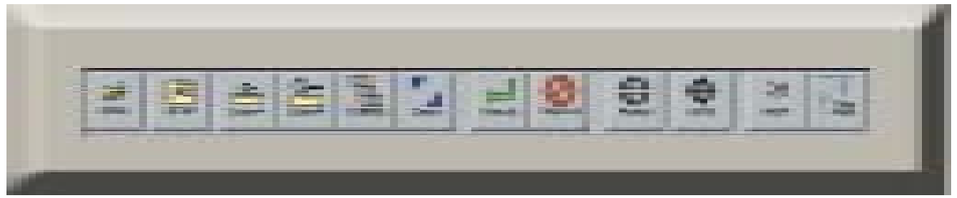
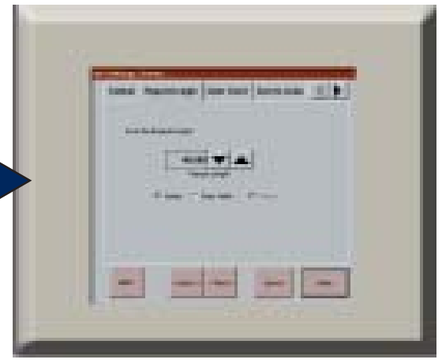
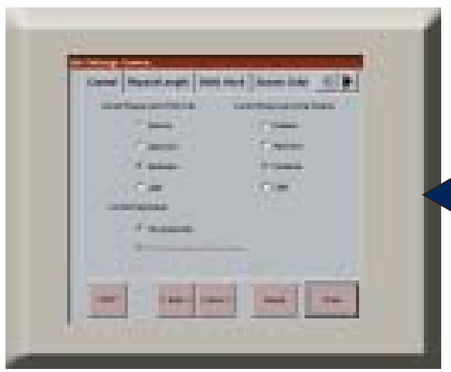
A Windows®-based automatic re-registration control with a graphical User Interface



Enter the repeat length in inches or gear teeth.

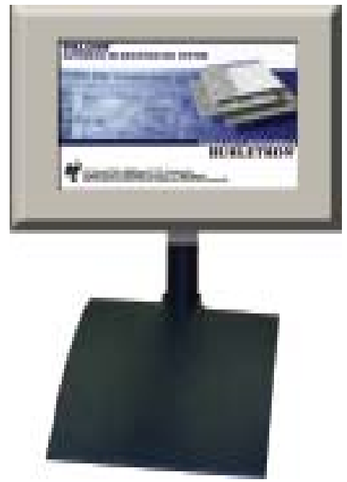




Select the control response strength and type.

Falcon Insetting

with Automatic Re-Registration Control System



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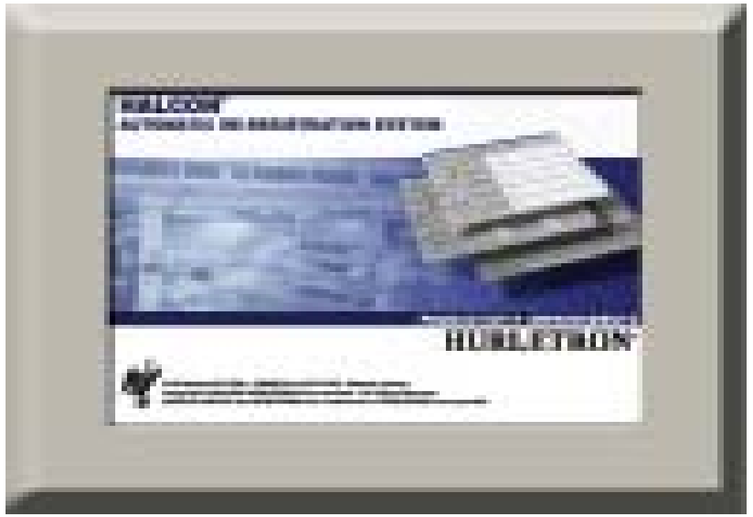


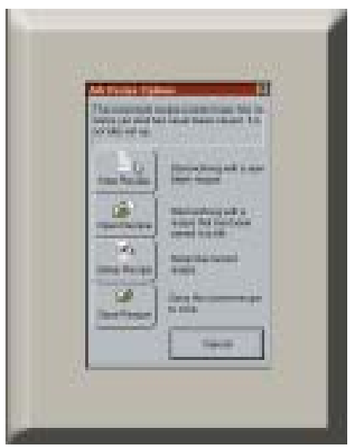
Hurletron's Automatic Registration Controls improve color to color control, die to print alignment, web to web control, and other independent web functions.

Halcon® controls use two unique design features to improve registration control: **the point scanner** for mark detection and **the internal clock** for registration measurement.

Point scanners with embedded microprocessors pre-process the scanner signals before they deteriorate. This feature amplifies weak signals typical of light colors and eliminates the need for 100% clear-track printing of registration marks.

The fiber optic point scanner used to detect the registration marks self-adjusts for optimum signal-to-noise ratios to better adapt to changes in the environment and changes in contrast between ink and substrate. The point scanner also uses a wide focal range to compensate for imprecise mounting.

The **internal clock** provides measurement accuracy to 0.0002" eliminating the need to rely on encoder pulses and their inherent mechanical measurement limitations. In many applications, the Halcon® uses encoder pulses only to identify the registration mark inspection zone and to indicate web speed.



Halcon Insetting combines accurate re-registration in second pass printing or die cutting operations with easy point and click setup and operation.

The unit operates either as a freestanding re-registration control or in a lineup with Halcon Automatic Registration Control.

Halcon® Insetting automatically controls registration for:

- second-pass print and die control
- finishing line functions and die control
- web to pre-printed web control

Depending on the specific application, registration control can be achieved by:

- **Web Stretch:** Stretching the web to the correct length requires the pre-printed roll be printed short with respect to the nominal length of the printing cylinder used on the second-pass work.
- **Web Velocity:** In this configuration the insetter controls the velocity of the web to match the repeat length of the second-pass work to the printed repeat length of the first-pass work. This requires the ability to control a nip near the exit of the press and a tension control.
- **Function Point Speed:** When controlling the function point (print station, die station, etc.) the insetting control changes the velocity of the function point so that the print cylinder rotates exactly once for every preprinted repeat that passes through the nip.

Halcon's History Screen provides the press operator with a visual representation of registration error. The Halcon® also provides an electronic file with this information.