Laundry Systems
for healthcare institutions

WHY INSTALL AN ON-PREMISES HEALTHCARE LAUNDRY?

1. Launder everything on premises.
A MILNOR on-premises laundry can handle all of a healthcare institution's clean fabric needs in a simple manner. MILNOR washer-extractors can process patient gowns, pajamas and personal apparel, adult diapers, towels, linens, mattress covers, blankets, pillows, plus such items as employee uniforms, slip covers and cleaning rags. Many types of rugs and drapes can be processed in a MILNOR on-premises laundry.

2. Enhance the image of your institution.
Many operators have enhanced their image of quality, and brightened their patient's environment, through tasteful fabric selection. Everything from linen to drapes can be selected in the colors and patterns of your choice and processed in your MILNOR equipment.

3. Get more use from less inventory.
An on-premises laundry provides more use from less inventory. Smaller stocks meet your needs since you are no longer dependent on pickup and delivery. Towels, linens, and patients' apparel can be laundered immediately after use and be ready again in about an hour if necessary. Smaller inventories mean less storage space and more money for investment elsewhere.

4. You won't be caught short.
On-premises laundering eliminates "caught short" situations. It gives you a ready supply of adult diapers, linens, towels, patient gowns, and pajamas. This is especially important during weekends and holidays when outside services are not available.

5. Control quality, sanitation.
On-premises laundering assures quality processing because you are in control. You can prolong fabric life by using a distinct formula for the specific degree of soil. MILNOR's E-P Plus® washer-extractors make this easy, with several specific formulas developed and field-tested by chemists for healthcare facilities. MILNOR washer-extractors also combine commercial washing action with the ability to wash at high temperatures so you can be sure sanitary safeguards can be maintained. MILNOR Staph Guard® washer-extractors, installed in a wall separating clean and soiled areas, are available for medium and large sized institutions where infection control is vital.

WHAT IS NEEDED FOR AN ON-PREMISES LAUNDRY?

1. Equipment
Operating a healthcare on-premises laundry is simple. Washer-extractor, dryer, sink, folding table, and supplies are generally all you need. Often, an institution's existing hot water, gas, and electrical services are sufficient. An on-premises laundry is basically an extension of your present services.

A top quality washer-extractor, with a proven track record in commercial use, brings professional laundering ability to your institution. It will make better use of water and soap, improve washing quality, and handle bulky items. It's best to get a machine with a large cylinder, which provides the ability to launder items such as diapers, mop heads, and cleaning rags.

Dryers can use gas, steam or electric heat (gas is regarded as the most efficient). For faster drying and less wrinkling of polyester materials, it is generally desirable for the dryer to be rated at a slightly larger capacity than the washer-extractor. An area for folding is necessary, too. A 2' x 6' table proves sufficient for most institutions. After folding, the items simply have to be stored.
2. Space
An on-premises laundry doesn't require much space. An equipment room or an existing linen storage room is adequate for many facilities. An unproductive room with a poor location may also be used or a combination of these rooms could be used in a large institution. A larger, central laundry can serve affiliated facilities near each other. A MILNOR dealer's laundry planning department provides specially prepared layout drawings for facilities at no charge.

3. Labor
In some institutions there is no need for additional help. Existing housekeeping and maintenance employees can handle the laundry during the slower parts of the day. Equipment that is easy to operate is essential to maintain consistent quality and production. MILNOR's E-P Plus machines are particularly easy to use. The operator simply loads the machine, pushes a button to select the formula, pushes the start button, and can go on to other tasks since the machine requires no more attention.

WHAT SHOULD YOU LOOK FOR IN A WASHER-EXTRACTOR?

1. Easy operation
The washer-extractor you select should have easy, automatic controls that make operation simple and free the operator to handle other duties. With MILNOR's preprogrammed E-P Plus machines, the operator simply matches the type of goods being loaded to the formula named for these goods ("towels", for example), then pushes a button. Operation of field-programmable formulas is similar. Formulas on the alphanumeric display can be named to match goods, making selection easy. Because so little judgment is required, new employees get the knack quickly. Substitute employees can take over with ease, too.

