

# ISO-BAR GLUE MACHINE



- Innovative rod metering - First new concept in 50 years.
- Accurately meters glue film thickness down to 0.025mm (0.001").
- Runs any solids and viscosity - high or low.
- Viscosity can be adjusted to maximize board properties, not to prevent slinging.
- Glue weight adjustment by varying the speed of a motor, not the gap between two rolls.



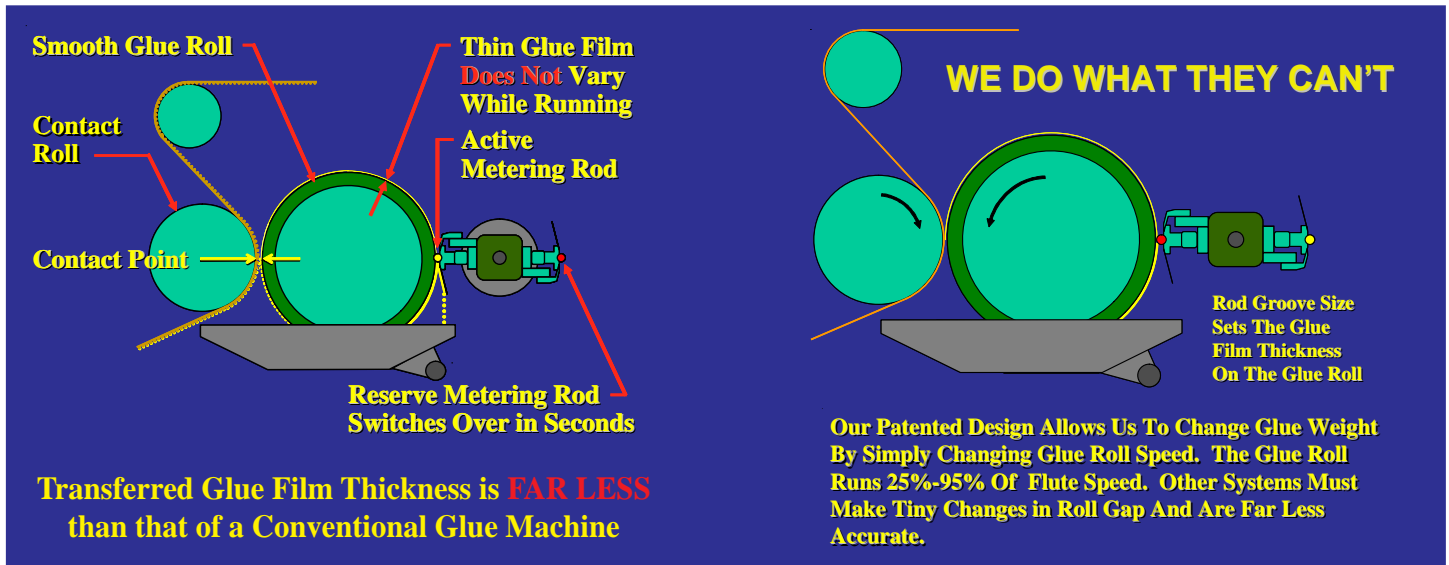
## CSI KOHLER COATING

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# FIRST NEW CONCEPT IN 50 YEARS



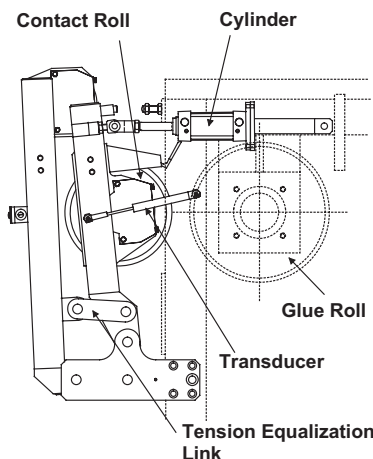
Shown With Mechanical Gap Control System

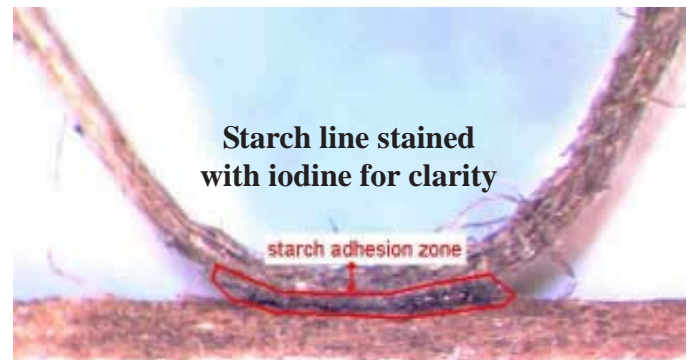


120" Triple Stack for Solid Fiber Lamination

## KOHLER PRESSURE GAP CONTROL SYSTEM

- As simple to operate as a contact bar.
- Always has the right pressure for the flute size running.
- Automatically adjusts for flute change and web width.
- Fewer flutes in contact than any other system.
- Maintains constant pressure on flutes if web width changes.
- Patent Pending.





