

The kick for every size press

## SizeWings AT boost young and old paper machines

**You don't have to be big to be great. Even small equipment can give the essential kick to increase production or quality. SizeWings AT (Advanced Technology) are one of these small, but clever products for the paper machine.**

Increasing production speeds, while improving paper quality, pose new challenges to all machine components. In existing size presses, higher speeds cause increased splashing in the sump. Heavily soiled size presses, however, are extremely detrimental to paper production. This is where SizeWings AT should be used.

SizeWings AT are a clever equipment allowing non-splashing starch supply to the roll nip, thus ensuring a uniform sump level across the entire web width.

The SizeWings AT installed up to now confirm their effectiveness. Every time, significant improvements could be achieved. Starch application behavior and size press cleanliness improved considerably in all cases.

Thanks to the improved sump behavior in the size press, higher production speeds are possible. Production increase, combined with low investment costs, results in a short amortization time – the cost-benefit ratio could hardly be better.

### Fantastic experiences from Switzerland

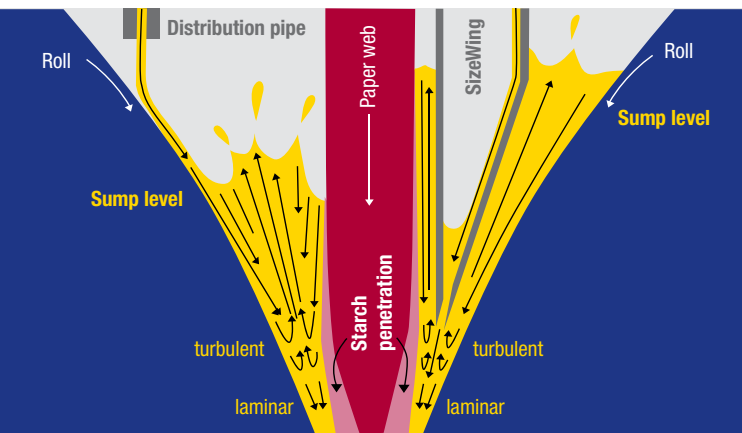
In Weinfelden, Switzerland, Thurpapier Model AG operates two paper machines, PM 1 and PM 2. The machines are almost identical in design:

They produce testliner and corrugating medium in a basis weight range of 100-220 g/m<sup>2</sup> on a wire width of 2,500 mm and are equipped with conventional size presses. PM 2 produces testliner in a basis weight range of 110-200 g/m<sup>2</sup>. Starch is

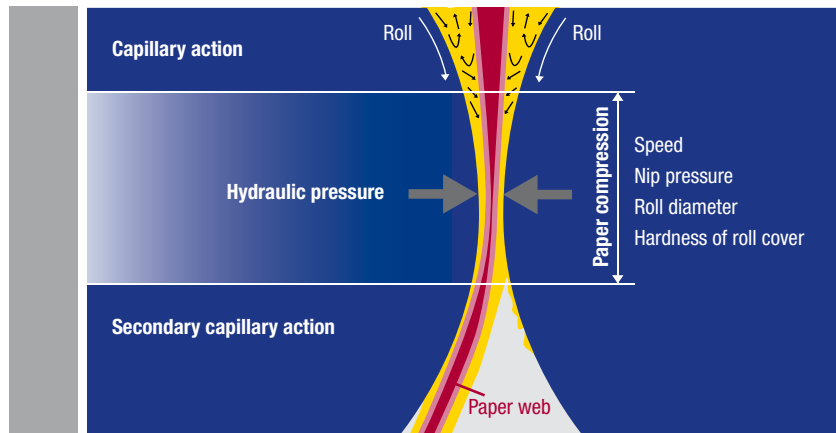


*Left:  
SizeWings AT with moving device for flexible operation of the size press (one-sided or double-sided).*

*Right:  
Without SizeWings, the sump was rather unsteady.*



Starch penetration is influenced by many factors, such as speed and roll diameter.



SizeWings stabilize the sump behavior.

mainly applied to one side. After PM 2 had faced increasing problems with uneven CD strength profiles, Voith Paper was commissioned to eliminate the quality problems. In addition, clean size press operation was to be ensured, thus improving runnability.