Automatic supply injection further reduces operator responsibility and helps ensure consistent quality. MILNOR machines readily accept liquid chemicals, making hookup fast and easy. Other factors to look for are a large, accessible door for fast loading/unloading, and door safety interlock which prevents opening while the machine is operating.

2. Laundering quality
Washing flexibility should not be sacrificed for operation simplicity. Only a commercial washer-extractor, with professional tumble washing action, can properly clean stained linen, soiled diapers, and dirty apparel.

A cylinder with a large diameter should be among the top priorities when choosing a washer-extractor. The large diameter provides the lift and drop action necessary to clean hard-to-launder items. When comparing machines, compare actual cylinder dimensions and specific cubic foot volumes.

Also, look for microprocessor controls which give a greater range of processing choices as well as more accurate control over how goods are processed. The preprogrammed formulas in MILNOR machines were developed specifically for the needs of healthcare facilities. They are not common-denominator formulas. The formulas differ in number, type, time and temperature of baths, as well as supply injection. By pushing a button, these formulas can be adjusted for either permanent press or all-cotton fabrics. The machines are available in 25 to 160 lb. capacities.

3. Heavy duty construction
Rugged construction -- from top quality materials -- is imperative if you expect long-term service. Check competitive brands to see if their construction stands up to MILNOR specifications. Compare spec literature. There can be a big difference in quality.

MILNOR machines stand apart from others with features like:
- large, tapered roller bearings and a triple shaft seal to shield the bearings from water
- the exclusive use of continuous, rather than spot, welding for greater strength and reliability
- the simplicity and dependability of heavy duty, single-speed motors
- pre-extract load balancing speed to reduce vibration and extend machine life, and
- a console constructed of heavy gauge materials
HSHS Shared Laundry Services consolidates laundry for 10 hospitals

New plant serves institutions in Central and Southern Illinois

BY BRUCE BEGGS, EDITOR

SPRINGFIELD, ILL. — HSHS Shared Laundry Services has been up and running for more than six months and by early 2011 will be responsible for supplying the laundry services for 10 hospitals in Central and Southern Illinois.

The new facility on the northeast side of Illinois’ capital occupies a former tanning supply warehouse. Its location just off I-55 offers easy highway access to any of the hospital customers within its roughly 120-mile service area.

As the on-premise laundries serving the Hospital Sisters Health System’s (HSHS) various Illinois hospitals deteriorated with age over the past decade, the prospect of a centralized laundry became a more frequent topic of conversation, says Mark Davis, the laundry’s director. But it wasn’t until a feasibility study illustrated the benefits of such a setup that the decision to consolidate was finally made.

Headed for 10 Million Pounds

At the time of our visit, the 28,000-square-foot laundry was processing approximately 4.8 million pounds annually for St. John’s Hospital in Springfield (owner of the shared-services facility), St. Mary’s Hospital in Decatur, and St. Francis Hospital in Litchfield—part of HSHS—plus Dr. John Warner Hospital in Clinton and Pana Community Hospital. It was at roughly 50% capacity, and some of the washing and flatwork-finishing equipment was idle because the workload didn’t justify its use.

The laundry will add St. Mary’s Hospital in Streator in July, followed by St. Anthony’s Memorial Hospital in Effingham by the first of the year, Davis says. All are HSHS institutions.

The added poundage will push the laundry’s workload to approximately 10 million pounds annually, but there may still be some capacity remaining to consider taking on additional accounts, he adds.

Carl Rees, who oversaw the HSHS laundry project for suburban St. Louis-based distributor Loomis Bros. Equipment Co., quipped that he hopes the plant doesn’t take on too much more work, since 10 million pounds is what it was designed to process.

Davis and Rees have been friends for 20 years and had many conversations about the health system’s laundry needs. Both say they are pleased to have seen the project they envisioned finally come to life.

