

Tuning Your Wilevco Mixer

Why Tuning?

When flour and water are combined to make batter, they must be added in correct proportion to achieve a desired viscosity - much like a recipe for pancakes. Too much water will make the batter thin and too little water will make the batter thick. This also holds true in maintaining your batter viscosity (recipe) throughout a production period. Your goal is to find the correct mix (recipe) of flour and water for each of your batters and maintain that recipe throughout a production period. When in automatic, the Wilevco mixer is designed to maintain your viscosity (recipe) to within 1.5 points of the set reference point on the chart or digital readout.

In a Wilevco mixer the amount of dry mix (flour) being added cannot be changed but the water rate can. "Tuning the Mixer" is the way for you to find out what the water flow rate setting should be, in GPM, for each of your batters (therefore finding your recipe). A properly "tuned" mixer will consistently deliver batter that will help you achieve your pick-up percentage goals. You should check that your mixer is "tuned" periodically and each time you change products. To carry out the tuning procedure you should be familiar with the locations of the switches, the water flow rate gauge and the water flow rate valve on the mixer.

How to tune the mixer:

1. After start up and having reached your batter's correct viscosity, note the position/ number value of the red pen on the chart or the number value on the digital read out.
2. Switch the mixer to manual.
3. Manually turn both solids and liquids on at the same time & note the water flow rate.
4. Let them run for approximately 30 to 60 seconds then shut them off.
5. Wait a minute for the new batter to blend with the existing batter.
6. Observe how the red pen or digital read out reacts during this period.
7. If the pen moves up the chart or the digital read out rises, the batter is getting thicker which means you are not adding enough water.
8. To correct this turn the water flow rate up, no more than $\frac{1}{4}$ GPM, then repeat steps 3-6.
9. If the pen moves down the chart or the digital read out decreases, the batter is becoming thinner which means you are adding too much water.
10. To correct this turn the water flow rate down, no more than $\frac{1}{4}$ GPM, then repeat steps 3-6.
11. The goal is for the red pen or digital read out to remain at the same position throughout the tuning procedure therefore holding steady throughout the production period.

Fine Tuning:

1. Fine-tuning may be needed occasionally and can be accomplished after the mixer has been "tuned" and while the mixer is in automatic. Observe how the red pen or digital read out performs during a filling cycle. If the pen or digital readout rises slightly during this period, tweak the water flow rate up. If the pen or digital read out falls slightly during this period, tweak the water rate down.