



KOHLER COATING

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WaterDeck™

Precision moisture control technology

Also ask about
Other Kohler
Innovations:



ISO-BAR® TFM™ Glue Machines and
Laminator Glue Machine Upgrades



Kohler Full Width Wax Applicators

Make flatter, smoother board, that *stays* flat and smooth.

Reduce starch usage by an additional 10%.

Conserve Energy.



The Kohler Guarantee

Let's get straight to the point!
We guarantee performance.



WaterDeck Benefits

Saves energy and glue,
enhances productivity and quality

- Produce corrugated board that not only flat and smooth, but stays flat and smooth!
- Eliminates Wash-boarding and Warp
- Eliminates Score Cracking
- Prevents damage to sensitive or coated papers
- Makes stronger, stiffer board
- Save 10% more glue, applies same amount of glue regardless of speed
- Easy to thread and operate
- Enhances efficiency of singlefacer and doublebacker
- Easy retrofit to any Kohler ISO-BAR glue machine manufactured since 2006.*

*Some applications may require moderate modifications

Single WaterDeck Guarantee

With a single WaterDeck installed on the doublebacker we guarantee:

- Complete control of up warp – independent of glue weight
- No washboarding at any speed – from thread to full, regardless of basis weight
- No Score cracking regardless of plant environment moisture or incoming moisture in the board
- The ability to run sensitive and/or preprinted grades without damage

Double WaterDeck Guarantee

Install a WaterDeck on singlefacer as well as the doublebacker and we guarantee:

- Complete control of **up and down** warp – independent of glue weight
- No washboarding at any speed – from thread to full, regardless of basis weight
- No Score cracking regardless of plant environment moisture or incoming moisture in the board
- The ability to run sensitive and/or preprinted grades without damage
- Virtually 100% consistent glue weight applied at the glue machine at all speeds, resulting in at least a 10% reduction of applied glue over the best achievable consumption without the WaterDeck
- Virtually 100% consistent glue weight applied at the glue machine at all speeds, resulting in at least a 10% reduction of applied glue over the best achievable consumption without the WaterDeck (provided that the single facer is capable of low level uniformity of $\pm 10\%$ on the glue line)
- The elimination of stair step gap adjustments on the singlefacer while the machine is running



The Importance of Moisture Control

Moisture is the leading cause of warp and washboarding in corrugated board. Managing and controlling moisture in the corrugating process is critical to producing flat, smooth board.

As corrugators move towards energy and material saving “cool” corrugating, precision moisture control becomes one of their biggest advantages as they begin to work with high solids, low volume glue application.

With high solids there's less available water which can result in incomplete gelatinization of the starch and over-drying of the liners. This, in turn, can manifest as crystallization, blistering, reduced ECT, score cracking and many other quality issues.

So, if you're taking water out of the glue only to put it back in, why not just run low solids and use of the extra water in the starch? With low solids glue you have little control over where and how the moisture is applied. It's only applied at the point of contact between the flute tip and the liner causing uneven moisture distribution across the surface of the liner which results in wash-boarding and warp as the paper expands and contracts.

The WaterDeck Difference

The WaterDeck gives you precision control of the moisture applied to the liners. You have total control to put it precisely where it's needed and in the precise amount that's necessary.

The WaterDeck applies a continuous, high precision film of water across the full width of the liner, not just at the flute tip, evenly hydrating the paper and controlling warp independent of the bonding process. The precision application of water allows less water to be applied, therefore, there's less water to be evaporated which creates a stronger, stiffer board that equalizes to final moisture sooner. So, you're getting superior board, faster!



Efficient Heat Transfer

Convection heating is far more efficient than conductive heating. The WaterDeck applies an adjustable, continuous thin film of water to the outside of the liner. As the paper is heated, this film of water 'flashes off' and the heat and moisture rapidly and evenly penetrates the paper.

The efficiency of the process requires less total water to fully gelatinize the starch and protect the liners during curing and less energy to evaporate the moisture.

Save Even More Glue

When the typical corrugator slows down for a splice or order change the glue machine must apply more glue in order to have sufficient moisture for bonding and protecting the liner from over drying.

With the WaterDeck, water is used to maintain the moisture level and applied glue weight remains the same providing and **additional 10% savings in glue** over the best obtainable with the ISO-BAR TFM® alone.

Cross Machine Profiling (optional)

Occasionally corrugators must contend with moisture streaks from the mill. The WaterDeck can provide 'Cross Machine Profiling' with pulse width modulated nozzles on 5 inch centers (125 mm) across the full width of the web. This optional feature, used in conjunction with the continuous film from the roll, allows the moisture to be changed by 0-4% at any location.

The process can also be fully automated with the integration of scanning moisture gages for 'set it and forget it' operation.



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