Central Laundry Deemed Most Cost-Effective Choice

“All the hospitals (once) had their own laundry,” Davis says of the HSHS institutions. “But the hospitals didn’t put the capital into them over the years, so all the facilities were needing upgrades.”

For example, one hospital still uses an ironer that was installed new in 1961 and later rebuilt, he explains. “Corporate decided to do a study and see if they wanted to put (laundry) funding into the hospitals or if it would be feasible to build a central laundry, put all the capital money into this, and truck it out.”

In 2007, a consultant was hired to examine different scenarios, including possibly upgrading the St. John’s Hospital OPL to handle the workload generated by multiple facilities.

“They decided that building a central laundry would be more cost-effective, more feasible, than upgrading or trying to upgrade a facility already there to do it all,” Davis says.

The decision to proceed with the central laundry was made in early 2008 and announced to the system’s hospitals late that year.

There was some debate about whether to build the laundry in Springfield or in Decatur some 40 miles to the east, but when the warehouse building became available, its proximity to the health system’s corporate office and its highway access made Springfield the ideal choice.

The laundry operates a single, 8-hour shift Monday through Friday (deliveries occur Monday through Saturday). There are 37 employees, with 28 working in production, two in maintenance, three drivers, and a secretary. Don Beahringer is operations manager, and Jim Bishop is chief engineer.

Because there is more office space available than the laundry needs, some of the health system’s corporate staff members are headquartered there, too.

Project Focus: Green Operations and Equipment Redundancy

Based on a consultant’s plan, HSHS solicited bids from vendors and selected Loomis Bros. to head up the project, Davis says.

“We basically handled all the project management” after the health system selected a construction firm, says Rees, who is Loomis Bros’ vice president of sales. “We put together all the layout drawings, the installation drawings, and engineered the entire laundry.”

The project evolved through several different layouts, according to Rees, until the final design allowed for a minimization of worker movement.

Construction began in January 2009, and the...
The clean take-away conveyor transports goods from the dryers.

The plant uses laundry chemicals and injection systems made by Gurtler Industries and supplied by H.H. Coleman. Two 200-hp Lattner boilers generate heat for the plant, while Kaeser compressors supply the needed compressed air. Lint-collection and cart-wash systems are by Energenics.

**Standardization Desired, But Specials Still a Must**

An E-Tech automated rail system—completely floor-supported, Rees points out during our tour—is used to load the two eight-module, 150-pound Milnor tunnels. Each tunnel has its own single-stage extraction press, and there are four 275- to 300-pound dryers on each system.

Three stand-alone Milnor washer-extractors (60, 170 and 275 pounds) and another 300-pound dryer are available for rewash and small loads of specialty items.

“We’re trying to standardize all the hospitals as much as we can,” Davis says, “but there are restraints and all kinds of paraphernalia that the hospitals have that they want washed.”

The laundry purchases basic linen items from Phoenix Textile. “Everybody uses the same sheets, the same pillowcases, the same blankets.”

It doesn’t process mops and rags, so each hospital keeps small wash equipment on-site to process those goods, Davis says.

**Chicago Dryer Equipment Dominates Finishing Area**

The Milnor dryers automatically dump goods to a conveyor that carries the just-dried linen to a finishing area dominated by Chicago Dryer Co. equipment.

The inventory list reads like a Chicago® showroom: two Pik-Quik linen separators with cart shufflers; an Edge Maxx spreader-feeder; a King Edge spreader-feeder; two 2-roll, 52-inch Century ironers; one 2-roll, 42-inch Century ironer; two Air Chicago small-piece folders; two Air Chicago XL small-piece folders; a Skyline Mini folder; and a Blanket Blaster blanket folder.

The folders and stackers are equipped with Bridge linen-transition conveyors. The small but integral machines extend their mini-conveyors to discharge the folded items onto a master take-away conveyor, which then carries the clean linen to waiting pack-out workers. Sensors ensure the stacks are spaced on the belt.

