Overview

Inserter and Quadient Inserter Express

The Inserter features help to automate the insertion of printed documents and extra inserts (such as marketing materials) into envelopes. RICOH ProcessDirector supports two features that support inserters: the full Inserter feature and the Quadient Inserter Express feature.

Both Inserter features:

- Prepare print jobs for insertion.
- Write and send control files to inserter controllers.
- Receive results files from inserter controllers and interpret them to determine the insert status of each document in the job.
- Automatically (or manually, with operator control) reconcile the job, and reprint any damaged documents.

Supported inserters

The Inserter feature works with inserters from a wide range of manufacturers; the Quadient Inserter Express feature only works with Quadient inserters. They provide sample system objects and sample configuration files for inserters from these manufacturers:

- Bowe
- Bowe with JetVision camera systems
- Bowe Bell & Howell
- Gunther
- Inserters with Ironsides camera systems
- Kern
- Pitney Bowes
- Quadient with the Automated Insertion Management System (AIMS) software.

> ⊙ Note:
> - The Quadient Inserter Express feature only provides sample system objects and sample configuration files for Quadient inserters.

Prerequisites

To use the Inserter features, first install a feature that supports document processing:

- For PDF files, install the PDF Document Support feature.
- For AFP files, install the AFP Support feature.

File requirements

Input files must be either:

- PDF files for which you have defined page groups using RICOH ProcessDirector Plug-in for Adobe Acrobat.
- Advanced Function Presentation (AFP) format, or a format that RICOH ProcessDirector can convert to AFP format. AFP page groups must define the mailpieces in the file.
  With the AFP Support feature installed, RICOH ProcessDirector automatically converts line data and mixed-mode files to AFP format.
  If you have AFP Support and purchase the InfoPrint XT product, RICOH ProcessDirector converts Xerox metacode and Line Conditioned Data Stream (LCDS) files to AFP format.
  If you have AFP Support and purchase the Advanced Transform feature, RICOH ProcessDirector converts PostScript, PDF, or PCL data into an AFP format that is acceptable for use with AFP document processing functions.
  The AFP Indexer mode of RICOH Visual Workbench creates page groups in AFP files created by InfoPrint XT or the Advanced Transform feature. The Ricoh PostScript/PDF to AFP, PCL to AFP, and SAP to AFP Transform features convert input files into AFP image data files. These files do not contain page groups. As a result, they cannot be used with the document processing functions provided in the AFP Support feature.
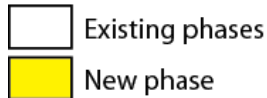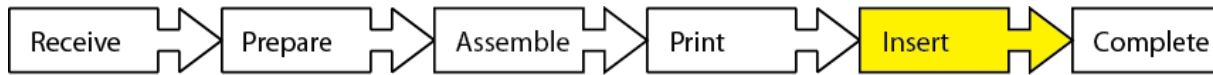
Workflow phase processing

The inserter features add the Insert phase to the RICOH ProcessDirector Workflow Editor. The figure **Insert phase in the RICOH ProcessDirector workflow**, shows how the Insert phase fits into the existing phases.

> ⊙ Note:
> - If you have customized phase names in your system, those phase names differ from the phase names in the diagram.

Insert phase in the RICOH ProcessDirector workflow

A job that requires insertion is processed through the workflow phases, with some variations specific to inserting.

Receive phase

RICOH ProcessDirector accepts an input file for processing and creates a job in the system. It assigns the job a unique job number in the system.

Prepare phase

RICOH ProcessDirector creates page groups and extracts the values of document properties in AFP or PDF jobs.

Assemble phase

RICOH ProcessDirector processes the documents in the job:

1. RICOH ProcessDirector assigns each document in the job a unique document number.
2. RICOH ProcessDirector enhances the documents. For example, it hides existing insertion control marks and adds barcodes to control insertion. The barcodes contain the values of document and job properties (such as the job number, document number, and the insert sequence number of the document).

Print phase

RICOH ProcessDirector prints the job. The job header page is configured to include the job number, the inserter job name , and the name of the inserter controller for the job. The inserter job name can be different from the job number.

Insert phase

RICOH ProcessDirector communicates with the inserter controller and reconciles the job after it completes insertion:

1. If the inserter controller uses an inserter control file to control the insertion of documents in a job, RICOH ProcessDirector creates the inserter control file for the job and sends it to the inserter controller.

