

Keep an eye on your energy costs OnV EnergyProfiler



- 1 OnV EnergyProfiler, for energy monitoring of the entire system.
- 2 Comprehensive monitoring contributes to smooth production.
- 3 With OnV EnergyProfiler, the machine operator always has an eye on energy consumption.
- 4 OnQ ModuleSteam
- 5 OnQ FormingSens

Visible energy costs

The energy costs in paper production are approximately 10 – 20% of the total costs. The composition of the energy mix varies, depending on the paper grade. Every paper maker is faced with the question of how much their paper mill really consumes and where energy can be saved.

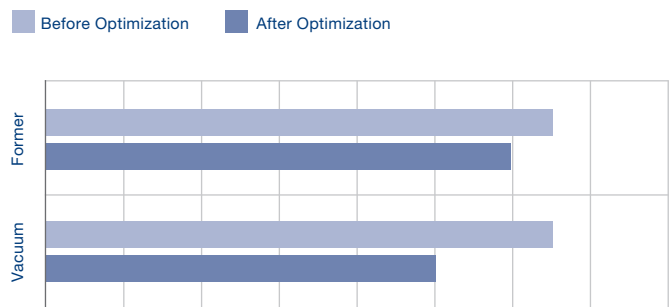
The OnV EnergyProfiler software locates and visualizes energy consumption throughout the paper production process. It was specifically developed for the paper industry and, unlike other available standard products, takes into account the relevant data and setting parameters for paper production.

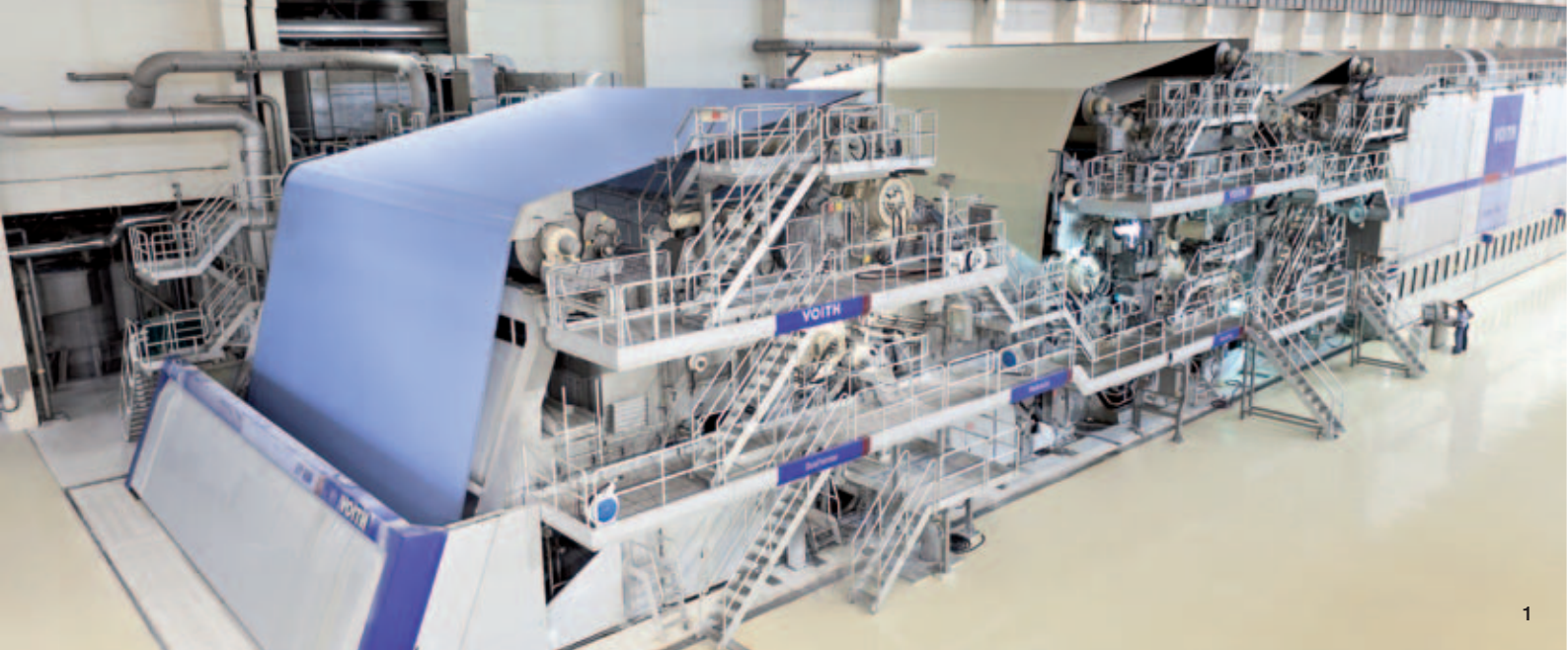
Thus for example, consumption values can be displayed specific to grades. Grouping of the energy consumers by process units, such as press or former, is just as possible as an analysis according to their function. Downtimes and web breaks can be eliminated from calculations as needed. Measurement data for electricity, rpm, steam, and amount of condensate which are available in the process control system form the basis of the system. Whether in the daily operation of the individual sections or long-term for the entire facility – the

