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Converted Paper

The converting industry is today one of the largest industries in the world. It is the most dominant in the packaging industry. Under the roof of the paper converting industry are industries such as:

- Boxmaking
- Tags & Labels
- Flexible Packaging
- Pre-press
- Printing

Moisture & Curl Control for the Converting Industry

Curl during and after production is a well-known problem in the converting industry which effects productivity and quality. The main cause of curl is the instability in the web material caused by moisture profile used in the converter.

How QUALITEK VIB help the converting industry to increase quality

Over the years Qualitek has developed and manufactured a variety of moisture and curl control products for the converting industry. The comprehensive product line and supporting expertise is a result of the company's unsurpassed moisture measurement and control experience in the paper industry. Systems have been installed world-wide on paper machines, corrugators, coaters, laminators, and printing lines.

Qualitek solutions combine the industry's widest range of contact-free moisture application technologies with infrared-reflectance moisture sensors, non-contact temperature sensors, PLC process interfaces and color-graphic operator interfaces. To meet each client's unique needs the company offers steam-based moisturizers (figure 1), air-atomized sprays (figure 3), and water-only sprays, each available in a variety of configurations, with a variety of optional features and accessories.

Sample configurations include single or double-sided, profiling or non-profiling (zone-controlled or full-width application), and manually or automatically controlled. A partial list of optional features includes entry and exit edge exhaust systems to remove excess moisture, and/or entry and exit edge air-knives or dams to prevent spillage to the surrounding area, steam-heated structures to prevent condensation, and manual or automatically actuated retraction systems. A sample of available accessories includes water supply systems with filtering and pressure and temperature controls, air supply systems comprising blowers and filters, vapor exhaust systems, and steam conditioning equipment to control steam pressure and quality.

The company's QualiPac-IR moisture sensors and QualiTemp-HT temperature sensors may be provided as part of an integrated system-solution, or may be purchased separately or for integration into existing systems.

When combined with appropriate upstream moisture applicators QualiPac-IR moisture sensors enable accurate and fast, closed-loop moisture control. When mounted at dryer/oven exit positions QualiTemp-HT temperature sensors enable closed-loop dryer/oven control. QualiTemp-HT sensors are also valuable for ensuring that appropriate curing, setting or chilling temperatures are reached between subsequent converting stages.

The QualiPac-IR sensor, designed just for paper, is quite unique. The compact sensor includes a built-in cooling system, uses only 24 VDC power, and provides a direct 4-20 mA output for use with standard PLC or PC I/O.

The QualTemp-HT contact-free temperature sensor is just as user-friendly. It too uses just 24 VDC power and provides a direct 4-20 mA output to standard PLC or PCI.

Integrated Solutions from Qualitek use the optimum arrangement of these applicators and sensors to control web moisture levels to grade-dependent targets. Correct moisture levels and side-to-side moisture gradients produce high-quality converted products with the desired curl (flat or intentionally curled).