

ENERGY EFFICIENT TEXTILE PRODUCTS

CUSTOMER STUDY

PerforMAX™ sheets lower rag-out rates by 71% and cut conditioning time in half, saving PHSC money and time.

PHSC replaced their traditional blended sheets with the PerforMAX 100% synthetic sheets, lowering dry times, energy use and replacement costs. This resulted from faster ironer speeds, less conditioning time, less stains and longer product life.

About Portland Hospital Service Corporation

Portland Hospital Service Corporation is a cooperative laundry in Oregon that processes over 23 million pounds annually. They service 13 hospitals and 60 medical/dental clinics, and have been in business for 38 years. PHSC owns their textiles and rents products to their customers, they charge by the pound.

PHSC's Laundering Process

Sheets are laundered in a tunnel washer with 18 modules. Each module can process 150 pounds of linen. The water extractor at the end of the tunnel uses 35 bars. PHSC conditions their sheets for two minutes and there is no cooldown stage. The dryer cannot be bypassed at this time, because it is an automated process. There are about 30% blended sheets in circulation (24 months after implementing PerforMAX) that require conditioning for drying and untangling. The feeder and folder are manufactured by Chicago and the ironers by LavaTec.

The Case for Evaluating Energy Efficient Textiles

Portland Hospital Service Corporation was facing several challenges: increasing energy costs, shrinking linens, and a high percentage of rewashes and ragouts. Two years ago Portland Hospital Service began ordering PerforMAX (100% synthetic) flat sheets to combat their bottlenecks and problem areas in the laundry. With over a quarter of the linen pool consisting of flat sheets, any improvements would generate great benefits to their bottom line.

Deborah Lark, PHSC's C.O.O., sought any opportunity to reduce the amount of rag-outs. Many things can contribute to rag-outs such as staining, fabric degradation, yellowing,

tears, and excess shrink. PHSC was running all blended sheets (55% cotton/45% poly and 70% cotton/30% poly) before implementing PerforMAX.

PHSC was having a tough time accounting for the high rag-out rate on the blended sheets. They found that the products were becoming stained, ripped, and yellow, resulting in high rag-outs. They also found that the blended product was not as strong, which caused the sheets to tear easier and wear out faster. Shrinking product was also an issue: the blended sheets were shrinking at least 25%, causing the laundry to lose revenue and upset their customers with shorter sheets.

A visit was made to the laundry in May 2008, two years after PHSC initially implemented the PerforMAX sheets. The following data was gathered for a side-by-side comparison of the key metrics before and after implementing PerforMAX.

Getting Started with PerforMAX

Lark mentioned that she had initial doubts that PerforMAX could live up to its promises. She had a hard time believing that a sheet would be tough to stain in her industry and would last nearly 300 processings, so she sent samples of PerforMAX to the high-stain hospital areas to put them to the test. She was amazed when the product came back clean and white with only one regular wash. She was most surprised that the sheets did not shrink. After measuring numerous sheets with a tape measure she was shocked to see the sheets were the same size as the originals after 30 processings.

After injecting the initial quantities of PerforMAX sheets, PHSC had to dedicate one engineer to work with the machines to be able to process the new sheets properly. It took 4-5 days to adjust the folders and ironers so there were no glitches. The main adjustments were to add tracking tape on the belts of the folder to provide a better grip on the sheets, and to replace the ribbons on the ironer with rubberized ribbon.

Significantly Reduced Rag-Out Rate

Since the implementation of PerforMAX, PHSC has seen their rag-out rate go from 7% down to 2%. This is a 71% decrease in rag-outs. Lark mentioned that they still have 25%-30% of blended sheets in circulation, and believes that her rag-outs will be even lower once the blended product is fully cycled out. The lower rag-out rate naturally has an impact on the replacement rate. PHSC was replacing \$30,000 each month and now it has dropped to \$25,267, which is 16% overall.

Faster Dry Times - Ironers

Before implementing PerforMAX, PHSC ironers ran at 130 feet per minute. With PerforMAX, they are now up to the highest speed of 170 feet per minute. This represents a 31% faster speed, saving both time and money. Dale Walden, PHSC's plant engineer, noticed how the PerforMAX sheets slide against each other and untangle with ease, while the blended sheets (70% cotton 30% polyester) are soaking wet, and

require two hands with force to untangle. This attribute allowed the people feeding the iron to work more quickly and efficiently.

Faster Dry Times – Conditioning

Walden said that the PerforMAX sheets are practically dry after extraction from the tunnel washer. Conditioning the sheets could be bypassed, but the plant has an automatic system that will not allow that to happen. They were able to cut the conditioning time in half, from four minutes to two minutes. Again, two minutes of conditioning is necessary because there is still some blended product in circulation.

Increased Customer Satisfaction

Lark realizes that no change would be successful without the approval from her customers at the numerous hospitals and clinics that PHSC services. Before implementing PerforMAX, she received frequent phone calls from customers with complaints on the blended sheets. She is delighted that she is now able to offer her customers a sheet that is whiter, brighter, and keeps its size and weight throughout the life of the product, and has greatly improved customer satisfaction. Lark said that the time spent making the initial adjustments to the machinery was well worth the end result with PerforMAX.

Operating costs	Before PerforMAX	After PerforMAX	Change	% Change
Rag Out %	7%	2%	-5%	-71%
Conditioning Time	4 min	2 min	-2 min	-50%
Replacement Spend / Month	\$30,000	\$25,267	-\$4,733	-15.8%
Ironer Speed	130 FPM	170 FPM	40 FPM	+31%

Summary

Overall PHSC estimates that they are saving \$15,000 annually by utilizing PerforMAX synthetic sheets.

