

# Quarter-Trol Registration Control System for Proportional Registration Control

**Scanning  
Devices**



## Overview

Scanning Devices manufactures the HB Quarter-trol system, a bi-directional proportional registration control system with automatic repeat length variation adjustment. It is ideal for applications where a web operation must be synchronized or registered to a mark. Die-cutting, bag-making, can winding, and label application are all proven applications for the Quarter-trol system.

Using an optical sensor to detect the registration mark and a rotary shaft encoder to monitor the position of the process tool, Quarter-trol measures the deviation from registration and generates correction signals proportional to the registration error detected. It then delivers outputs used to drive correction motors that will automatically adjust tool position back to proper registration.

## Features/Capabilities

- Easy to operate - intuitive controls
- Automatically adjusts for repeat length variations (PIV)
- Automatically corrects for differential (DIF) registration errors
- Use of encoder allows for fine adjustments when precision is required, 1 part in 6000 per repeat
- Outputs for both Forward and Reverse corrections to DIF and PIV correction motors
- In-process adjustments to registration can be made while in full auto mode
- Front panel display lights guide operation during manual mode and reports on automatic corrections when in Auto mode
- Available as a complete system with industrial enclosure, or as component for integration into existing system control panel

## Quarter-trol – Setup/Operation

### Installation

- Rotary shaft encoder installed on one-revolution-per-repeat shaft
- Scanner installed over web positioned to detect registration mark
- Wire correction motors

### System set-up in three easy steps

- Program Mode – set up Quarter-trol with system parameters
- Manual Mode - establish machine registration using Quarter-trol adjustment switches
- Switch to Auto Mode - Quarter-trol takes over

### Programmable parameters include

- Registration tolerance setting
- Repeat length correction setting
- DIF and PIV motor run time settings
- Out of Registration Alarm setting
- Inspection window setting (disregards extraneous print between registration marks)



## Scanning Devices CX6 Scanner & Encoder

- General Purpose Registration Mark Scanner
- Optimized for color contrast detection
- NPN Transistor Collector sinks current to power supply minus, 100 milliamps MAX
- Selection Switch for Light mark on dark background or Dark mark on light background
- Multi-turn adjustment dial
- Quick disconnect cables, 6' to 15', ext. available
- Vertical and horizontal orientation
- Scanning Devices Encoder
  - Rotary shaft
  - 600 PPR