

Fabio Perini S.p.A. and KPL Packaging S.p.A. offer a start-to-finish, one-source solution

In the last few years, the evolution in converting processes has led to increased automation. High cycle rates, automated reel change systems and reductions in product change times are just some of the innovations we have witnessed in this last decade. At the cutting edge of these technological developments, Fabio Perini S.p.A. is constantly working to offer new, focused solutions that enhance the entire converting process, benefit the environment and improve the working conditions of machine operators. Committed to being one step ahead in the development of new technologies for tissue converting, the company has always been the market leader.

John Dalke

The new TIME800 line - an automatic model for the production of toilet rolls and kitchen towels, even low-density rolls - is a prime example of how an intelligent combination of technological developments can lead to increased ecological and economic efficiency while maintaining top-level production excellence. Above all, the TIME800 line combines all of these attributes in a single, unified converting line.

At the Fabio Perini S.p.A. "Printemps in Lucca" event on March 27, 2009, the converter community was able to see a new production line which is completely integrated from the unwinder right up to the KPL Packaging S.p.A machines. The first complete, integrated and unique solution: Now, with the TIME 800, customers are offered a complete turnkey solution. Fabio Perini S.p.A. is the only company on the market that is able to offer a start-to-finish, one-source solution.

THE NEW TIME 800 LINE UNITES A MULTITUDE OF TECHNOLOGICAL DEVELOPMENTS. Starting with the unwinder, and going to the printer, the embosser and the rewinder, all the way up to the log saw and finally to the wrapping and bundling areas, this new line embodies a series of innovations aimed at enhancing production performance and further protecting the surrounding environment.

In 2005, the unwind backstand model 375 was the first machine to guarantee on-the-fly reel change at a speed of 150 m/minute. Today the machine's potential transfer speed is 300 m/minute. The model 375 has also been updated in terms of web tension control, with dancer rolls having been replaced by load cells. And also, in order to guarantee proper web flow, flat planes called Airfoil have been added. Through an air cushion generated by the Venturi effect, it is possible to obtain a relative flow between the plies while working at different unwind backstand speeds.

THE TIME 800 CONVERTING LINE ALSO INCLUDES THE 4-COLOR 984 I_PRINT PRINTER. New on the market, this innovative superior-category machine features the new gearless system. Through a series of linear slides it ensures top-level precision even at high speeds (800 m/min). The new PCS (Positioning Control System), patented by Fabio Perini S.p.A., facilitates roll approach while the overall operation has been simplified by automating some of the interventions that until today had to be carried out manually by qualified personnel. The I_Print 984/4 makes a wide range of prints possible, thanks to the option of mounting variable diameter cliché sleeves, from a minimum of 220 mm to a maximum of 480 mm.

AS AN EMOSSER, THE LINE INCLUDES THE NEW 479/D MULTI-FUNCTIONAL UNIT. Designed to confer the utmost versatility and flexibility, this unit - as all new devices on the line - have also been optimized in terms of ease of use, error reduction and enhanced safety of operation.

The 479/D is a machine that can work at high speeds, maintaining its lamination features unaltered. Thanks to a highly innovative structure, the new product change system makes the machine extremely flexible and allows the sleeves to be freed automatically and replaced in about 12 minutes. The rubber rolls are moved by the new PCS, which ensures perfect embossing and adjustment from panel. The lamination unit can move back automatically on slides for maintenance and cleaning. All the rolls are independently driven, ensuring excellent web control in every part of the machine.

THE LINE INCORPORATES THE MODEL 323/2 UNWINDER FOR COREWINDERS. This machine unites all of the developments that unwinders have undergone over the years, and unites them in one compact, modular structure. The layout is simple and rational, and the dimensions have been greatly reduced, facilitating operator use. In fact, the 323/2 is designed around the operator, with a new single reel loading system for all four reels and easy-to-use controls.

In the gluing unit, the roll system has been replaced with the new Lite Coater system that continually checks the quantity of glue being distributed. The result is a drastic reduction in the amount of glue needed, meaning protection for the environment, cost savings and reduction in maintenance and cleaning times.

THERE IS PRACTICALLY NO PART OF THE LINE THAT HAS NOT BEEN OPTIMIZED. Everywhere Fabio Perini S.p.A. innovations achieve cost savings and reduce environmental impact. The new, Fabio Perini S.p.A.-branded LitePly technology for the production of single-strip cores reduces the amount of coreboard needed for production by 20% and glue by 80%. At the same weight, these cores are more resistant than double-strip cores, and the production process is more efficient thanks to a drastic reduction in machine stoppages for maintenance interventions. Consistent commitment to protecting the environment yields a positive effect on costs. The single-ply core is a good example, benefiting both business and the environment.

FABIO PERINI S.P.A. HAS ALSO ENHANCED THE SINCRO REWINDER AND ITS "SURFACE-DRIVEN REWINDING TECHNOLOGY". This efficient and highly reliable technology exists since the 1990s. Continually improved and perfected, it is now in operation in over 550 machines worldwide. Today the machine can boast of perfect winding control thanks to a sturdy system of servo-controlled punzoncini. This innovation, presented in 2005, gives Fabio Perini S.p.A. greater control of roll density and consistency during the entire diameter growth phase. Using "punzoncini", all winding parameters, such as perforation length, sheet count, log diameter, web tension and winding adjustments, can be controlled from the operator panel and modified while the machine is running.

