

Choosing the Solution

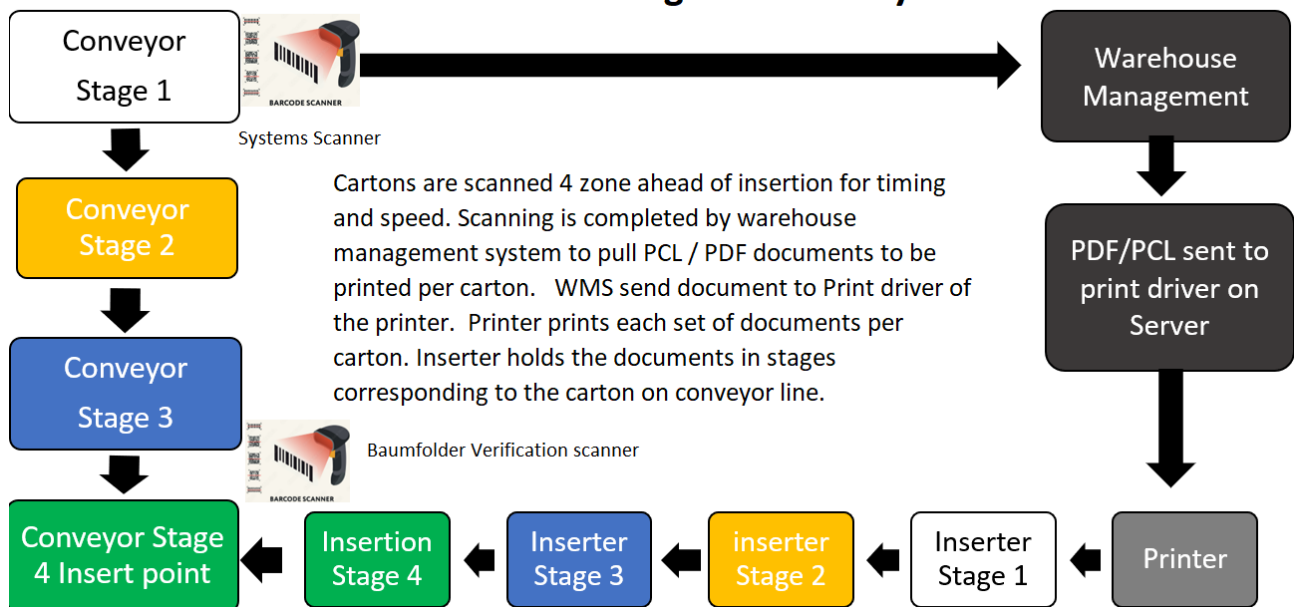
in an Order Fulfillment System



BAUMFOLDER
SOLUTIONS

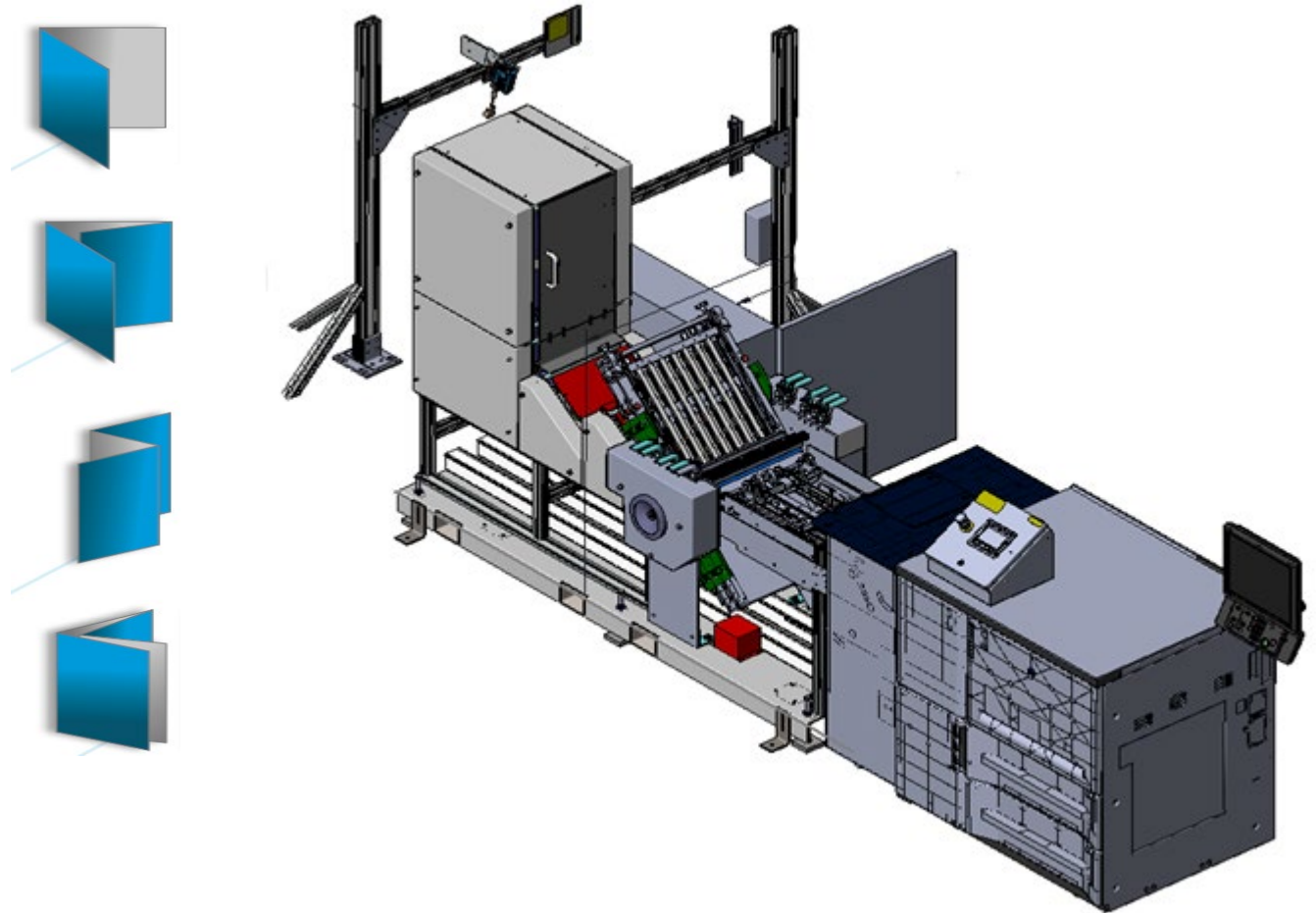
| SOLUTION CONFIGURATION MATRIX | | BC2000545 | BC2000626 | BC2000750 | BC2000850 |
|--|---------------------------|-----------|-----------|-----------|-----------|
| | | | | | |
| Rate of insertion 1-3 pages | | 18 | 18 | 18 | 30 |
| Rate of insertion 3-6 pages | | 12 | various | N/A | |
| Box sizes | Height (flap up) | 3" to 24" | fixed | 3" to 24" | fixed |
| | Width | 5" up | configure | 5" up | configure |
| | Length | 9" up | configure | 9" up | configure |
| Fold required | | various | none | two folds | |
| Bar code / QR code | Specifications | standard | standard | standard | N/A |
| Sheets per insertion, equipped with gatherer | | 1 to 6 | 1 to 6 | 1 to 6 | 1 |
| Gatherer | | gatherer | N/A | gatherer | N/A |
| Multi Level insertion | Available as an option | 3" to 36" | fixed | 3" to 18" | N/A |
| System information | | | | | |
| Print color | Black/white or color | configure | configure | configure | N/A |
| Conveyor height | | | | | |
| Foot print of inserter | Parallel to conveyor | x | | | |
| | Perpendicular to conveyor | x | x | x | x |
| Communication requirements | | | | | |
| | Discrete signals | x | x | x | |
| | Ethernet cables | x | x | x | |
| Paper specification | Stock or pre-printed | x | x | x | x |