**GRADE: 35-26m-35 C-Flute**

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**BEFORE ISO-BAR  
INSTALLATION**



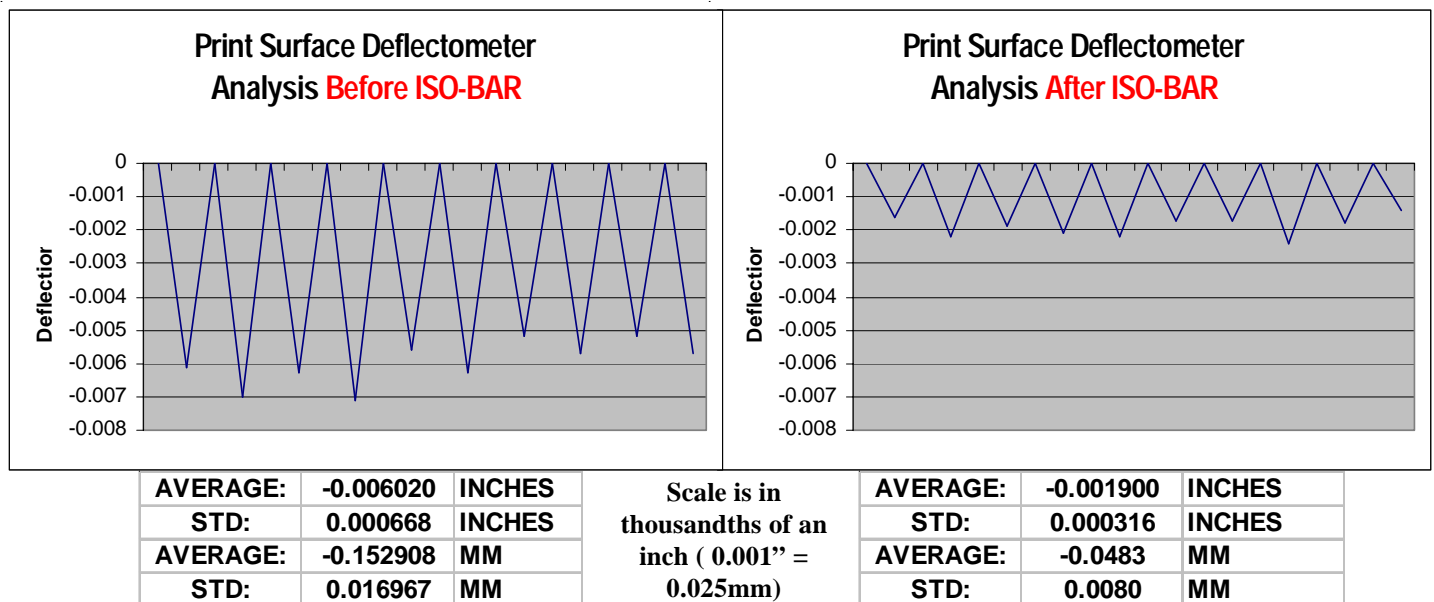
**GRADE: 35-26m-35 C-Flute**

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**AFTER ISO-BAR  
INSTALLATION**



The above photos show the difference between the glue line with a convention glue machine and the ISO-BAR glue machine. Note that with the ISO-BAR glue machine the glue line is only on the flute tip, without any glue on the flanks of the flute. The glue line width is completely controllable.

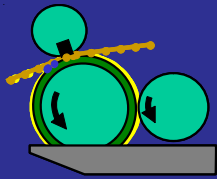


The above graphs show the improvement in surface smoothness provided by the ISO-BAR glue machine. The graph shows that in this case surface deflection (wash boarding) was reduced to less than 1/3 of the previous deflection with the old glue machine. This enabled the customer to downgrade liner basis weight from 42 LB (205 GSM) to as low as 31LB (150GSM) on ECT grades without effecting print quality.

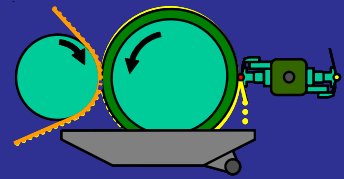
**Contact CSI Kohler Coating for more Information**  
**[www.kohlercoating.com](http://www.kohlercoating.com)**



# Conventional VS ISO-BAR Comparison



**SENARIO - Solids - 30%**  
**Line speed 350 MPM (1150 FPM)**  
**Viscosity 30 Seconds - Stein Hall**



Assume that you have the world's most perfect conventional glue machine.

It is capable of running a gap of 0.06mm (0.0025in). It's cell depth is only 0.05mm (0.002 in).

It's rolls and bearings have infinite stiffness, with no measurable deflection or run out. Film thickness exposed to the flute tip is  $0.06 + 0.05 = 0.11\text{mm}$  (0.0045 in).

A.) Nothing.  
You have no other means to further reduce film thickness.

B.) Buy an ISO-BAR.

Assume that you have a standard ISO-BAR glue machine running a #40 rod. Film thickness exposed to the flute tip = 0.10mm (0.004 in).

**You need to reduce applied weight by 50% to run a new adhesive cost effectively.**

**What do you do?**

A.) Change rods, swap in a #20 rod which applies a 0.05mm (0.002 in) film to the roll and dial in the new glue weight in 2 to 3 minutes.

## WITH THE ISO-BAR GLUE MACHINE

### Improved Quality

- Improve ECT scores by up to 10%
- Reduce washboarding by a factor of 3
- Increase flat crush up to 15%
- Increase caliper by .002 - .004 inches (.05 - .10mm)
- Maintain glue line consistency of +/- 1.5%

### Improved Production

- Reduce water in board up to 40%
- Decrease energy consumed more than 30%
- Reduce starch consumed up to 30%
- Improve speed on heat-restricted grades
- Eliminate film thickness variations due to speed changes

### Provide Ease of Operation for the Operator

- Provide the operator with more control of adhesive application
- Eliminate starch slinging
- Reduce clean up time