

# TrimMaster TOS 04

## Slitter Scorer Alignment / Board Stabilization



Corrugated GmbH



### System Function

The TrimMaster system is designed for dry end applications in front of the SlitterScorer.

Its core function is to equalize and minimize edge trim in the Slitter Scorer. This is achieved by sensing board edges or pre-printed lines and shift the Slitter Scorer with a hydraulic unit

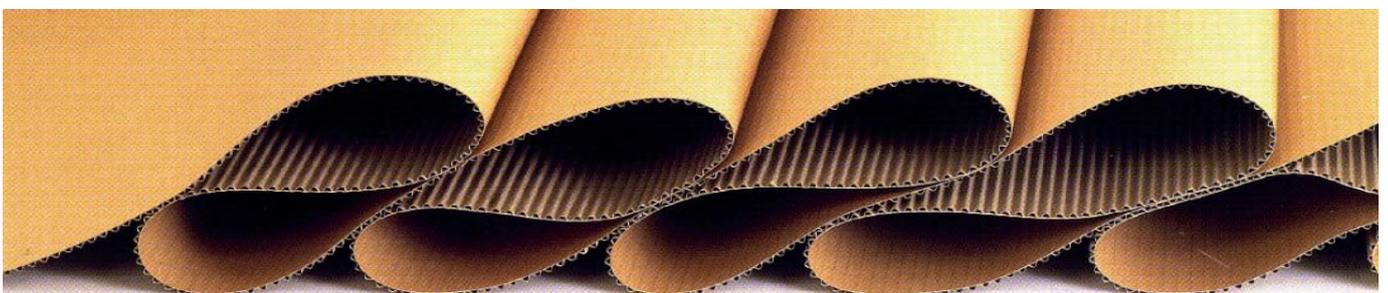
to correct incoming misalignment mistakes.

Thus, constant trim reduction results in waste savings and roll stock size reduction.

The integrated stabilization device, based on our proven CorrAligner

tracking wheel assembly, compensates for board oscillation.

The stabilization unit is available in two different models, one for board stabilization only and one for board stabilization or board guiding modes to preselectable references.



## The Sensors

The web sensing is done through CCD line cameras with wide angle lenses for detection of the minimum and maximum web width, without moving the camera.

The cameras are capable of sensing the board edges or guiding lines printed on the outside of pre-printed outer liner.

This reference position is fed into the digital controller, which is then automatically compared to the mechanical position of the slitter scorer.

The actual slitter scorer position is measured by a digital positioning encoder.



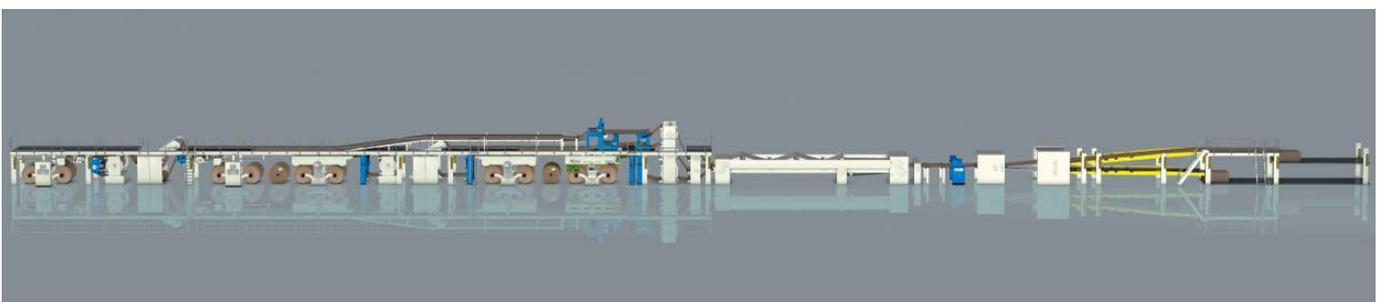
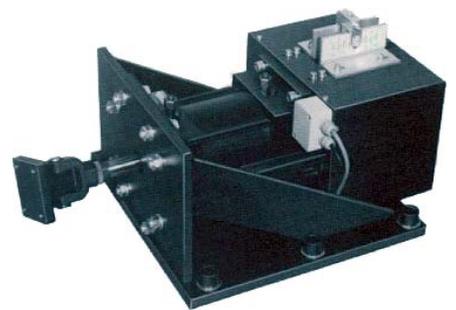
## The Controller

When a misalignment between these two positioning inputs is calculated, the system automatically engages its hydraulic power unit and thus the hydraulic cylinder.