**SizeWings AT ensure uniform paper quality**

Using SizeWings AT in PM 2 resulted in a 50 m/min speed increase to 780 m/min. At the same time, the strength values of the end product remained unchanged or were even increased at lower basis weights. The

plied from the same starch kitchen. Cleanliness in the size press increased considerably since SizeWings AT have been used. Now, it takes about five shifts for the size press to be soiled as much as before after only one shift. The number of web breaks at the size press has also been significantly reduced.



*“The component meets all papermaker’s demands.”*

Ernst Herzog, Technical Manager at Thurpapier Model AG, Weinfelden/Switzerland

increased sump level in the size press produces a longer penetration time, thus improving starch efficiency. A direct comparison of PM 1 and PM 2 showed another advantage. The size press of PM 2, which had been equipped with SizeWings AT, hardly reacts to fluctuations of the starch quality. Whatever the starch quality, the end product is always excellent.

This is easy to prove, since the size presses of both machines are sup-

Mill Manager Andreas Klumpp and Technical Manager Ernst Herzog have been observing the SizeWings since the start-up in August 2008 and are delighted. The equipment has been functioning since without any problems worth mentioning. “The component meets all papermaker’s demands. Since its start-up, it has not required any special attention. This is a great advantage,” says Ernst Herzog.

Andreas Klumpp summarizes the Swiss experiences:

Project/Customer	Country	Start-up	Paper grade	Basis weight [g/m <sup>2</sup> ]	Paper web [mm]	Working speed [m/min]
<b>Weinfelden PM 2</b> Thurpapier Model AG	CH	2008	Testliner	140 – 280	2,500	650
<b>Nine Dragons PM 17</b> Nine Dragons Paper Industries (Taicang) Co., LTD	CN	2008	CM	80 – 145	6,860	1,000
<b>Zhejiang LCPC PM 6</b> Zhejiang Long Chen Paper Co., LTD	CN	2009	CM	90 – 110	6,660	825
<b>Wuxi LCPC PM 3A</b> Wuxi Long Chen Paper Co., LTD	CN	2009	CM	90 – 110	6,660	825
<b>Zhejiang LCPC PM 5</b> Zhejiang Long Chen Paper Co., LTD	CN	2008	Testliner	125 – 250	6,660	825
<b>Frastanz PM 2</b> Rondo Ganahl AG	AT	2007	Testliner CM	105 – 200	2,600	900
<b>Mannheim PM 6</b> SCA Mannheim	DE	2004	Grease-proof	29 – 60	3,150	530
<b>Pitten PM 3</b> Papiererzeugung W. Hamburger AG	AT	2000	Fluting	100 – 200	2,500	1,050

*SizeWings AT are suited for any paper grade.*

“I wouldn’t want to do without SizeWings AT any more!” On the contrary: The next step is to equip PM 1 with SizeWings AT as well, thus increasing starch concentration.

### Three upgrades for Long Chen

The Chinese papermaker Long Chen Paper chose another way. The company immediately ordered SizeWings AT for the three new paper machines: Wuxi PM 3A, Zhejiang PM 5 and Zhejiang PM 6.

All three of them are large machines with a wire width of 7,250 mm and a design speed of 1,000 m/min. Voith Paper delivered the complete stock preparation and approach flow systems for each line.

The three-ply PM 5 in Zhejiang was put into operation shortly before Christmas 2008. It produces testliner in a basis weight range

of 125-250 g/m<sup>2</sup>. The maximum operating speed is 825 m/min, and production is laid out for 400,000 t/year.

Wuxi PM 3A and Zhejiang PM 6 are identical machines with regard to the stock preparation system and machine equipment. They achieve an annual output of 250,000 tons of corrugating medium in a basis weight range of 90-110 g/m<sup>2</sup> with a maximum speed of 825 m/min. Wuxi PM 3A was put into operation early in 2009 and Zhejiang PM 6 by the end of April.

*“I wouldn’t want to do without SizeWings AT any more!”*

Alexander Klumpp, Mill Manager at Thurpapier Model AG, Weinfelden/Switzerland

### On Focus: SizeWings

- ProEnvironment +
- ProRunnability + + +
- ProQuality + +
- ProSpeed +

Section: sizing  
Width: max. 7,500 mm  
Paper grade: all

#### Contact



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