VForm: Maximum flexibility for Fourdrinier paper machines and hybrid formers

- Increasing the dewatering capacity and paper quality
- Compatibility with the ComCore platform for automatic setting
- Successful use at Schönfelder Papierfabrik

By individually setting the height and angle, VForm makes it possible to precisely adjust the activity of the pulp suspension. This increases the dewatering capacity and improves e.g. the strength of the paper. The optional integration in ComCore makes VForm a Papermaking 4.0 solution.

With the new VForm hydrofoils from Voith, papermakers can decisively improve the quality of all grades of paper already in the wire section. Unlike conventional dewatering systems the VForm allows the height and angle to be set for each individual hydrofoil. This increases the activity in the fiber suspension, which in turn leads also to a significant increase in the dewatering capacity.

Every VForm hydrofoil can be adjusted by up to five millimeters in height and up to seven degrees in the angle. This adjustment can be made manually. But in order to obtain a consistently high paper quality, the positioning of the hydrofoils needs to be adapted to the paper grade. For this reason, it makes sense to install an electric control system. The VForm foils can be adjusted for the specific grade using the Voith automation platform ComCore. Moreover, this also makes it possible to react to process fluctuations. The VForm is therefore another production solution from Voith that makes Papermaking 4.0 a reality – that is, the digitalization of paper production.

Through the interaction of height and angle adjustments in connection with ComCore, VForm simultaneously combines three setting options that make
it possible to increase paper quality. “Thanks to this genuine 3-in-1 solution, it is possible to significantly improve the formation, for instance. Moreover, the more homogeneous pulp suspension results in greater paper quality with respect to its strength as well,” stresses Dr. Thomas Jaschinski, Global Product Manager at Voith Paper. VForm therefore helps to reduce the use of starch and other chemicals in paper production, for example.

Integration in ComCore also increases the process reliability. This is because the paper manufacturer can store the ideal setting of the VForm hydrofoil for each paper grade. The setting process is then performed automatically. Since it is possible to adjust each individual foil, papermakers have many more levels of freedom compared to conventional systems when it comes to achieving the desired paper quality. At the same time, this means an increase in flexibility during paper production.

Adjusting the dewatering system precisely results in better homogenization of the fiber suspension, thereby leading to greater paper strength. “With the new VForm hydrofoil from Voith, we are achieving greater dewatering capacity and better formation. At the same time, we have been able to increase the static strength properties and obtain improved pulp orientation,” adds Andy Diedrich, Production Manager at Schönfelder Papierfabrik. VForm is in operation since March 2017 there.

VForm will be delivered completely preassembled with hydrofoil boxes or as a retrofit of existing dewatering boxes.

Voith Paper is a Group Division of Voith and the leading partner and pioneer in the paper industry. Through constant innovations, Voith Paper is optimizing the paper manufacturing process, focusing on developing resource-conserving products to reduce the use of energy, water and fibers. Furthermore, Voith Paper offers a broad service portfolio for all sections of the paper manufacturing process.

For 150 years, Voith technologies have been inspiring its customers, business partners and employees all over the world. Founded in 1867, Voith today has around 19,000 employees and earns 4.3 billion euros in sales. It has locations in more than 60 countries and is one of the largest family-owned companies in Europe. As a technology leader, Voith sets standards in the energy, oil & gas, paper, raw materials and transport & automotive markets.
By individually setting the height and angle, VForm can be used to adjust the fiber suspension for the specific grade. This increases e.g. the dewatering capacity and improves the strength of the paper.

The VForm foils can be adjusted for the specific grade using the ComCore automation platform developed by Voith. Moreover, this also makes it possible to react to process fluctuations. For this reason, it makes sense to install an electric control system.

At the Schönfelder Papierfabrik PM 1, three conventional boxes have been replaced by two VForm hydrofoil boxes. By using the VForm hydrofoil,
papermakers will be in a position to react flexibly to the increased market
demands in the future as well.

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