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VOITH

Cutting-edge technology meets digitization

OnQ ModulePro DG

Nozzle moisturizer

OnQ ModulePro DG maintenance ports and integrated valves

An optimal result for every application

For years, nozzle moisturizers from Voith have helped to ensure the best paper quality and highest cost-effectiveness of systems. The OnQ ModulePro DG product line meets the requirements of all paper machines.

Highest requirements

Optimal moisturizing results, especially in large and fast machines, presuppose outstanding spray quality and exact spray quantity monitoring. OnQ ModulePro DG with its precise technology meets these high requirements.

Optimal solution

An optimal spray angle and extremely fine water drops provide for even water absorption over the entire web. With OnQ ModulePro DG, a finely atomizing air-atomizing nozzle with a very large spray quantity range provides for this.

Better quality

Due to the uniformly fine remoistening and the optimal moisture cross profile, OnQ ModulePro DG meets the highest quality requirements. A homogeneous moisture distribution in the paper and reduced curling tendency are the attainable result.

High cost-effectiveness

The higher paper quality improves winding, reduces breaks, allows a lower dry content at the reel or higher speeds. Redundant systems and optimal accessibility of the system components make OnQ ModulePro DG extremely reliable. All this increases the cost-effectiveness and runability of the paper machine.

Digital Generation (DG)

The new OnQModulePro DG (Digital Generation) offers the option of cloud connection and cloud trend analysis. Based on Voith‘s OnCumulus platform, data and trend transfer to Voith is faster and easier than ever before. Analysis as well as tweaking of the operating parameters by Voith experts results in increased availability, which then improves the overall efficiency of the paper machine. In addition, this also provides a way to leverage OnEfficiency applications.

OnQ ModulePro DG water station

Modular design with atomized spray exhaust system

QnQ ModulePro DG two-substance nozzle

Maximum customer benefit through innovative technology

OnQ profilmatic software

This moisture cross profile control allows exact interventions for quality improvement. It quickly records all significant profile changes and calculates the optimal set point positions. The auto-mapping function continuously adapts the correlation between the scanner and the local reaction in the paper web.

Exact spray application

The pneumatic atomizer nozzle covers a large spray quantity range with high spray quality (drop size of 10 – 60 µm with spray quantities up to 24 l/h per nozzle). Depending on the application, two nozzle types are available: The L30 nozzle with extremely narrow spray angle allows the smallest profiling zones; the L50 nozzle with large angle is used for profiling wider zones and uniform remoistening. Both nozzles are very effective due to their high jet impulse and are not sensitive to contamination.

Benefits OnQ Profilmatic

+ Open interface with the quality control system
+ Own user interface for startup and service
+ Controls, visualization and service can be implemented in one PC
+ Diagnostic function for the valve-nozzle system
+ Energy saving mode: Best profile or target profile

Benefits nozzle

+ Superior spray quality, especially for high flow rates
+ Only nozzle on the market with innovative internal atomization
+ Adjustable droplet size up to 25 µm
+ Adjustable flow rate up to 24 l/h per nozzle
+ Protected nozzle surface without protruding parts

OnQ Module Pro DG rugged spray beam

The stainless steel spray beam has an atomized spray exhaust and a seal for the spray area. The two to four nozzle rows are divided into zone widths between 15 and 80 mm. Furthermore, the spray beam has a lifting device for optimal accessibility. Besides, cleaning and maintenance are greatly facilitated by the service openings.

Optimum spray water conditioning

The water station with stainless steel reserve tank takes over the provision of the correctly conditioned spray water. The available condensate is continuously filtered, tempered and supplied to the spray bar at the required pressure or in the desired quantity.

Benefits OnQ ModulePro DG spray beam

+ **High quality stainless steel design**
+ **Efficient atomized spray exhaust**
+ **Variable number of nozzles and nozzle rows selectable**
+ **Easy service**
+ **Low-maintenance actuator**

Benefits nozzle

+ **Reliable conditioning of the spray water**
+ **Field devices are optimally accessible**
+ **Attached status indicators**

Highly precise valve technology

The OnQ ModulePro DG product line uses the innovative spider valve technology (resolution >1,000 control steps). The flow quantity is controlled by means of pulse-width modulation. The high precision of the valve results from the predefined “open” and “closed” states. Due to the consistently large valve opening, even with the smallest flow quantities, the valve is insensitive to contamination and thus completely maintenance-free.

OnQ ModulePro DG Upgrade for other brands

Many papermakers are aware of the advantages of an OnQ ModulePro DG nozzle dampener but shy away from investing in a complete system. For these cases, Voith has developed an innovative solution: the V30 upgrade nozzle for other makes. It corresponds to the Voith L30/L50 nozzle technology and features excellent spraying results and easy installation.