With the 790 Coreless rewinder, presented in 2007, Fabio Perini S.p.A. took another generational leap in terms of product flexibility and savings in production costs. Their new "swing machine", using the WEBTUCK technology, is able to rewind webs for the formation of rolls with or without a central core, with a diameter range from 110 to 450mm. This new mechanical web pick-up system means it is now possible to start winding both on mandrels and on cores without the use of glue! This saves money and results in a 100% ecologically friendly product with no additives.

THE TIME800 REWINDER PRESENTED IN CONJUNCTION WITH THE TISSUE WORLD 2009 show employs the world-renowned consolidated Sincro technology implemented in the TIME700 with the concepts of draw rolls and combined central and surface winding, adding the core movement of the finished roll through motorized plugs. All winding parameters can be changed directly through the control panel without there being any need to stop the machine. It is possible to produce rolls with external diameters that vary between 90 and 160 mm, up to the machine's maximum capacity of about 60 logs/minute with punzoncini and 80 logs/minute without punzoncini - the concept is patented - at a speed of about 800 m/minute. These results are absolutely exceptional! Unlike the machines that preceded it, the TIME on demonstration today features independent drives for the bowed roll, and also for the upper roll and the lower draw rolls. Furthermore, machine evolution has led to the creation of a model without a flat belt and to an improved web thread system that is now complete along the entire winding process.

THE CUTTING OF THE LOGS INTO ROLLS OF TOILET PAPER AND KITCHEN TOWELS IS CARRIED OUT BY THE 176E AND THE 184D. These two highly efficient log saws represent the top of their range. Like the model 176E, the 184D is a highly flexible four-lane log saw that continuously cuts toilet roll and kitchen towel logs in a diameter range from 90 to 160 mm with traditional clamps and three ranges of shells. The 184D utilizes two cutting blades, enhancing the quality of the final product. The blades are smaller and can turn faster as a result, thus reducing speed impact on the log.

The 184D attains cutting speeds of up to 300 strokes/minute for lengths of 80 to 120 mm and up to 165 strokes/minute for lengths of 220 to 300 mm. A four-grinding-wheel sharpening system patented by Fabio Perini S.p.A. guarantees that the quality of the cut stays the same from start to finish.

KPL PACKAGING S.P.A. PROVIDES ANSWERS TO THE MARKET. Completing the line are new, highly efficient machines made by KPL Packaging S.p.A., a company that has raised the flexibility of its latest machines to a new level. The Casmatic Cube is the first tissue roll wrapper that can produce single, double and triple layer packs. The 3-

layer pack configuration is revolutionary for tissue products and opens up new marketing opportunities for tissue producers through new pack configurations that make their product stand out.

THE VERY INGENUOUS SOLUTION OFFERED BY KPL PACKAGING S.P.A. BRINGS MANY ADVANTAGES TO CUSTOMERS. The system still allows high-speed production of single and double layer packs because the production cycle for these types of packs has not changed. Nor is there any influence on changeover times because there is only one additional part involved in the changeover procedure to make the 3 layers. The Casmatic CUBE is equipped with the same automatic changeover with motorized adjustments as is its sister machine, the Casmatic A5T. Twenty-two servo-motors make precise and repeatable adjustments, including motorized adjustment in the overhead flights unit, combining fast changeovers with maximum wrapper flexibility and a high level of productivity.

ANOTHER ROLL WRAPPER RECENTLY DEVELOPED BY KPL PACKAGING IS THE CMW 200. It has been designed to satisfy the growing needs of the consumer market for small-count packs. To meet these production needs and ensure economic returns for producers, it is essential to have a dedicated, high speed wrapper. So KPL Packaging S.p.A. has developed the CMW 200, capable of wrapping single toilet rolls, 2-4-6 toilet roll packs, a single kitchen towel roll and two-kitchen-towel-roll packs with a maximum output speed of 200 packs per minute. This speed is attained on the CMW 200 without sacrificing quality, thanks to the use of the traditional reciprocating wrapping cycle with elevator, overhead flight unit and folders. And the KPL Packaging wrapping cycle can easily handle soft rolls with high levels of compressibility, since it keeps the rolls under control during the whole cycle. The CMW 200 is a compact machine which offers the operator easy access and requires only a modest amount of floor space for its installation.

FINALLY, WE SHOULD MENTION THE CASMATIC S35. True to Casmatic bundling machine tradition, the Casmatic S35 has been complemented with specific infeed units to achieve maximum flexibility. With this unit it is possible to produce bundles starting from packs by applying the DVL or the CMD infeed, or the RP infeed can be used, a unit which enables the S35 to bundle single rolls as well as packs. Just using printed polyethylene, the product can go directly from the Casmatic S35 onto the store shelf. Thanks to its innovative cut and seal unit, the Casmatic S35 can achieve production rates that are significantly higher than those of other bundlers. It features four bar couples moving round two circuits and following a specifically programmed movement cycle. Each bar is equipped with an independent motor and a microprocessor which checks the position and temperature of the sealing plate and cutting wire, thereby guaranteeing production quality. Using distributed intelligence, this system can attain speeds of up to 35 bundles/minute.

“FOR US THE TIME LINE WAS A GREAT EXPERIENCE,” say the Fabio Perini S.p.A. people, “because we were able to show all those actively involved in the tissue market something different, something unique - and that we have always and will always supply technical innovations that benefit our customers.”o