

E.C.H. Will

Installing the world's largest and widest cut-size converting equipment

Portucel Soporcel took a single-supplier approach in equipping its cut-size converting department at their new mill. The project features three cut-size converting lines within the cut-size converting area supplied by companies of the Körber PaperLink Group (KPL): E.C.H. Will, Pemco and W+D-Langhammer. Heading the KPL team, E.C.H. Will was also responsible for selecting and arranging sub-suppliers, from paper reel to finished pallet.

Ultimately, the facility's cut-size converting department includes two E.C.H. Will high-speed 16-pocket cut-size sheeters, with Pemco dual high-speed packaging lines and W+D-Langhammer automatic palletisers. These lines are primarily for large orders of A4 and letter-size products. The third line focuses on flexibility and productivity, with an E.C.H. Will 8-pocket sheeter matched to a flexible Pemco packaging line, a bulk packaging line and a W+D-Langhammer high-speed palletiser.

Integrated Manufacturing Execution System (MES) software talks with the mill's production planning system (PPMS), helping to maximise productivity and reduce waste by intelligent management of the entire converting process.

"Having begun operation with the first two lines in September, we are

already seeing the benefits of working with E.C.H. Will," said project manager Ângelo Loureiro. "We value not only the equipment, but also their expertise and service."

The relationship between KPL and Portucel Soporcel was formed years before this project. The Group's mills currently run eight E.C.H. Will-Pemco cut-size lines. The KPL companies' solid understanding of their partner's technical and marketing needs has led to comprehensive system solutions that fulfill their sales and marketing requirements. E.C.H. Will, Pemco and W+D-Langhammer have increased production through automation – smartly integrating the MES into the customer's existing order and material management – as well as through fast changeover times, higher packaging speeds and expanded format and pallet specifications.



The 16-pocket high-speed cut-size sheeter



The Pemco Model 137 stacker accumulator

E.C.H. Will also brought this challenge to sub-suppliers, to achieve even higher labeling speeds for pre-printed pressure sensitive, thermal printed and top labels (reams and cartons), as well as automated pallet labeling. Capabilities also include ink-jet marking, sheet insertion and strapping. "We're extremely satisfied with the results, and the great efficiency and flexibility these choices afford us," said Ângelo Loureiro. "All three KPL companies have delivered on their reputations for looking after customer needs."

The Portucel Soporcel group sought the most reliable cut-size converting equipment. And the need was met by E.C.H. Will's 16-pocket cut-size sheeters, each having six double unwind stands with zero-speed splicing, and the ability to produce more than 800 t/d of cut-size paper. Speed reaches 256 reams per minute. First installed at Setúbal, these sheeters are world's widest (3.48 m).

Connected to each sheeter are two Pemco high-speed packaging lines: Model 39S ream wrapper (up to 140 reams/min, kraft and polypropylene wrapping), Model 124 ream inspector (ensur-

ing that only good quality reams proceed to the case packer), Model 137 stacker accumulator (600 ream capacity allowing the line to run even with a downstream stoppage), Model 162 case packer (up to 30 cases/min), Model 123 case inspector (ensuring that only good quality cases proceed to the palletiser). Completing each line, W+D-Langhammer delivered a high-speed, heavy-duty palletiser for up to seven layers (max 2.3 m high, 1.5 t/pallet), to fill shipping containers more efficiently. One operator can manage both palletisers on a 16-pocket line, thanks to a sub-supplier's fully automated pallet labeling solution and Automated Guided Vehicle (AGV) pallet pick-up. AGVs also deliver the reels to the sheeter.

While the two 16-pocket cut-size lines focus on output, the flexible 8-pocket cut-size line combines versatility and productivity. At 400 m/min, the 8-pocket sheeter, sporting five double unwind stands with zero-speed splicing, can produce up to 100 reams/min and all formats between A4 or letter-size and 30.84 x 45.72 cm. Hole punching is flexible, too, with four punching units to meet various market requirements. With

automatic slitter positioning and quick-change features, the machine is designed to minimise format change times.

Discharged reams are directed into one of two packaging lines, either a bulk line for cases with 2,500 loose sheets, or a highly flexible Pemco line featuring: sheet inserter (from sub-supplier, inserts top and bottom promotional sheets used with clear polypropylene wrap), Model 33 ream wrapper (up to 100 reams/min, kraft and polypropylene wrapping, semi-automatic size change), Model 124 ream inspector (ensuring that only good quality reams proceed to the case packer), Model 137 stacker accumulator (480 ream capacity, allowing the line to run even with a downstream stoppage), Model 163 case packer (up to 22 cases/min, semi-automatic size change) and case inspection/rejection (ensuring that only good quality cases proceed to the palletiser). The palletiser is identical to those on the 16-pockets lines. High automation, a moveable touch-screen and excellent accessibility facilitate operation with minimal manpower.

The brand new plant allows E.C.H. Will to demonstrate their expertise as

a turn-key supplier, drawing on experience from installations around the world. "It's turn-key in that we developed the systems, specifying and adjusting them to meet requirements optimally, and delivered, installed, set-up and readied them for testing," noted Klaus Aarestrup, managing director. "Yet, it was also a partner relationship, communicating closely at every stage. We help with their planning, sourcing and relevant technical matters."

The Manufacturing Execution System (MES) keeps production running smoothly by bridging the gap between the Enterprise Resource Planning system (an ERP called PPMS) and local machine controls.

Furthermore, ExpertOnline contains all relevant operation manuals, programs, software, etc., and, when the mill requests, it provides remote access to the machines by KPL experts. This allows quick diagnosis of machine disturbances and immediate support, either online or by sending an expert onsite. It's also used for training and updating documentation. ■