“You’ve got various pieces of equipment on one belt, so you’ve got stacks of linen going by,” Rees says. “If you’ve got a situation with a stack coming up, instead of discharging and bumping into that one, it stops the conveyor on the folder and lets that stack go by.”

The entire system is tied into ChiLinc (Chicago® Laundry Information Network Connection). The data-collection system connects the laundry’s management team to the flatwork finishing systems, providing current and historical production data, operator efficiency rates, and individual machine utilization factors.

Rees and the Loomis team worked closely with the manufacturer to analyze the laundry’s flatwork needs and determine which equipment would fit best to reach its production and quality goals.

“It was sized to keep it flowing and keep everybody busy,” Rees says. “That’s where you get your production and keep your pounds per operator hour up where they need to be.”

“Whenever possible, we like the customer to come to Chicago,” says Carol Tyler, Chicago Dryer’s marketing director, who also toured the facility. “They can meet everybody who’s involved, ask questions of the engineers, and see how everything is made.”

**Pack-Out and Delivery**

Clean linen is stacked and stored by the cartload and moved to an interior staging area outside the laundry. Dozens of loaded carts covered in clear plastic fill this large room, where faxed or e-mailed orders are filled and drivers wheel the carts into their delivery trucks.

The hospital additions will require the clean-linen staging area to be relocated at some point in favor of adding more production space, Davis says.

The laundry uses three delivery trucks. Springfield and Decatur deliveries are made daily, while other facilities receive deliveries two or three times a week.

**Pleased with Outcome**

“This is the largest job I’ve sold,” Rees says. “We’ve done a lot of good-sized jobs, but generally it’s (replacing) all the flatwork equipment or all the washers. But to get the complete plant, with everything, that was huge. It was great for Loomis Bros.

“I’ve got a great relationship with Mark, and have for a long time. That’s a lot about what this is—you build relationships with people. Mark is a friend more than he is a customer. It feels really good that he’s happy with it and it has all worked the way he wanted it to.”

Davis would like to form a committee of hospital representatives so the laundry’s customers can provide feedback about the service, linen selection, etc. Right now, they all have good things to say.

“Everybody is quite pleased with how things are looking, how things are going,” he says. “There really are no issues right now. Things are really going very well.”

*ALN*
After being devastated by Katrina in 2005, Associated Hospital Services (AHS), located in New Orleans East, has recently completed its second equipment renovation. In August 2005 the laundry received 6’ of water damage from the hurricane decommissioning most of the existing laundry equipment. Despite the devastation, the laundry staff was determined to rebuild the laundry and they were able to do so in less than 8 months. AHS utilized Pellerin Laundry Machinery Sales Company, their authorized Milnor distributor, to restore one of their existing Milnor CBW® Systems and re-equip the laundry with additional Milnor and Chicago equipment.

In 2010, Associated Hospital Services completed a major equipment renovation with the acquisition of a new Milnor CBW® tunnel with PulseFlow™ technology (their 5th Milnor CBW®), affirming the laundry’s dedication to efficiency and savings. With this addition, the co-operative laundry is capable of achieving pre-Katrina production capacities, while achieving significant operational savings.

The cooperative laundry is currently producing in excess of 10,000,000 pounds of healthcare linen in only 40 hours per week, with less than 40 production employees. This calculates to an average PPOH of approximately 120. The new renovation will allow the laundry to continually increase their PPOH and become even more efficient. These production achievements begin with AHS’s dedicated employee base. Over 90% of their current employees worked for AHS prior to Katrina. Associated Hospital’s employees are just as dedicated to AHS’s full recovery as their managers.

