

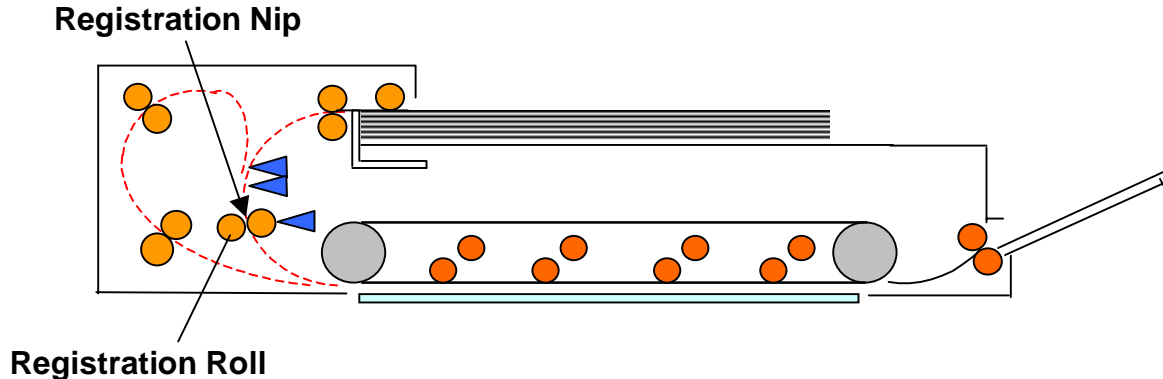
Document Registration - Document Handling Module

Document Registration

There are two steps used to register document that are feed through the DADF.

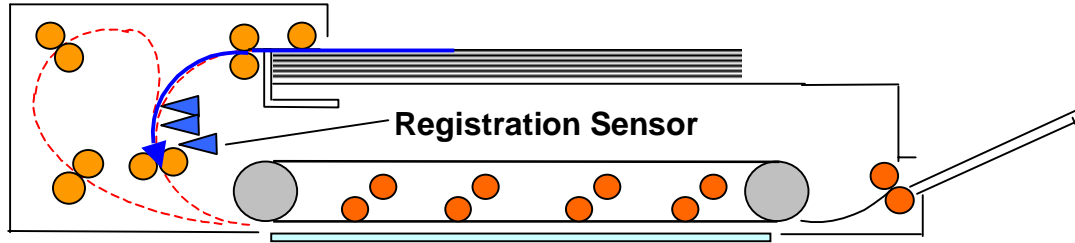
1. The document is first de-skewed at the Registration Rollers.
2. The document is registered on the Platen Glass by the Platen Belt, Registration Roll and Registration Pinch Roll

The Belt Motor drives the Registration Roll through a drive belt. The Registration Roll uses a one-way clutch and only rotates when the Belt Motor is rotating in the forward direction. The Registration Roll creates a nip with the Registration Pinch Roll. In our discussion we will refer to this nip as the Registration Nip.



Document Registration - Document Handling Module

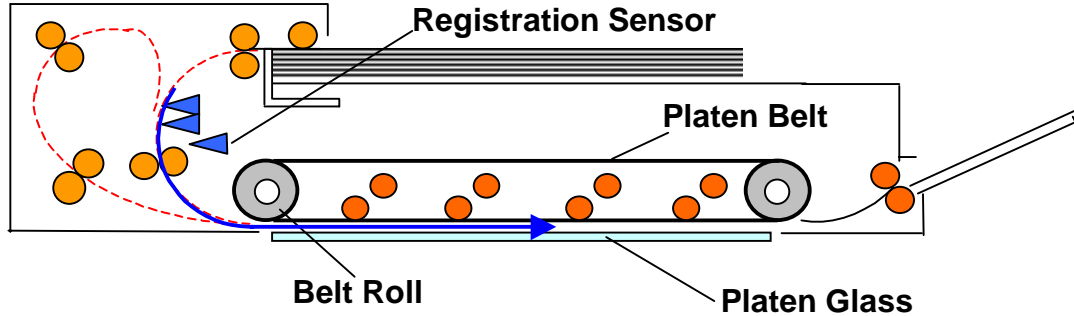
Document Registration (continued)



The Feed Motor provides drive to move the document out of the Input Tray. The motor continues to drive the document for 50 msec after the lead edge actuates the Registration Sensor. During this time the Belt Motor is deenergized and the Registration Rolls are stationary. This over-travel allows the lead edge of the sheet to buckle and de-skew against the stationary registration nip. 50 msec after the Registration Sensor is blocked, the Belt Motor turns on, and the Registration Rolls transports the document to the Platen Belt.

