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## Fine Paper Grades

This segment of the paper industry is very challenging as fine papers cover a wide range of different specialty grades such as watermark paper, banknote paper, security paper, copy paper, cast coated paper, printing and writing paper.

However, certain quality standards and demands are common to all of these paper grades.

New production tools, for example inline soft calenders, film presses, new coating pigments on the production side, and increasing demands on the user side such as high-quality laser printing, color printing with high resolution, high throughput on fast printing machines and top-quality appearance of the finished product result in improved surface, printability, runability and format stability for almost every fine paper grade.

Most of the mentioned quality parameters are influenced by the moisture content of the paper. Uneven moisture profiles result in severe quality problems such as an uneven surface, curl problems and caliper problems. To avoid value losses due to lower quality, the control of the moisture content in machine direction as well as in cross machine direction (CD profile) are most important. VIB Systems has developed technologies and actuators for application on fine paper to improve moisture profiles, to increase machine output and to minimize broke and quality related rejects.

These are some typical applications for different types of fine paper:

### **Banknote- and security paper**

Steam application such as the **VIB SteamTech** on these grades is used for raising output.

High zone definition is most important especially for watermark grades, as the watermark area must be controlled separately for good results.

### **Auto Copy Paper CF, CB, CFB**

For these grades steam can be applied in the press section with steam showers such as the VIB SteamTech for moisture profile correction and for higher output. A production increase of 6-8% is quite likely.

Curl control can be achieved with a **VIB CurlTech** or spray system such as **VIB AirTech<sup>Plus 6</sup>**.

### **Wood free printing and writing grades**

SteamTech steam showers are most efficient to increase dryness. Production increases of up to 10% can be achieved; the moisture profile can be exactly controlled by adding different amounts of steam per control zone to the sheet. The use of high-resolution steam showers with control zone width of 50 mm results in 2 sigma values of less than 0.1 on specific applications.

VIB SmoothTech steam showers can improve smoothness and gloss of the surface of calendered grades.

Improvements of up to 50% and more can be achieved.

Spray systems such as the **VIB AirTech Classic** are used with great success for moisture profile improvement as well as for on-line conditioning.

As the leading company for moisture and steam applications, VIB Systems has solutions to many different moisture problems throughout the fine paper industry worldwide.