Benefits of valve

+ **Highest precision with one resolution of >1000 steps**
+ **Self-cleaning effect through constant movement**
+ **Maintenance-free (no clogging) constant large opening cross-section of 1.0 mm^2 for all quantities**

Benefits of the OnQ ModulePro DG upgrade nozzle

+ **Superior spray quality, especially for high flow rates**
+ **Only nozzle on the market with innovative internal atomization**
+ **Protected nozzle surface without protruding parts**
+ **Modular upgrade concept**
+ **Low investment costs**

OnQ ModuleJet actuators with control unit

Outstanding results in CD profile control

To achieve seamlessly coordinated automation processes and optimum results, Voith actuators are connected to the proven system platform Voith ComCore. As a result, the system is perfectly tailored to the machine.

Voith ComCore provides comprehensive overview

To obtain optimum results in CD profiling, a diverse range of constellations and complex interactions have to be taken into consideration. Over time, the demands imposed on applications have grown steadily. Conventional systems often consist of several platforms, resulting in different user interfaces, longer start-up times and increased maintenance and servicing needs. Voith ComCore allows you to focus on what matters, with the platform accessible to all key information from your quality control system with just one click. An intuitive user interface and low maintenance requirement help to get the job done as easily and quickly as possible. The flexible, readily scalable system architecture can be extended at any time. Because it uses Microsoft Internet Explorer, standard PCs can also be used as operating stations, avoiding expensive software licenses and costs for special hardware. Likewise, the web browser also allows access from the company's intranet and via commercially available tablet computers. Via a tablet, the service technician has an overview of the entire process. This considerably simplifies the servicing job and ensures complete reliability. Thanks to the integrated information system, Voith ComCore not only offers traditional QCS functions but also operating trends, reporting and extended analysis functions.

Profilmatic for optimum CD profile control

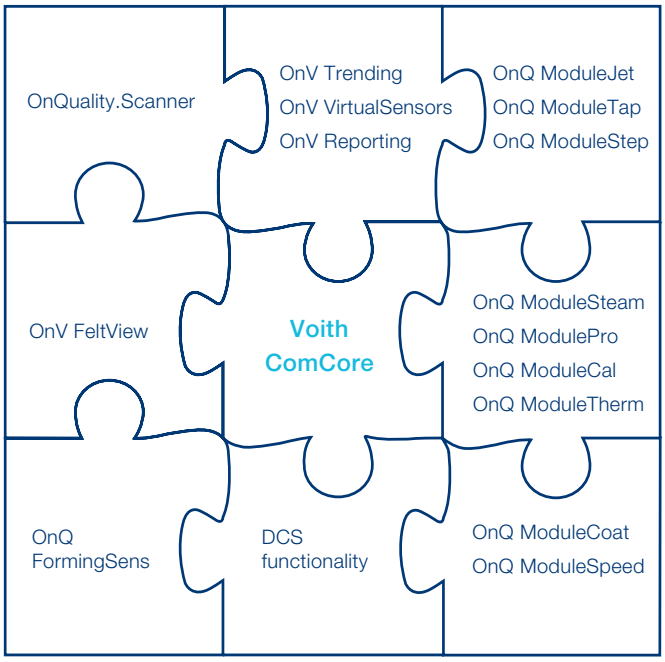
As a key component of Voith ComCore, Profilmatic includes numerous progressive control strategies with fast response times that deliver reliable, flat cross profiles. Because several process models and grade-specific target profiles are used, every paper grade gets the appropriate control setting. In the process, a dynamic algorithm ensures the correlation of the actuators to the profiles determined by the scanner at all times. Deviations due to paper shrinkage and wandering of the paper web are automatically compensated. The capabilities of Profilmatic are particularly demonstrated following web breaks and during grade changes. Supported by statistical process control (SPC) algorithms and adaptive control parameters, the customary high-quality profiles are quickly restored. To save raw materials and energy, various modes of operation are available to optimize the economic efficiency of the production process.

The clearly laid-out design of the user interface means it is easy to navigate and use

Benefits

+ Web-based operation
+ Easy to use, just like browsing the web
+ No complex client installation necessary
+ Mobile clients for maintenance activities in the field
+ Integrated alarm function and data history
+ Analysis functions (FFT, correlation, etc.)
+ Fast and easy remote service and maintenance options
+ Scalable and flexible architecture for stand-alone products through to complete QCS
+ Reliable, easy to maintain and operate due to the use of industry standards
+ Time-saving and well organized thanks to platform solutions
+ Minimal servicing and tuning requirement
+ Fast and accurate CD profile control
+ No disruptive bump tests during operation
+ Two measured criteria in one actuator system
+ Networked control structures ensure optimum control behavior and decouple technologically linked control loops (feed forward control)

Know-how from a single source



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