Leading Extrusion Manufacturer Yields Big Results from Blender Enhancement

Extrusion Manufacturer upgrades to an innovative new paddle design for faster, cost-saving materials blending

CUSTOMER
Wisconsin based company is a manufacturer of high-quality custom plastic profile extrusions.

CHALLENGE
The company aimed to produce quality parts faster and minimize costly additive waste.

SOLUTION
Upgraded the existing BD Batch Weigh Blender with a new easy-to-install new and innovative paddle design.

RESULTS
Immediately after installing, mixing quality improved, and they started producing quality products four times faster.

A Wisconsin based extrusion manufacturer is committed to producing high-quality products and delivering on-time results with short lead times. To achieve these goals, the extruder looked to improve the efficiency of their materials blending process.

For a custom profile extruder achieving the right product colors and material properties hinges heavily on how well different materials are blended together. An optimal blend is difficult to achieve when performing a job change-over or starting-up the extruder. This results in scrap that impacts material costs, labor efficiency and even turnaround time. The scrap costs add up significantly when running multiple jobs every day.

The manufacturer had a Sterling blender on their manufacturing floor that had performed well for many years with a high degree of accuracy, dependability and effectiveness. Yet, the Maintenance & Purchasing Manager was continually looking for ways to reduce the amount of scrap generated when changing extrusion jobs. Key enhancements in the new BD Series Batch Weigh Blender offered not only industry-leading features, but also a game-changing paddle design.

“That was no surprise to me. The Sterling blender has always been a lot easier to use versus the other smaller brand of blenders we have on the floor.”

-Maintenance & Purchasing Manager
After an assessment of their current Sterling BD Batch Weigh Blender and exploring the possibility of upgrading the paddle component, both companies partnered to make this enhancement work. The team focused on the advanced paddle design that’s standard with the BD Series due to the proprietary geometry that:

- Eliminates “dead zones” in the blending process
- Pulls materials out of corners
- Achieves unmatched mix quality
- Delivers consistent batch-to-batch blended mixes

The installation process for the new paddle was straightforward: “It was simply a matter of popping out a couple of screws, taking the old ones out, sliding the new ones in, and fastening it again,” says the Maintenance & Purchasing Manager. “That was no surprise to me. The Sterling blender has always been a lot easier to use versus the other smaller brand of blenders we have on the floor.”

**MAKING GOOD... GREAT**

With the new paddle installed, the manufacturer noticed a difference right away. The blending operators observed that the mixing quality improved substantially. As important, they started producing quality products four times faster.

“The first thing we noticed with the new Sterling paddle was that it seemed to blend in better and faster. You could literally see it mixing much more consistently,” says the manager. “I looked at the video showing a side-by-side comparison of the paddle on the Sterling website, and it’s very accurate.”

With a custom profile extruder running up to five different jobs a day on the line, the improvement in the blending process became even more evident, resulting in significant benefits:

**Cost savings:** The company experienced substantially reduced additive waste while waiting for quality parts. Some project recipes include additives costing up to $40/lb., so profitability increases the faster the manufacturer can start producing quality product.

**Labor and materials savings:** Before the new Sterling paddle, a typical grinding run might result in up to 200 feet of scrap up. Whereas, with the new paddle, the company is only getting 50 feet of scrap, which only takes a quarter of the time to grind than previously. Plus, the new blending process results in a quarter of the amount of material that must be re-grinded and manually put back into the line.

**Less downtime:** Operators experience higher uptime while waiting for the line to run that 50 feet of scrap. If a job produced 5 feet per minute, the collection and regrind process would end up saving half an hour of downtime with a lot less scrap that needed to be processed.

**Greater accuracy:** Color concentration is an essential factor in the blending process, and the Northland Plastics team noticed some measurable results before and after the installation of the new paddle...

“I’ve been tracking my color concentrate usage since before we had the new paddles and after from when we’ve run a job,” says the manager. “We had a job where we ran 450 pounds of virgin material. We ran 1.5 percent concentrate. We were 0.1 pounds off from what the blender said we used and what we actually used. But the last job with the same amount of virgin materials measured at 0.08 pounds off, and that’s not even a handful of material. We were running a 0.005 pounds difference. Those are some good numbers.”
MORE INNOVATIONS TO LEVERAGE

While the extrusion manufacturer benefited on several levels with the game-changing new paddle design, the new Sterling BD Series Batch Weigh Blender offers even more industry-leading features with enormous advantages. For example the BD Blender achieves accuracy within 1% of target weight. When accuracy is of utmost importance a new “advanced mode” provides enhanced accuracy. Also, Sterling’s exclusive weigh hopper design eliminates fatigue points and delivers consistently reliable performance. Plus, an intuitive color touch screen improves operator adoption and performance while Ethernet connectivity makes remote monitoring a breeze.

Benefits by the Numbers

- 4 Times Faster to Color Specification
- Startup Scrap Reduced From 200 to 50 ft
- Batch-to-Batch Accuracy of +/- 1%
- Blender Accuracy of +/- 0.1% Over Time

“I looked at the video showing a side-by-side comparison of the paddle on the website, and it’s very accurate.”
- Maintenance & Purchasing Manager

We can help you determine how your company can benefit from our BD Series Batch Weight blenders.

For more information, visit our BD Series webpage.

To arrange a free on site consultation, you can reach us by email at marketing@acscorporate.com

ABOUT STERLING

Sterling is the frontrunner in temperature control units for plastics and industrial applications. For more than 100 years, Sterling and the Sterlco® brands have been synonymous with dependable temperature control for applications in plastics, food and beverage, pharmaceutical, and many other industries.

Sterling has grown to be a market leader across a broad range of auxiliary equipment for the plastics industry, leading the way in chillers and process cooling, material handling, and granulators.

Sterling brings a century of experience, providing our customers with premium value and quality.

For more information, visit www.sterlco.com or call 262-641-8600