

PulseFlow delivers water savings at Comforta



MEETING REQUIREMENTS: Milnor agreed with Lindström's management that a Milnor 76028 PulseFlow 10-module tunnel would achieve the output required, improved water savings and other parameters set out in the tender document

Comforta Tampere is the first laundry in Finland to install a Milnor PulseFlow PBW tunnel and this is one of more than 70 Milnor PulseFlow tunnels now operating in laundries that process linen for hospitality and healthcare markets

Milnor's revolutionary PulseFlow® Technology has been exceeding performance expectations since its introduction to the laundry industry in late 2009. The company recently installed its 100th PulseFlow PBW™ tunnel washer.

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The laundry owner, the Lindström Group, has grown from a dye house to a textile rental specialist and the 164-year-old

family business has been a pioneer in its field right from the beginning. Lindström is committed to a policy of sustainability, corporate social and environmental responsibility. "Companies that are able to reduce their consumption of clean water by developing water distribution through diverse recycling and regeneration methods will be the ones that succeed. The availability of water is not self-evident in all of Lindström's current operating regions, and wastewater legislation is becoming increasingly stringent in both Europe and Asia."

Before introducing the Milnor PulseFlow tunnel washer, Comforta was equipped with an eight-module 76032 50kg first generation Milnor CBW tunnel that was installed in 1990.

The standard counterflow technology performed well but given Lindström's sustainable development objectives and the corporate social and environmental responsibility policy, Milnor's PulseFlow technology was the obvious choice to achieve Lindström's environmental goals.

With minimal fresh water consumption and continuous



LANDMARK EVENT: Announcing the shipment of the 100th PulseFlow PBW tunnel washer from the New Orleans factory, Milnor president Jim Pellerin (pictured below) told Milnor employees: "We estimate that our PulseFlow customer base is saving over 375million gallons (1.4billion litres) of fresh water each year." He added: "We are confident that PulseFlow will be a mainstay of Milnor's product line for many years, although we'll never stop looking for ways to make it even better."

water re-use through the integral RecircONE® pump arrangement, PulseFlow tunnels offer unparalleled efficiencies in wash quality and extended linen life. Milnor's PulseFlow Technology PBW tunnels can achieve as little as 2.5litres/kg (0.3gals/lb) fresh water consumption without compromising wash or rinse quality.

This is possible because the high-velocity intermittent counterflow is only activated during the last 25% of the cycle time. PulseFlow Technology also maximises wash chemistry because the water flow is only turned on after chemical equilibrium is reached. This enhances chemical use.

With proper chemistry and the short, high-velocity PulseFlow Technology counterflow, linen spends less time in the tunnel, thus prolonging linen life. PulseFlow tunnels are used to process all types of textiles from lightly-soiled hospitality linen to heavily-soiled work in the food and beverage sector. In all cases the PulseFlow tunnels produce excellent wash quality, performance and minimal fresh water consumption. There have been dozens of successful PulseFlow installations throughout 2011 and 2012.

Meeting sustainable development objectives

Lindström chose Pellerin Milnor Corporation's PulseFlow Technology because it allows a reduction in water and energy consumption while maintaining high washing quality. Comforta has increased its production whilst meeting its sustainable development objectives.

Lindström's tender specified a tunnel capable of processing either 15,000kgs (33,069lbs) of hospitality linen in eight hours (1,875kgs/hour, 4,133lbs/hour) or 12,000kgs (26,455lbs) of healthcare textiles in eight hours (1,500kgs/hour, 3,300lbs/hour) with batches of 50kgs (110lbs). Additionally, Lindström set out specific requirements for the wash process.

- Fresh water consumption of no more than 3.5litres/kg (0.4 gals/lb);
- Rinsing water quality to meet the predetermined requirements for alkalinity, pH and water hardness.

Milnor agreed with Lindström's management that a Milnor 76028 PulseFlow 10-module tunnel would achieve both the



output required and improved water savings.

The entire project was developed by Milnor's team of experienced tunnel experts. Milnor's Applications Engineering Department, Patrik Ulfves from Vestek, Milnor's official distributor in Finland, and Milnor International worked together to design an effective layout based on the customer's needs.

The tunnel was installed over a weekend with the help of Milnor International's field technician Pascal Robin.

During the start-up phase, Milnor's research and innovation engineer Dave Urquhart worked closely with the chemical company to optimise the tunnel performance. After testing was completed by Urquhart and Ecolab, the chemical supplier, Comforta Tampere's 10-module tunnel began processing batches on the Monday morning. After three months operation, Ecolab checked and reported back that:

- Fresh water consumption at Comforta was 2.87litres/kg (0.34gals/lb) on average;
- The whiteness of terry towels has remained excellent. No traces of greying have been detected; and
- Contrary to Milnor's suggestion, peracidic acid is now injected in module five instead of module six.

Panu Kinnari, manager, Process Development at Comforta says: "What was most surprising was the hassle-free startup. It was first time that I saw a new machine producing clean laundry with promised consumption figures from day one." ■