OnV EnergyProfiler uncovers both visible and hidden potential savings.

Paper engineers from the customer and Voith Paper work through the energy values and production data together to come up with a set of recommended actions with the lowest possible energy use and correspondingly lower costs while maintaining the same quality.

Specific energy consumption kWh/t, comparable time frame





Step by step to the goal

Successful energy management is a continuing process and requires a number of small optimization steps. This is made possible by the flexibility of the energy report. The OnV Energy-Profiler meets all of the necessary criteria for this:

Speed

With the OnV EnergyProfiler, users have quick and easy access to all relevant data in order to uncover and eliminate energy inefficiencies. A customizable overview page with all essential information shows real-time usage at a glance.

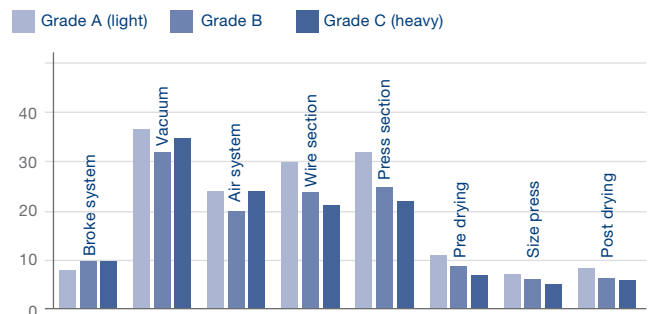
Transparency

The extensive database allows a detailed look at individual areas of consumption and also whole sections. Additional comparison values, such as grade-specific mean values or calculated optimum values, help in making the right decisions and checking the success of the measures that have been taken. Thus, the operators are more likely to switch off unneeded units, if they actually see the costs those units produce. In our experience, there are savings without any additional investment expenses.

Availability

The consumption data are centrally stored in the OnView database and are available at any time to the OnV EnergyProfiler over the long term. It automatically creates reports, allowing a constant overview of the development of energy consumption and the corresponding costs.

Specific energy consumption kWh/t





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Application example

As pleasant as it is uncovering a large potential saving, as a rule, it is generally many small steps that contribute to a lasting cost reduction. OnV EnergyProfiler is a valuable tool particularly in the search for inconspicuous “energy leaks”. This was also seen during a project with a Hungarian customer.

Based on the data ascertained, it became clear that an alternative condensate pump control with a frequency converter for each pump would save a total of € 15,000 per annum. The investment in this control will pay for itself in less than a year. With this single measure alone, electricity savings of approximately 200 MWh were achieved. That is equivalent to the annual electricity consumption of 50 households.

The OnV EnergyProfiler can provide a quick estimation of the efficiency of such measures. Of course, if needed, the specialists from Voith Paper will help with the challenge of defining the right measures.

