Qualitek SprayTek

Spray System

The SprayTek air-atomized moisturizer system applies a fine, controllable mist to the webs or liners to counter warp. The heart of the SprayTek is the patented SprayTek nozzle.

The benefits of the patented SprayTek nozzle are:

- Maintenance free – does not plug
- Fully controllable water flow (in 100+ increments)
- 50 - 150 mm (2 - 6") zone coverage

Integration with Qualitek QCS and PCS systems
Companies in the converting industry manufacturing quality paper require a consistent sheet moisture profile along the entire length of the production line.

Using the spraydampener in the process a good moistening without formation streaks and with controlled percentages of atomized water will result in a better converting and machine process.

The Qualitek SprayTek a member of the Qualitek Actuator Family is the industry standard for spraydampening system. The proprietary fine droplet nozzle technology allows Qualitek systems to provide a solution tailored to your special requirements.

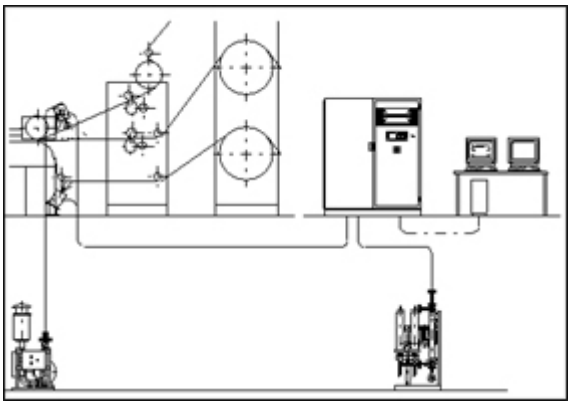
Advanced Actuator Control Systems
Description
The most important characteristics of a fine droplet spraydampening system are its profiling capability and its ability to control the average moisture level. These two characteristics improve the sheet's cross-directional moisture profile and optimize the paper machine's productivity and runability.

The critical proprietary components of the system are the Qualitek two-stage nozzles that create a balanced mixture of air and water which meets your application requirements. The water nozzles are located in the center of the air nozzles. Directional vanes integrated into the nozzle create a rotational air flow from the nozzle. The rotating air pulls the water from the nozzle and transforms it into a highly atomized, full cone spray pattern that is efficiently applied to the web. The fine droplet size increases the absorption into the web.

The Qualitek SprayTek system consists of a sprayboom on which patented, two-stage nozzles are mounted; control station; air supply unit and water supply unit.

Control Station is for operation of the spray dampener. Each single nozzle is connected with an individual flow meter and regulation valve for selective water control. The total flow is automatically measured and shown on a display.

An integrated solution with PLC for all systems.



Advanced Actuator Control System Layout

VIB Systems GmbH • Am Kreuzstein 80 • 63477 Maintal • Germany • Phone: +49 6109 606-0 • Email:vib@vibsystems.de • www.vibsystems.com
VIB Systems, Inc. • 4661-A Hammermill Road • Tucker, GA 30084 • USA • Phone: +1 770 491 8981 • Email:vib@vibsystems.de • www.vibsystems.com

The complete process can be integrated in the control process station. It contains the integrated MD/CD control, the operator visualization package, PLC functions and the intelligence to control the entire actuator control system.

Benefits for the Converting Industry

- Higher output and a flatter moisture profile can be achieved simultaneously.
- Better edge performance.
- Reel average moisture increased by 0.5 - 4.0%.
- Energy savings produced from a consistent moisture profile and higher average moisture.
- Improved tension profile.
- Higher caliper and a flatter caliper profile.

Technical Features

- Advanced patented two-stage nozzle applies a highly atomized, low-pressure spray mist to the sheet
- Profiling zone spacing down to 25 mm gives high profiling capability
- Constant air flow through the nozzles keeps them free from broke and debris
- Integrated control system with PLC (Allen Bradley or Siemens S7)

Technical Specifications

Nozzle Orifices

2 to 5 mm (non-clogging)

Nozzle Spray Capacity

min. 0.2 - 4 l/h each nozzle

max. 2 - 30 l/h each nozzle

The System consists of:

- spray boom
- control station
- air supply unit
- water supply unit
- moisture / temperature measurement

QCS Family (Quality Control Systems)

WarpTek – heat control system

WarpTekPlus – heat and moisture control system

SpeedTek – speed optimization

GlueTek – autometering gap control

Options

PCS Family (Production Control Systems)

BridgeTek – bridge controls

SpliceTek – synchronized splicing

RollTek – diameter splicing

Qualitek UpTek – uptime maximizer

Actuator Family

CurlTek – on-line curl control

SteamTek – steamshower

SprayTek – moisture control

Steam and Condensate Systems

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