



# The Evolution of Dryer Fabrics

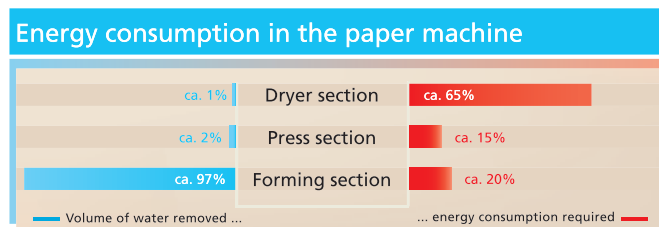
*secoplan.*

Heimbach – wherever paper is made.



## The Dryer Section – the most energy intensive process

Over the years the demands on paper manufacture have significantly changed. Nowadays economy and efficiency are rated above everything: More production and lower energy consumption with the same or improved quality.



### Papermakers know the problem:

The dryer section is the most energy intensive and therefore the most cost intensive part of the papermaking process.

About two-thirds of the total energy requirement is needed by the dryer section.

In order to remove the same volume of water from the sheet, the energy consumption on the dryers is up to one hundred times higher than in the forming section.

High energy usage and the continuously rising costs of energy are now the main sub

ject of interest for the dryers.

The concept and construction of our new product range SECOPLAN are based on the optimisation of energy usage.

Everybody talks about product advantages. Heimbach talks about their combination.

Heimbach has always aimed to achieve a balance of all fabric characteristics – not only the peak performance of one feature, since a product can only be as good as the efficiency and function

of its weakest feature.

Based on this principle Heimbach developed the new product range SECOPLAN – the evolution of dryer fabrics.

## Contact surface and evaporation

Amongst papermakers the rule applies: A high contact area is the main requirement for a good dryer fabric.

We disagree: a high contact area combined with optimal distribution of the evaporation channels is the ideal solution. Neither is absolute. It is the balanced interplay of these two characteristics which leads to the best possible energy consumption.

### SECOPLAN from Heimbach

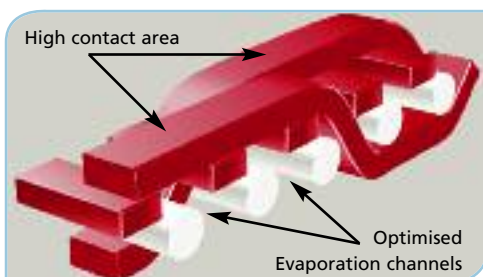
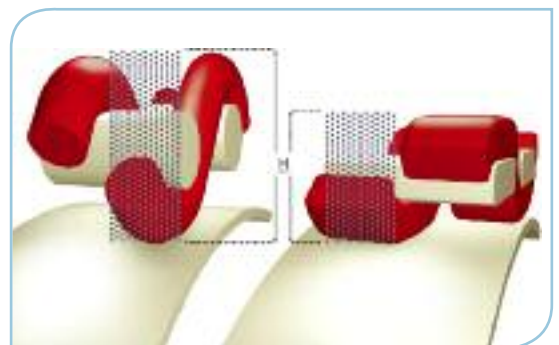
The new SECOPLAN product range, thanks to its flat monofilaments and its special construction, has a high contact area on the paper side and at the same time encourages optimal moisture removal by its open structured roll side. Simultaneously low extensibility values are guaranteed. As a result running at permanently high tension is possible – and therefore high contact pressure – with virtually no lengthening or width loss.

### With its flat monofilaments SECOPLAN provides:

- A homogeneous, even surface, resulting in
- An optimal sheet contact, so that
- A high level of heat transfer between sheet and cylinder occurs, and therefore
- Optimal usage of the energy applied results

### The special construction offers:

- even distribution of open areas
- open roll side for better moisture removal
- short, optimised evaporation routes



The moisture is transported away quickly, the developments of an insulating „steam cushion“ is prevented.