Included in the delivery

- + OnV EnergyProfiler software
- + OnView platform and portal with OnV reporting software
- + Dedicated computer (optional)
- + Start-up, optimization, and training
- + Communication with external systems (OPC required)

Software features

- + Real-time display of energy and resource consumption
- + 200–1,000 consumers (depending on machine size)
- + Freely selectable grouping by machine area, functionality, and resources
- + Filtering by process parameters (grade, speed, etc.)
- + Extensive graphical analytical tools and clearly arranged energy reports
- + Calculation and display of the specific consumption and energy costs
- + Data export and import to standard systems
- + No additional sensors necessary



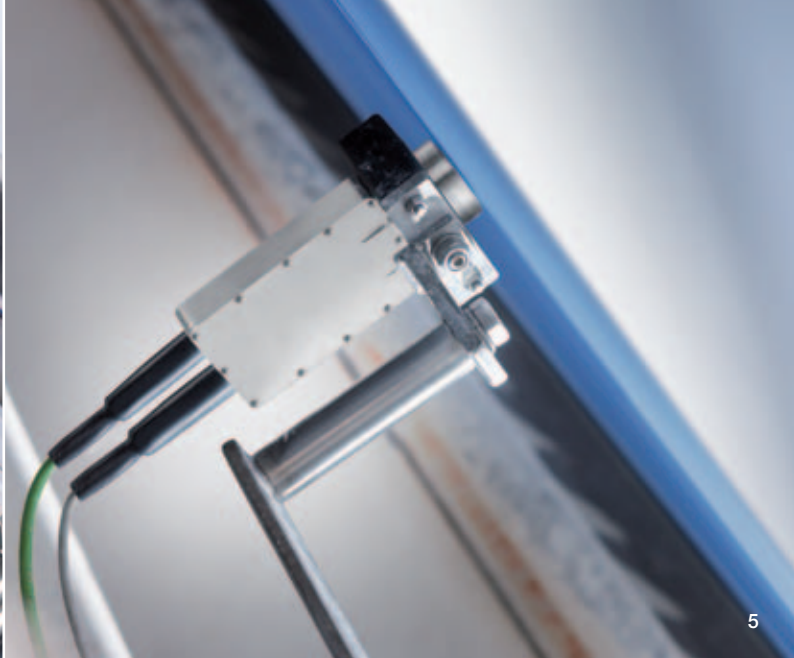
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Engineered Reliability



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Voith products help save energy

If energy waste is found in the paper mill with the OnV Energy-Profiler, sometimes changed settings alone are not enough. In that case, Voith offers products for saving energy, including the OnQ Module Steam and the OnQ FormingSens.

OnQ ModuleSteam

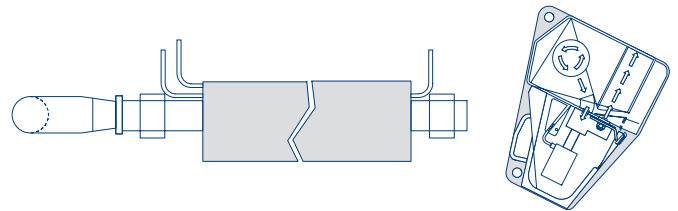
The OnQ ModuleSteam steam box with the OnQ Profilmatic provides optimum moisture CD profile control in the press. By steaming the paper web with the OnQ ModuleSteam which effectively reduces the viscosity of the water in the stock, the effectiveness of the press nip is increased. That saves energy and, ultimately, costs.

OnQ FormingSens

OnQ FormingSens is a sensor for the continuous online measurement of the water weight in the forming zone and the dry content which is derived from it. The sensor offers the highest precision thanks to high-frequency microwave technology. With these exact measurements, the performance of the vacuum elements can be set to be as precise and energy efficient as possible.

OnQ ModuleSteam Schematic drawing

Side view and cross-section



OnQ FormingSens Schematic drawing

Side view and cross-section

