

For years, Koehler has been implementing  
Voith innovations

## Partners in thermo paper market leadership

**AL FARO**  
bar-gelateria

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LUNGOLAGO REGINA ADELAIDE 34  
PARTITA IVA 02996820235

OPERATORE 01

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GELATI  
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Euro

2.500  
1.250  
1,29



The August Koehler AG company based in Kehl uses Voith paper machines to produce its thermo papers.

*“The Koehler PM 2 is state-of-the-art  
when it comes to thermo paper.”*

*Tobias Müller, Sales Engineer in the thermo papers segment at Voith Paper*

**In coming years the production of thermo papers will represent a significant growth market, and the August Koehler AG paper mill has certainly achieved an excellent position in this international market. The intense cooperation with Voith Paper has made a significant contribution to the remarkable market success of the company.**

“The PM 2 at Koehler is state-of-the-art when it comes to thermo paper,” says Tobias Müller, sales engineer in the field of thermo papers at Voith Paper. Müller’s statement underlines how important the systems used at Koehler are for Voith as reference projects. The two companies have been close partners for over 20 years with technical innovations from Voith used effectively at the production facilities of the August Koehler AG company, located in Kehl. Voith was a supplier from the first hour with its delivery of a paper machine and an offline coating machine back when

the Kehl plant was being built in 1988. In 2001, an additional Voith paper machine and offline coating machine with an annual capacity of 120,000 tons followed with production line 2. The PM 2 has a wire width of 4,750 mm and a design speed of 1,500 m/min, producing only thermo base paper in a basis weight range of 40 to 80 g/m<sup>2</sup>.

The first film press for thermo pre-coating was also used in the PM 2. At the time, this was completely unique in the field of thermo papermaking. Applying a one-sided precoat with a

SpeedSizer ensures that the necessary barrier and insulating properties are provided for the subsequent thermo coat.

**Reduced curl and optimized web lead**

The thermo-sensitive coat is applied in the SM 1 and SM 2 coating machines at the Koehler facilities in Kehl. Both machines were converted by Voith in 2001 to curtain coater technology. Instead of using an applicator roll, the coating color is now applied directly like a



*The ModulePro C jet spray dampener moistens the paper web in the coating machine.*



*The SM 2 coating machine at the Koehler facilities in Kehl applies the thermo-sensitive coat to the paper.*



liquid curtain to the paper web. In order to reduce curling that occurs for papers with one-sided coating (warping in the paper), each of the two coating machines were equipped with a ModulePro C jet spray applicator system in 2006. The ModulePro C compensates for the roll tendency of the paper by releasing frozen warps that remoisten the web on the non coated side. The new technology

uses a contactless mechanism, which has made it possible to increase the operating speed by 100 meters per minute.

In the summer of 2006, the pre-drying section of the PM 2 in Kehl was equipped with seven ProRelease<sup>+</sup> stabilizers, an innovation from Voith Paper. The stabilizers ensure that the web run is optimized in the first

drying group, which is particularly sensitive. This resulted in a considerable reduction of the paper draw and an additional increase of the production speed by about 30 meters per minute. These successes were determining factors in the decision a few months later to also equip the PM 1 with seven ProRelease<sup>+</sup> stabilizers. Around the same time when the ProRelease<sup>+</sup> stabilizers



*The PM 2 at the Koehler facilities in Kehl is used exclusively for the production of thermo papers in the basis weight range of 40 to 80 g/m<sup>2</sup> and at a production speed of 1,600 m/min.*

were built into the paper mills, a NipcoFlex calender was built into each the SM 1 and SM 2 coating machines. These replaced the soft calender originally integrated into the coating machines. Using the NipcoFlex calender it was possible to significantly improve the smoothing process, which is made apparent by the finish quality of today's thermo papers.

In past years, Koehler AG was able to further secure its position as market leader in the field of thermo papers. More than half of the thermo papers produced worldwide are made by Koehler. The development of the PM 2 in Kehl is likewise impressive:

Originally built for a design speed of 1,500 meters per minute, today the machine runs at more than 100 me-

### A brief cultural history:

#### Thermo paper



Thermo paper can be found on bananas, in hospitals and at concerts. The reason for this is that today labels, ECG printouts and admission tickets are printed for the most part on thermo paper.

The color inlay technique, for example, is used with thermo paper to achieve counterfeit-proof results. Colorful inlays in the paper reveal a different colored layer when the paper is torn in two. Counterfeiters don't have a chance!

Thermo direct printing involves heating the thermo paper in particular spots to blacken the paper. Color printing, in contrast, requires a thermo transfer ribbon. A color ribbon is placed between the paper and the thermo printhead. The heat melts the wax particles in the ribbon and the pigments are transferred to the paper. Intense sunlight can considerably reduce the durability of thermo printing. Keeping thermo printed materials in cellophane or in wallets can also reduce the life of the print. This results from the use of chemical plasticizers and tanning agents. However, thermo paper with a 25 year shelf life guarantee does exist.

ters above this capacity, thus making it possible to increase the daily capacity of the machine to over 400 tons of thermo paper.

#### Contact



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