**SECOPLAN increases drying efficiency**

## Dimensional stability and wear volume

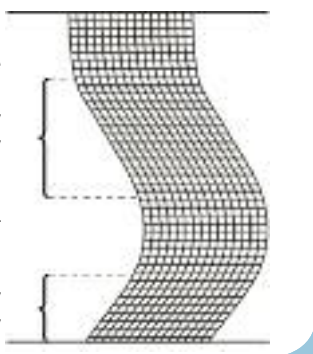
Increasing machine speeds demand increased reliability of dryer fabric characteristics.

Porosity in specified range

Significantly reduced porosity

Porosity near specified level

Significantly reduced porosity



**SECOPLAN from Heimbach provides an even air permeability profile of the fabric throughout its whole life.**

### **Dimensional stability and Air permeability**

The SECOPLAN monofilaments form stable crossing points which provide a high level of dimensional stability.

This ensures distortion-free running, the fabric mesh remains unchanged in its pattern.

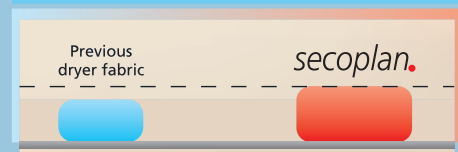
Air permeability differences across the fabric width are prevented and the CD moisture profile is even.

### **Wear volume and life**

Long life is an important demand of the paper maker on his clothing. This requires fabrics with a high wear volume.

### **SECOPLAN ensures a high wear volume.**

#### **Wear volume of yarn cross-sections**



The yarn cross-sections for the SECOPLAN product range are optimised with regard to contact area, wear volume, tensile strength and the resulting fabric caliper.

**Despite this SECOPLAN is one of the thinnest dryer fabrics on the market.**

**SECOPLAN offers high life potential combined with low caliper.**

## Seams and air permeability spectrum

The dryer section requires high performance fabrics with a consistent performance profile.  
The SECOPLAN range is right for virtually all positions on the most modern machines.



Spiral seam

### Rapid seam closing, high seam safety.

The special seams make SECOPLAN dryer fabrics almost imperceptably „endless“.

They provide:

- Easy and fast closing
- Air permeability of seam identical to fabric
- A virtually mark-free seam zone
- High seam tensiles

### secoplan.XF

~ 1.000 m<sup>3</sup>/m<sup>2</sup>h to ~ 1.900 m<sup>3</sup>/m<sup>2</sup>h  
~ 60 cfm to ~ 120 cfm

SECOPLAN are available in a comprehensive range of graded air permeabilities for all positions.

### secoplan.SF

~ 1.300 m<sup>3</sup>/m<sup>2</sup>h to ~ 3.200 m<sup>3</sup>/m<sup>2</sup>h  
~ 80 cfm to ~ 200 cfm

### Convincing in their totality:

SECOPLAN fulfils all the demands on a dryer fabric – evenly and in a balanced way. SECOPLAN, the new dryer section product line of high performance fabrics with consistent performance profile.

### secoplan.F

~ 4.500 m<sup>3</sup>/m<sup>2</sup>h to ~ 10.500 m<sup>3</sup>/m<sup>2</sup>h  
~ 280 cfm to ~ 650 cfm

**SECOPLAN from Heimbach – the evolution of dryer fabrics**

**Heimbach GmbH & Co. KG** • D-52348 Düren • phone +49 (0) 24 21 802-0 • fax +49 (0) 24 21 802-700  
heimbach-paper@heimbach.com • www.heimbach.com

**Heimbach Asia (Singapore) Pte. Ltd.** • 9 Temasek Boulevard • # 08 - 03 A Suntec Tower Two • Singapore 038989  
heimbach-asia@heimbach.com

**Heimbach Ibérica S.A.** • Apartado 337 • E-09080 Burgos • heimbach-iberica@heimbach.com

**Heimbach Specialities AG** • Tülje 65 • B-4721 Neu-Moresnet • heimbach-specialities@heimbach.com

**Heimbach Switzerland AG** • Solothurner Str. 65 • Postfach 7 27 • CH-4603 Olten  
heimbach-switzerland@heimbach.com

**Heimbach U.K.** • Bradnor Road • Manchester M22 4TS • UK • heimbach-uk@heimbach.com

