

Gaining Productivity & Efficiency — Laundry Plus Installs GI Tunnel Washer



The TBS-50 12-module tunnel washer is top loaded via a conveyor.

By Haley Jorgensen

Laundry Plus, a quality-focused industrial laundry located in Bradenton, Fla., recently installed a 12-module Girbau Industrial Continuous Batch Washer; one SPR-50 Water Extraction Press; five 250-pound capacity ST-100 Dryers; and associated conveyor and shuttle systems. The new Girbau Industrial laundry system—controlled seamlessly from a central operator station—was successfully placed within a tiny 50 x 25 foot area.

“Now we are running an eight- or nine-hour day to accomplish what we used to do in a 20-hour day,” says owner Rick Rone of the new equipment. “We used to need eight to 10 people to man the wash line—to load and unload machines manually. Now, only one person is needed per shift because virtually everything is automated.”

Even better, the laundry now has the production capacity to take on new customers and an additional 15,000-30,000 pounds of linen per day.

At Its Production Threshold

Laundry Plus is a 20-year-old industrial laundry providing 24-hour turnaround laundry service to area resorts and hotels. Focused on delivering superior service and quality, the laundry is known for going above and beyond for clients. For one customer, Laundry Plus provides ironed tablecloths on hangers covered

with colored plastic bags. The different colored bags tell banquet staff the size of the tablecloths inside. Laundry Plus works hard to fulfill special requests such as this, according to Rone.

However, because of an increase in demand, Laundry Plus recently hit a production threshold—thwarting customer growth. “During our peak season, we were operating at capacity,” says Rone of his business. “We couldn’t take on any more customers. We knew we needed to make a change.”

But, the decision to purchase new equipment didn’t come easily. Rone maintains it took careful research. The laundry’s existing equipment included three 700-pound capacity washers; one 480-pound capacity washer; one 135-pound capacity washer; two 310-pound gas dryers and three 110-pound gas dryers. It also had three small-piece folders; two three-roll ironers; a spreader/feeder and two automatic sheet folders.

Selecting the Right Equipment

Rone made the decision to purchase a Girbau Industrial TBS-50 Continuous Batch Washer to catapult productivity and lower

labor and utility costs. “We went with the tunnel washer to cut utilities, support our green initiative and get substantially increased productivity,” says Rone.

The TBS-50 selected by Rone features a modular inner and outer drum system with separate baths for each module. Each wash module is highly programmable, which allows for infinite configurability to meet very specific laundry needs, according to Rone. “The flexibility of the equipment lets us do anything that needs to be done.”

Flexibility to Meet Customer Needs via Programmability

The TBS-50’s automated system is programmed from a central control, which allows for 99 general installation programs and detailed adjustments of different operations of every component on the system. Each module of the tunnel is programmable for water temperature and levels, duration of the wash cycle, mechanical action, bath partitions, rapid draining, chemical injection, closing parameters and more. One person per shift uses the touch-screen control to call up customer numbers and individual programs designed for washing and drying that customers’ unique linens, according to Rone.

Slashed Labor & Better Clean

“Our washers had limited mechanical action before,” says Rone. “The tunnel gets goods cleaner, brighter, whiter and softer than they’ve ever been.” He attributes this to his ability to program the tunnel system according to customer needs. Some hotels served, for example, inventory heavy, thick terry towels and higher thread-count sheets. Others inventory thinner towels and lower thread-count sheets. Each requires different washer programming.

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From the central control, the other equipment components are also controlled, including the SPR-50 Press, the five new ST-100 Dryers, and the conveyor system. All components, Rone says, work in automated concert ...

In the past, it required four to five employees per shift to run the laundry's conventional washer system. Today, it requires one employee. That attendant selects a customer number and program on the central computer screen and loads the tunnel conveyor. Each load equates to about 110 pounds of laundry. The linens travel via conveyor to the top of the tunnel, where they are automatically loaded into the tunnel washer. Every 110-pound load travels through 12 modules. Each module of the tunnel is programmed to perform a function for about two minutes, such as pre wash, wash, rinse, etc. After the two minutes, the load is automatically transferred to the next module. Once a load travels through every module in the tunnel, it enters the SPR-50 Press. This is where each 110-pound load of sheets or towels is compressed into a condensed cake and loaded automatically, via conveyor, into an open ST-100 Dryer. Sheets are quickly separated in the dryer and run through the ironing line still damp, while towels are completely dried and subsequently run through the laundry's folding line. An infrared sensor in each dryer automatically puts the dryer into cool-down mode once the goods inside are properly dried. This, according to Rone, saves natural gas and prevents over-drying and fabric damage.

“Since installation, water usage has dropped from 3.5 gallons to 0.8 gallons of water per laundry pound,” says Rone.

Water Reuse Critical to Cutting Water Usage

With such a large tunnel washer, one might think water consumption would increase, maintains Rone. But, since the installation, water usage has dropped from 3.5 gallons to 0.8 gallons of water per laundry pound. “Eventually, using the tunnel, I think we’ll get that number down to .6 or .7 gallons of water per pound,” says Rone.

The TBS-50 Tunnel Washer is designed to reuse rinse water at specific points in the wash process. At Laundry Plus, rinse water is redirected into a holding tank and used a second time during the pre-wash phase. Since less water is used, Rone says less water is heated, which dramatically cuts natural gas costs, as well. “All the water that comes out of the press is reclaimed and used for pre-wash,” says Rone. Despite

saving water, wash quality has dramatically improved, he adds, along with productivity.

Rone is convinced he’s saving electricity, as well. “Each of our old conventional washers had three motors on them. Now, the tunnel has two, low-horsepower motors that drive the whole piece of equipment.”

The old, conventional washers will now sit idle

most of the time—reserved for back-up. This is because Rone also installed two new washer-extractors to handle loads smaller than 110-pounds. “It doesn’t make sense to put small loads into the tunnel, he maintains. Instead, smaller loads and the laundry’s food and beverage linens will run through 55- and 90-pound capacity Continental E-Series Washer-Extractors. The soft-mount washers produce 350–380 G-force extract speeds to remove more water from every load, and subsequently,

lower dry-time and natural gas usage. Moreover, they deliver a better clean than the laundry’s old side-load washers, according to Rone. “These front-load washers deliver better mechanical action and get our food and beverage goods much cleaner than our old machines,” he says. “We ran our steam lines through the washers so we can get our water temperatures up very high. We run our food and beverage goods at 170 degrees, which helps relax linen fibers and remove stains caused from food, lipstick and grease,” he adds.

Processing More per Hour

Thanks to the new tunnel washer and supporting equipment, Laundry Plus now processes in eight hours, what the laundry used to handle in 20 hours. This opens the doors for new customers and 15,000-30,000 additional pounds of linens per day. Rone has already secured new hospitality clients. “The tunnel’s flexibility and great programmability, make it possible to properly clean health care laundry, as well,” he says.

While he’s got each load transferring from module to module in around two minutes, Rone expects to lower transfer time to one minute and 40 seconds. When he does, he’ll be able to process 3,960 pounds of laundry per hour!

ROI in Three Years

In the end, the new equipment was installed to elevate the laundry’s PPOH, or pounds of laundry per operator hour, according to Rone. Just six months since the installation, the PPOH at Laundry Plus is 10-15 percent higher than before, and as a result, Rone expects a full return on investment in approximately three years.

See it Live! See the Laundry Plus continuous batch washing system and what owner Rick Rone has to say about it at www.girbauindustrial.com/laundryplus.

