear blender that uses a high-shear, intermeshed rotor/stator system to quickly and completely disperse particles into liquid in just one pass. With the FS, 100% of the product flows through the shear blender so all of the product is blended the same.

While they were pleased to learn the shear blender could easily emulsify the oils down to the size they needed, they were even happier to learn that installing an FS shear blender did not require them to change out their current process or production equipment. By simply placing the FS after the positive displacement pump that was emptying the tank, and controlling the flow rate of the pump and RPM of the FS, they are able to dial in the perfect particle size for each batch.

Now the customer uses the agitator in their batch tank to disperse the ingredients for a pre-mix and then pump it through their FS Shear Blender where they achieve the right emulsion in a single pass on the way to the filling line.

By simply installing a Fristam FS shear blender, they were able to achieve their goal—a perfectly

mixed salad dressing that stays blended on the shelf—without having to make a change to their overall process or current equipment.

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