

Laundry technology for the eco generation

Pellerin Milnor's PulseFlow CBW has proved perfect for the Campus Laundry at LaSelva Beach in eco-conscious California

Both businesses and private citizens are becoming increasingly aware of the need to invest in ecologically sustainable practices. Performance is no longer the sole criterion for machine development. Manufacturers and customers have a responsibility to demand machines that combine the highest performance with the smallest environmental impact.

California is a shining example of this marriage between technology and ecological concern. It is the birthplace of the most advanced technologies in the world while holding closely to the ideals of organic conservation. These beliefs are a combination of necessity and morality. California suffers devastating droughts but also has some of the most beautiful terrain in the United States.

This idea of a rebellion for excellence has created a perfect fit for the Milnor PulseFlow CBW tunnel washer. PulseFlow technology, developed by the Pellerin Milnor Corporation, has opened the conversation for the industry to rethink how laundry is processed. It provides a practical merger of several different methods of washing inside a CBW that were previously thought impossible to combine. The combination of standing bath washing and high-velocity counterflow rinsing during each transfer has achieved washing results never before seen with actual consumption results never thought possible.

This revolutionary, patent-pending system, PulseFlow technology, has been successfully implemented in healthcare, hospitality and linen supply applications worldwide. PulseFlow's superior soil removal and rinsing



CONSERVATION STATE: California has beautiful scenery as this view from Campus Laundry shows but it also suffers devastating droughts so it needs to conserve water and other natural resources

performance has been verified by independent test laboratories and has earned a Hohenstein Certificate.

PulseFlow combines traditional "True Top Transfer" with a standing bath and controlled intermittent counterflow in every process module. For most of each cycle the linen is processed in a standing bath so that the chemicals are undiluted and can therefore work better. Then a high-velocity counterflow is applied for a very short time as the first stage of dilution. The second stage of dilution, True Top Transfer, ensures that the goods move into far cleaner water every time. Dedicated rinse modules are not required, so the PulseFlow CBW achieves higher productivity with fewer modules.

When Campus Laundry in LaSelva Beach, California, wanted to replace its twenty-year old 12-module Milnor CBW it contacted the local dealer Western State Design and started a plan to rejuvenate the laundry washroom. This plan culminated with the purchase of a 68kg eight-module 76039 Milnor PulseFlow CBW. The refurbishment began in 2008 with a Milnor pivoting COINC incline conveyor and Milnor MP1603 35bar press. In 2009 the laundry added four Milnor 64058 double-batch pass-through gas dryers and a Milnor COSP112 two-level shuttle. The eight-module 76039 PulseFlow CBW replaced the 12-module Milnor CBW in 2010. As this increased the capacity, the laundry added two more 64058 gas dryers.

Campus Laundry is a healthcare plant that works in connection with the Monterey Bay Academy. It aims to supply quality linen to area healthcare businesses while

EFFICIENT AND PRODUCTIVE: the 76039 PulseFlow CBW washer has helped to reduce water and energy use while improving results and increasing productivity



providing work experience opportunities and scholarship programmes for young people seeking an outstanding education. Most of the operators are full-time skilled workers but the laundry also provides students with the chance to gain practical work experience.

Before installing the PulseFlow CBW, the laundry still used washer-extractors for 25% of its work but production manager Jacob Anderson said: "We are now able to run 95% of our work through the PulseFlow tunnel, even heavily-soiled items such as underpads." This has halved the plant's total water consumption and the average for all processed linen is now 4.17litre/kg.

PulseFlow Technology saves water by using interrupted counterflow so water only flows during rinsing, which takes place for the last 25 – 35% of each cycle. In this controlled counterflow water is delivered by high-volume inverter-driven pumps with a vigorous flow that removes suspended soil and used chemistry faster with less water. Each module has a dual purpose as it is used for both standing bath washing and counterflow rinsing. Water is always available as fresh water and nearly-fresh recycled press water are collected in a single tank mounted within the washer frame.

In addition to reducing water consumption, the laundry has been able to reduce both washing temperature and cycle times. This is in part thanks to the chemical supplier and innovations in chemistry. California has the strongest regulations for processing healthcare linen in the United States with the Enactment of Title 22. Campus Laundry is able to work under the required temperature stated in the strict regulations because of the combination of PulseFlow, dryer and ironer temperatures and state-of-the-art chemistry while receiving superior results to previous standards of excellence.

The laundry now processes linen at 60C with transfer times of 90 – 130 seconds. The 68kg 76039 PulseFlow CBW can process batch sizes from 50 – 80kg. The six 64058 double-batch gas dryers can keep up with the heavy demand of 115kg batches for thermal blankets without backing up the system as the they dry work fully in 20minutes.

Pellerin Milnor's 64058 dryer has the Energy Saver Seal between the dryer shell and perforated basket, which

directs the air flow through the goods to save energy, while maintaining short drying cycles and superior drying quality.

Milnor's Energy Saver Seal saves energy throughout the drying cycle. The modulating gas valve controls the inlet temperature, heating the linen safely, quickly and efficiently. As the absorbed water in the goods is heated, sensors collect and transmit data to the microprocessor, which automatically modulates the gas valve – thereby controlling the inflow of energy and the outlet airflow temperature.

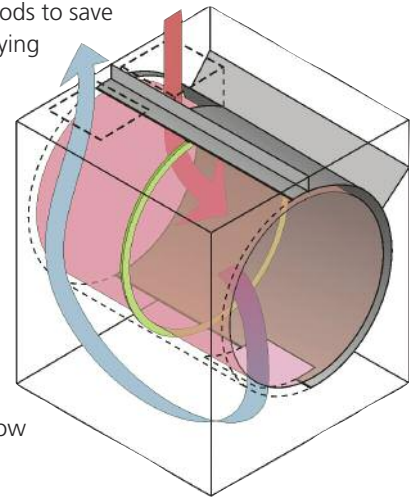
The Energy Saver Seal also ensures that the outlet temperature gives an accurate indication of the linen's temperature. As the water evaporates, the inlet temperature reduces because less energy is needed. Then, Milnor's "declare dry" software algorithm stops energy input at the level of residual moisture required.

Campus' new system with its faster wash times has reduced labour costs by 25%. It no longer needs to run three shifts to keep up with demand as it can now produce an equally impressive 18tons per day with one 68kg PulseFlow CBW in one 10.5hour shift.

Western State Design not only sold and installed all the new equipment but also helped Campus receive grant money from the state of California based on the present complete plant water and energy consumption. It is because of the addition of the Milnor PulseFlow CBW that the laundry was able to drop its total consumption figures allowing it to qualify for sustainable processing grants. This grant money allowed Campus Laundry to make replacing the previous Milnor CBW a reality, in turn increasing the productivity of the laundry.

After his experience of working with Milnor, Jacob Anderson said that anyone wanting to buy a tunnel washer should consider a Milnor PulseFlow CBW as it had proved a good return on investment and made a positive impact on the business. **LCNI**

PulseFlow and CBW are Pellerin Milnor's registered trademarks. Energy Saver Seal is a company trademark



LOWER TEMPERATURES:
The 64058 dryer with Milnor's Energy Saver Seal and intelligent air flow dries efficiently at lower temperatures



A GOOD RESULT:
Campus Laundry's owners Steve Syvertson and Greg Anderson have reduced water and energy consumption at their laundry thanks to Milnor's PulseFlow CBW