## The Actuator

The cylinder then moves the slitter scorer machine and adjusts for the misalignment. Thus trim can be minimized.



## Board Stabilization

Belt oscillation and any lateral slitter scorer movement can result in board weave.

Furthermore, tail-in and tail-out is under lateral pressure from the board tension distribution which results in misalignment and/or board jumps.

To stabilize or even control these impacts, E+L integrated a board stabilization unit to the Trim-Master.



## Guiding Functions

When switched to automatic the system automatically selects its guiding reference.

The cameras are capable of sensing preprinted lines or the board edges.

When aline or lines are present, the system will automatically select them.

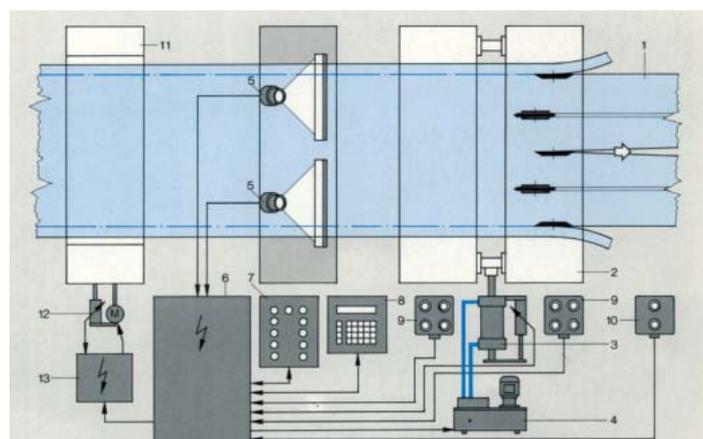
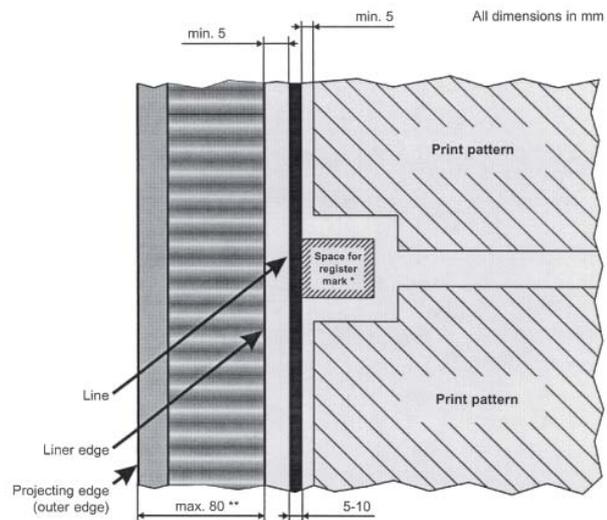
When lines are not present, the system automatically selects the outermost board edges as its guiding reference.

## Process sequence

CCD cameras detect the board edges or one or both pre-printed lines.

The digital encoder mounted on the hydraulic cylinder measures the position of the slitter scorer in reference to the machine center.

The controller compares the board position with the slitter scorer position and engages or disengages the hydraulic power unit.



## Dry End Solution 1

The PNW 04 is designed to detect board edges or guiding lines.

The Slitter Scorer is slaved in reference to one or both board edges in brown board production or to one or both lines in pre-print production.

The detection of the lines or the web edges is automatically selected by the sensing algorithm.

The included stabilizer holds the board in the incoming position and counteracts board weave.

## Dry End Solution 2

The TrimMaster TOS 04 is designed to detect board edges or guiding lines.

The Slitter Scorer is slaved in reference to one or both board edges in brown board production or to one or both lines in pre-print production.

The detection of the lines or the web edges is automatically selected by the sensing algorithm.

The integrated stabilizer unit features three modes:

- + Stabilization of the board in its position
- + Board guiding to a OS/DS selected position
- + Board centreline guiding

The Stabilizer wheel assembly is driven at machine speed.