The new renovation includes a Milnor 76039 8-Module CBW System with a 50 Bar Press and four Milnor 64058 pass-through gas dryers. The CBW has a new water saving feature called PulseFlow™. PulseFlow Technology allows the 8-module system to process healthcare linen at approximately a 101 second transfer rate while using 0.3- 0.4 gallons of water per pound. In simplified terms, Milnor still utilizes the superior True Top
Transfer counter-flow design that offers excellent dilution and bath separation. The PulseFlow design uses high-velocity counterflow through the wash zones, allowing chemistry, dilution and mechanical action more process time. PulseFlow increases the throughput capacity of the CBW; thus, an 8-Module Milnor PulseFlow CBW production is comparable to an 11-Module Milnor traditional, continuous counterflow CBW. Because the water is not continuously run through the CBW, but pumped at a higher rate at an exact time, the tunnel washer uses less water (gallons/lb.) to effectively process the linen.

After the PulseFlow CBW has cleaned the linen, the clean linen travels through a Milnor 50 Bar Press and to one of the four 64058 pass-through dryers via a Milnor 2-tier shuttle. Then, the clean, dry linen travels on an incline conveyor and into awaiting laundry carts. Associated Hospital staff use Chicago flatwork machinery to process various types of healthcare items for distribution.

Along with the PulseFlow CBW® system, Associated purchased two additional ironer lines. All three of the laundry’s large piece ironing lines include Chicago Edge feeders and Skyline Folders with Stackers. Their small piece ironing line includes a Chicago Skyline SP-4 four lane folder and four Bridges. The clean, dry, pressed and folded linen are automatically transferred to central take-away conveyors and carousels. The laundry also has four Air Chicago towel & gown folders, a Chicago Skyline Mini Knitted Fitted Folder and a Chicago Blanket Blaster System.

Associated Hospital Services, Inc. Cooperative Laundry began processing healthcare linen in 1971, almost 40 years ago. Since 1971, the laundry has trusted Pellerin Laundry Machinery to continually provide quality products and service for their facility. In 1971, the laundry originally purchased several StaphGuard® washers to effectively process healthcare linens. In total, five Milnor CBW® washers and presses, ten Milnor 58058 pass-through dryers, twelve Milnor 64058 pass-through dryers, and supporting rail and conveying equipment have been used in the facility. With the help of Milnor machinery, Associated Hospital Services provides clean linen to New Orleans area hospitals and medical centers throughout the Gulf South. There is no doubt that AHS has risen from the flood waters of Katrina and is here to stay due to their employees’ commitment and management’s determination. Pellerin Laundry Machinery Sales Company and Pellerin Milnor Corporation are pleased to be associated with this steadfast laundry operation, vital to our city’s recovery.

For more information on Milnor’s PulseFlow technology, please call 800-469-8780 or email mktg@milnor.com. To learn more about Pellerin’s successful installations, please visit www.pellerinlaundry.com/solutionSearch.asp.
Central Dakota Hospital Laundry upgrades

Elects to replace efficient 1992 tunnel system when financing becomes too good to pass up

BISMARCK, N.D. — Central Dakota Hospital Laundry (CDHL) Manager Greg Lorenz was faced with a challenging question. When should he replace an efficient tunnel system that has been working well for many years? Lorenz got his answer when the financing that was available became too good to pass up.

With financing in place and approval from its board, CDHL looked to The Minnesota Chemical Co. for a new Milnor tunnel washer. The local distributor sold the original tunnel system back in 1992.

The seven-module 76032 CBW® tunnel was in excellent shape after 17 years of continuous operation, effectively processing 3.2 million pounds of healthcare goods annually for two local hospitals, St. Alexius Hospital and Medcenter One.

Lorenz worked with Minnesota Chemical's Denny Franson to determine the most appropriate equipment for the updated laundry, based on its production goals and the linen demands of both hospitals.

With all of those factors considered, they chose to replace the “mint condition” tunnel with an eight-module, 110 pound-capacity 76028 CBW tunnel washer; a single-stage press, and three 64058 pass-through dryers with capacities of 200-320 pounds. Also recently installed in the laundry are an Imperial flatwork ironer, a Skyline large-piece folder, two Air Chicago XL small-piece folders and a King Edge feeder, all from Chicago Dryer Co.