Document Registration - Document Handling Module

Document Registration (continued)



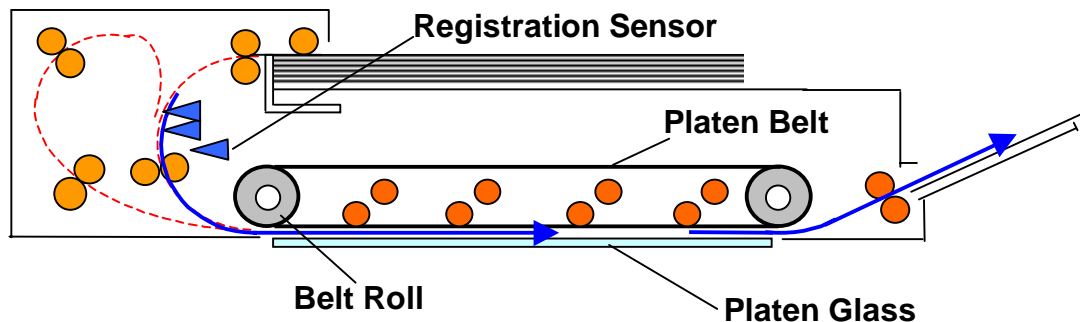
The Belt Motor drives the Belt Roll through a drive belt. The Belt Roll moves the Platen Belt, transporting the document onto and across the Platen Glass. The Belt Motor pulses for 51 counts after the trailing edge of the document passes the Registration Sensor. This positions the document onto the Platen Glass for scanning.

Document Registration - Document Handling Module

Document Registration (continued)

For single sided documents:

Immediately after document scanning, the Belt Motor energizes in the forward direction. This moves the scanned document off the Platen Glass and feeds the next document from the Registration Roll onto the Platen Glass. Again, the Belt Motor pulses for 51 counts to register the second document to be scanned on the Platen Glass.



Document Registration - Document Handling Module

Document Registration (continued)

For two sided documents: (Also see Document Inverting)

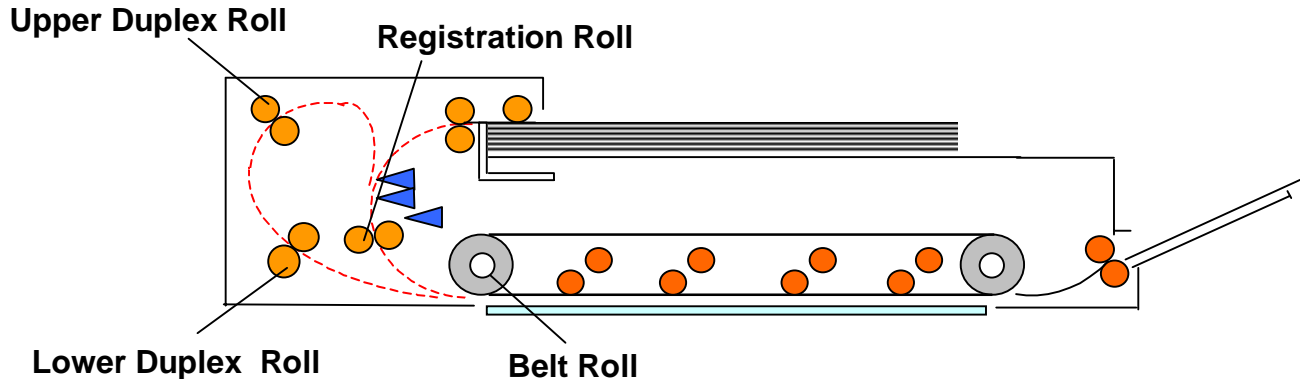
The DADF Belt Motor drives the registration system. This bi-directional stepper motor uses a belt drive to power the following rollers:

Registration Roll (one-way clutch)

Belt Roll (bi-directional)

Lower Duplex Roll (one-way clutch)

Upper Duplex Roll (one-way clutch)



The Belt Motor operates in one direction during document feed, registration, transport to the Platen Glass and document exit. The Belt Motor reverses direction when inverting the document.