> **⮟ Note:**
> ○ You can configure RICOH ProcessDirector to create the inserter control file before printing the job. This setting is useful if the inserter operator loads the initial portion of a large job on the inserter before the job finishes printing.

2. The inserter operator manually loads and runs the job on the inserter.
3. RICOH ProcessDirector receives the inserter results file (if any) for the job and interprets it to determine which documents to reprint.
4. RICOH ProcessDirector reconciles the job:
   ○ If the automatic reconciliation method is selected, RICOH ProcessDirector automatically reprints any damaged documents.
   ○ If the manual reconciliation method is selected, the operator uses the Reconcile function to review the list of damaged documents and indicate which documents to reprint. The operator can also mark individual documents as pulled (removed) from the job. Pulled jobs are not reprinted.
5. RICOH ProcessDirector reprints documents on the printer that the administrator selected for reprints or on the printer that the operator selected during manual reconciliation.
   ○ If the closed-loop reprint method is selected, RICOH ProcessDirector reprints the documents in the same job.
   ○ If the open-loop reprint method is selected, RICOH ProcessDirector creates a child job to reprocess the documents (for example, add new barcodes) and print them.

Complete phase

If jobs are retained on the system, the operator can reprint any documents that are damaged after the job completes reconciliation. Two methods to reprint the documents are available:

- Reconcile the job again. This method reprints the documents in the same job (closed-loop reprint method) or in a child job (open-loop reprint method).
- Create a new job. If a Transform feature is installed, RICOH ProcessDirector can transform the documents to a different data stream and print them on a suitable printer.

Step templates

The Inserter feature adds several step templates:

‣ The **WriteInserterControlFile** and **SendInserterControlFile** step templates let you create an inserter control file. The inserter control file tells the inserter controller how to process each document in a job and send the file to the inserter controller.
‣ The **SetInsertProperties** step template lets you set document properties that are required for insertion.
‣ The **InsertJobs** step template lets you track the insertion of documents into envelopes.
‣ The **CreateInserterReprints** step template lets you process documents to be reprinted after insertion by creating a print file containing only the reprints.

Reconciliation method

Both the **PDF Document Support** and **AFP Support** features support manual reconciliation. When a job enters the **Reconcile** step, the operator selects the **Reconcile** action to start manual reconciliation for the job. Then the operator uses the Reconcile Job dialog on the RICOH ProcessDirector user interface to request an action for each document in the job. To use manual reconciliation, set the **Automatic reconciliation** property on the **Reconcile** step to **No**.

The inserter features add support for automatic reconciliation. When a job enters the **Reconcile** step, RICOH ProcessDirector automatically reconciles the documents in the job and reprints any documents whose barcodes were not read. Operator action is required in these situations:

- The documents to be reprinted exceed the percentage allowed for the job in the **Maximum documents to reprint %** property.
- The inserter controller does not report a status for one or more documents in the job, and the **Default insert status** property of the inserter controller is not set.

To use automatic reconciliation, set the **Automatic reconciliation** property on the **Reconcile** step to **Yes**.

In this section:

[Inserter control files](#)

File-based inserter controllers use an **inserter control file** to control the insertion of the documents in the job. RICOH ProcessDirector can create an inserter control file for each job and send it to the inserter controller before the job is inserted.

[Inserter results files](#)

After a job completes insertion, most inserter controllers write an **inserter results file** that contains the status of each document in the job after insertion and other information related to insertion. RICOH ProcessDirector receives the inserter results file (or files) for each job from the inserter controller and interprets the information in the file to determine which documents to reprint and how to set job and document properties.

[Inserter completion methods](#)

The inserter **completion method** is how RICOH ProcessDirector determines when the inserter controller has finished inserting a job.

[Inserter reconciliation methods](#)

RICOH ProcessDirector reconciles each job after the job finishes insertion. During reconciliation, RICOH ProcessDirector determines which documents in the job were damaged and need to be reprinted, and which documents to pull (remove) from the job. The **reconciliation method** tells RICOH ProcessDirector whether to reconcile damaged documents automatically, or manually with operator control.

[Inserter reprint methods](#)

The inserter reprint method is how RICOH ProcessDirector reprints documents that are damaged during insertion.

Parent topic: [Document processing features](#)