

Guarantees troublefree operation and reduces the necessary maintenance

DuoCleaner Express – innovative dryer fabric cleaning

The DuoCleaner Express meets all demands for highly efficient cleaning of dryer fabrics. Due to a continuous cleaning of machine clothing a reliable production process can be guaranteed.

Today's high-tech paper machines can reach speeds of 2,000 m/min and sometimes even more. For sustainably optimal productivity under such conditions, close tolerances and fine-tuning for constant operating parameters are indispensable.

An important role is played here by paper machine fabrics, which have to keep up optimal performance for as long as possible during operation. A good way to ensure this is by continuous fabric cleaning, where Voith DuoCleaner technology is the established leader.

The Voith DuoCleaner with its rotary head continuously cleans the fabric during operation. The success of this technology is shown by the fact that more than 800 DuoCleaners are now installed worldwide. By adjusting the operating parameters accordingly, at working pressures of 200-350 bar various fabric cleaning tasks can be performed in the wet and dryer sections of paper, board and tissue machines.

Dryer fabric permeability is very important for paper quality and production efficiency. Dirt deposits on the fabric reduce the permeability, which in turn reduces heat transfer in this area. This naturally leads to poor drying performance, tail transfer problems, bad moisture profiles and high steam consumption. That is why dryer fabrics have to be changed so early – not because of wear and tear, but simply because they are no longer permeable enough.

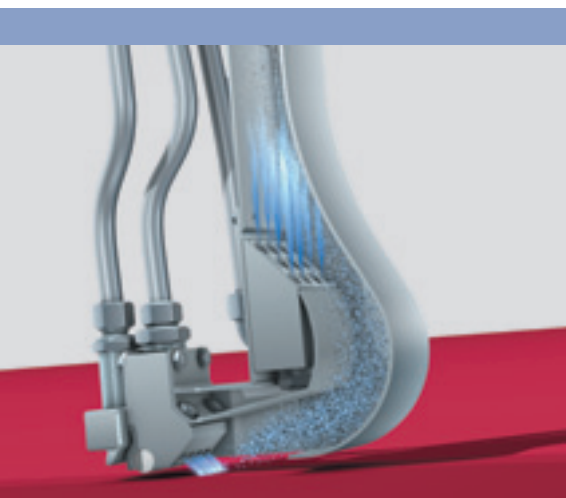
Particularly in the case of forming fabrics and press fabrics, the rotating water spray nozzles on the DuoCleaner head are extremely important because they enable correct adjustment of the local cleaning duration and intensity. In the dryer section, however, there is a risk of nozzle rotation being impeded or blocked by infiltrating dirt and by dry out of the hydrostatic ceramic bearings. Since access to the cleaning heads is not always possible during production, the DuoCleaner principle was further developed for use with dryer fabrics.

The result is less maintenance effort and better cleaning at the same time.

The latest Voith DuoCleaner – the DuoCleaner Express – is now the best solution for continuously cleaning conventional dryer fabrics. Instead of using cleaning heads, it has a newly designed cleaning boot. Cleaning takes place on the side in contact with the paper, which is where the dirt collects, in step-by-step mode. In other words, the cleaning boot remains stationary at one point over the dryer fabric until the latter has revolved a certain number of times. Then the boot changes position moving by its working width lateral to the dryer fabric. After cleaning the entire fabric width in numerous steps, the DuoCleaner Express travels at high speed to the other side of the machine for dirt removal at a cleaning station. Then the cycle starts over again, either immediately, or after a predetermined pause.

The new cleaning boot on the DuoCleaner Express uses a cleaning block with several fixed nozzles spraying the fabric at an angle for efficient dirt removal. By impinging obliquely, the water is tossed together with dirt particles into the cleaning boot's drainage duct.

Vacuum is generated at the beginning of the drainage duct by a water jet injector in the cleaning boot. The resultant suction ensures efficient removal of the dirty water. A small part of the cleaning spray water penetrates the



DuoCleaner Express in operation

fabric, and in case of heavy contamination it can be collected in a trough underneath. Following the cleaning boot is an air knife for removing residual water from the fabric. This eliminates the problem of water stripes and prevents loose dirt particles from being carried along. The suction drainage duct is usually connected via a separator to the paper machine vacuum system for dependable removal of dirt and water.

The highly effective DuoCleaner Express system with fixed cleaning nozzles ensures troublefree operation in the tough environment of the dryer section, and requires considerably less maintenance than conventional DuoCleaners with rotary cleaning head.

In summary, both on modern paper machines and older ones, efficient dryer fabric cleaning during produc-

tion upholds optimal efficiency. This is reflected not only in better paper quality, but also in fewer web breaks and lower drying energy consumption.

Stable running at high operating speeds with a minimum of breaks is even better guaranteed with well-proven web stabilizers like Pro-Release, and with clean dryer fabrics with the correct permeability. Productivity is increased thereby, and paper quality will always be better.

The Voith DuoCleaner Express with its new operating principle meets all demands for highly efficient cleaning of dryer fabrics as well as simplified maintenance.

Also for retrofitting and upgrading existing cleaning systems, the DuoCleaner Express offers a very good return on investment. Upgrading a conventional DuoCleaner to Duo-

Cleaner Express is usually no problem at all, because both systems have comparable operating parameters and largely compatible components.

Important DuoCleaner Express references include the installations at Palm Wörth and UPM Schwedt, where other type of products were replaced successfully, followed by supplemental orders.

Contact



Karlheinz Straub
Paper Machines Graphic
karlheinz.straub@voith.com



Maria Dröscher
Paper Machines
Board and Packaging
maria.droescher@voith.com

Comparison between DuoCleaner and DuoCleaner Express