The laundry relies on a Milnor CONWA weighing conveyor to both weigh the goods and introduce goods into the Milnor CBW when the system calls for the next load.

Lorenz uses clean, dry weight of goods to assess costs to the laundry's customers, as he believes it's a better system than costing by soiled weight.

After the goods are sorted and loaded into the tunnel, laundry staff members place empty carts underneath the pass-through dryers to wait for goods to discharge. CDHL staff also feeds the ironers and packages the processed goods for distribution to the two hospitals Monday through Friday, in eight-hour shifts. The staff includes 19 full-time employees, with an average tenure of 15 years.

The modernized, automated wash-to-dry process and automated flatwork processing are vital for CDHL because they ensure overall efficiency and reduce linen loss from transport, according to Lorenz.

Now, there is less production downtime and reduced linen loss with this new system, which positively affects the laundry’s bottom line and promotes excellent patient care.

While the machinery is paramount to CDHL’s success, so is the laundry’s management and its dedication to preserving that success.

“Greg is meticulous, as is his mechanic, Jay Seeberg,” says Franson about why CDHL gets its job done so well. “This is the cleanest, most well-maintained laundry you’ll ever visit. You could eat off the floor!”

That is quite a compliment considering the laundry processes surgical linen and patient linen among other healthcare goods.

Working overtime to get the job done

In order to have any tunnel system perform to its full potential, proper machinery layout and installation are vital. Minnesota Chemical and CDHL worked with Milnor’s Application Engineering Department to design the conveyor system, the tunnel-system layout, and flatwork finishing.

Once they had confirmed the machinery locations, the real challenge began — getting the old system out and the new one installed in less than seven days.

Throughout the weeklong installation (the average tunnel installation is 14 days), Gary Halloran, Milnor’s field and service engineer, had to work swiftly to meet the strict deadline. Four Minnesota Chemical service technicians came in from the distributor’s Iowa and Minnesota branches to assist him.

Meanwhile, Lorenz and his staff worked overtime to process the incoming linen using three Milnor Q-Series washer-extractors — two with 90 pounds capacity, the third with 50
pounds — originally installed with the tunnel system in 1992.

Lorenz had arranged to have the installation performed at the time of lowest linen usage of the year. He met with hospital staff to conserve linen as much as possible, and he built up his linen par levels at the hospitals.

With teamwork and a plan, Halloran made his deadline, with hours to spare. After a few test loads, the new tunnel’s wash quality was approved. “I had lots of good people to work with, from the rigger, to the Minnesota Chemical staff, down to the people who worked in the laundry.”

Lorenz and his staff were so pleased with the outcome, the manager wrote to Minnesota Chemical President Mike Baker. Lorenz complimented Franson, whom he said “isn’t afraid to pick up a broom, turn a wrench, or do anything that will keep the job moving along.”

With this new, improved system, the laundry has seen excellent results in utility savings, process times, and overall processed-linen poundage, according to Lorenz.

The laundry even had to slow the tunnel so the pre-sort area could keep up. And, since switching from a two-stage press to the 50-bar, single-stage press, its loads each take four to five minutes less to dry. Moreover, with transfer times of 3 minutes, 14 seconds, the entire laundry’s hourly output has reportedly increased 8.5%.

"Milnor strives to make quality machines using the best and latest materials and technologies." "This combination makes a high-quality laundry machine that brings many years of service." — Sam Cole, Director of Maintenance

Director of Maintenance Sam Cole was eager for Carolina Linen Management to purchase the tunnel because he knew how well it would perform. The company already had two other 1992 Milnor tunnels.
### HOSPITAL WASHER-EXTRACTOR CAPACITIES

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<th>Double sheets</th>
<th>Twin sheets</th>
<th>Pillow cases</th>
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*These figures are based on sample items. Weights and sizes of some brands differ, and therefore the figures should be used only as guidelines.*

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