

*Workshop assembly of the EcoSoft calender
Customer: Sun Paper PM 21
Year of Manufacture: 2006
Nip pressure range: 30-150 N/mm
Sheet width: 4,998 mm
Number of zones: 36
Design speed: 1,300 m/min*

A new generation of Nipcorect calenders

EcoSoft M and EcoCal M – customized for your products

The latest calender range is equipped with advanced Nipcorect technology. It has been developed for machines up to a working width of 6,500 mm and a design speed of 1,500 m/min and offers excellent profiling possibilities in addition to further reduced energy consumption.

With regard to the demands and requirements of the paper and board industry, Voith has created the One Platform Concept. It aims at making available installations which offer the industry a combined maximum of quality, efficiency, operating safety and environmental friendliness. Thus, a modular system has been established that allows realizing the optimum solution in each individual case. Within the One Platform Concept, calenders obviously play an important role since they determine such important parameters like smoothness, gloss and bulk which have a decisive influence on the end product and ultimately ascertain its saleability. That is the reason why Voith has established a comprehensive variety of finishing means for all the paper and board grades that require calendering.

Recently the product range has been expanded to include EcoSoft and

EcoCal calenders incorporating Nipcorect rolls: the EcoSoft M and EcoCal M range.

The new variants

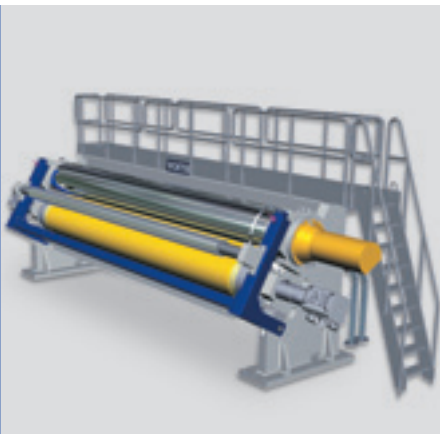
The principle component in this new range of calenders is the Nipcorect M with its advanced profiling possibilities – a further development of the Nipcorect zone controlled roll. As a result of individually controlled small zones and appropriate shell thickness they provide for improved CD profile control. Thanks to this, profile corrections can be carried out in the range of 150 mm: a higher resolution than any other calender supplier has previously been able to achieve using this type of technology. Unlike external profiling units, the Nipcorect roll is not energy intensive and does not suffer from a time lag between the detection of a change in sheet caliper and correction response. It can also

go back immediately to the previous profile setting after a sheet break or other interruption in production.

The Nipcorect roll is controlled by Voith's Profilmatic OnQ Module Nip process control software serving as an interface between the QCS scanner and the Nipcorect roll's hydraulic control system. This interface provides for closed loop monitoring and the rapid, automated correction of the sheet's CD caliper profile. The software calculates the setpoint for each control zone in response to a change in overall nip load as well as the correction required for variations in caliper.

Five standard sizes of Nipcorect calenders have been developed to accommodate a range of sheet widths from 2,300 mm to 6,500 mm, a maximum speed of 1,500 m/min and nip pressures between 10 N/mm

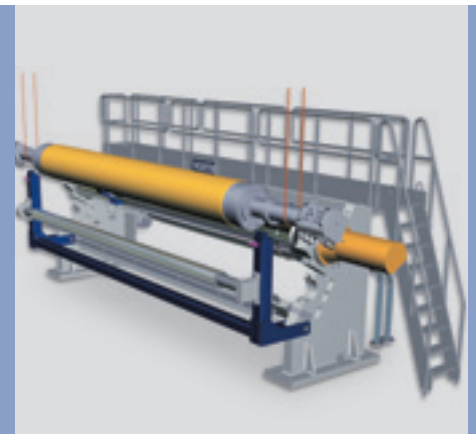
*M-Lock functions:
Closed*



Opened



Roll removed



to 300 N/mm. These calenders are based on proven designs and use standard and pre-engineered elements throughout the size range to achieve delivery times as short as possible. All calenders are assembled and tested prior delivery to minimise mill-site erection and commissioning times.

The calender frames are designed with a 30° incline to provide the increased stability that is obtained with a low centre of gravity. The compact frame footprint makes the design suitable for retrofitting into most existing paper machines. This design

also facilitates the easy removal of the rolls. Where space in the paper machine permits it, these calenders will be offered with the “M-Lock” system on which doctors, spreader rolls and cover monitoring equipment can be mounted: the “M-Lock” arms are rotated clear of the calender to significantly improve maintenance access and decrease the time for roll removal.

The very first EcoSoft M was installed at Pap  terie du L  man, Laval, France in 2003. This calender design was a derivative of the highly successful EcoSoft Modular and was sold as a

prototype in agreement with the end customer. The installation has been a complete success, with the Nipcorect technology exceeding forecasted performance. As a direct result, the design was refined into the EcoSoft M and EcoCal M calender range.

The number of orders placed with Voith for calenders of EcoSoft M and EcoCal M providing highest CD profiling resolution by using this Nipcorect M technology proves that the paper industry has fully become aware of the benefits which these machines offer.

EcoSoft calender installation at Sun Paper, PM 21



Contact



John Caulfield
Finishing
john.caulfield@voith.com



Andrew McHugh
Finishing
andrew.mchugh@voith.com