Inserter Print FlowSignal summary



PRINT/GATHER/FOLD/VERIFICATION/INSERT

BC2000545



FEATURES:

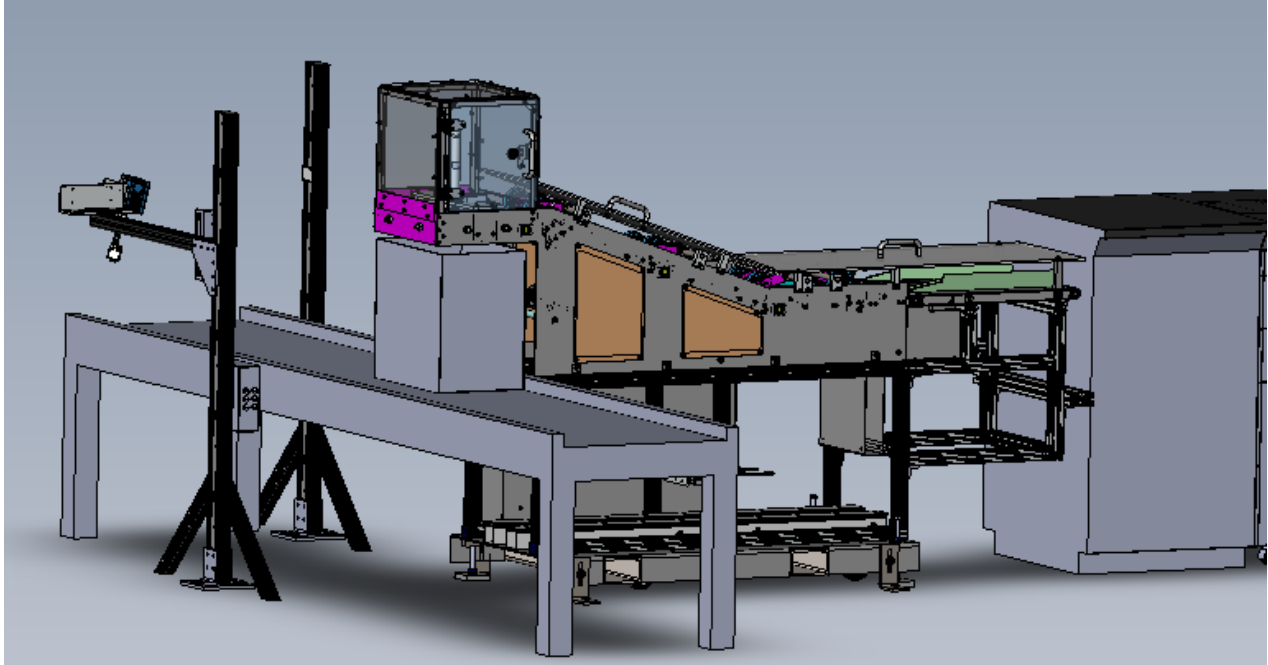
- Print Engine B/w (optional printers)
- Gather up to 6 sheets
- Half fold / Tri Fold / Inside Quarter Fold
- Rate 18 PER MINUTE AT 1-2 PAGES
- Rate 12 PER MINUTE AT 3-4 PAGES
- Rate 9 PER MINUTE AT 5-6 PAGES
- QR / Bar Code Verification
- 220V / 1ph
- Touch Screen controls

Optional:

- Multi-level insertion for variable box heights.
- 480v/1ph or 220v / 3ph
- Communication configurable at time of order.

PRINT - SINGLE-LEVEL INSERT

BC2000626



FEATURES:

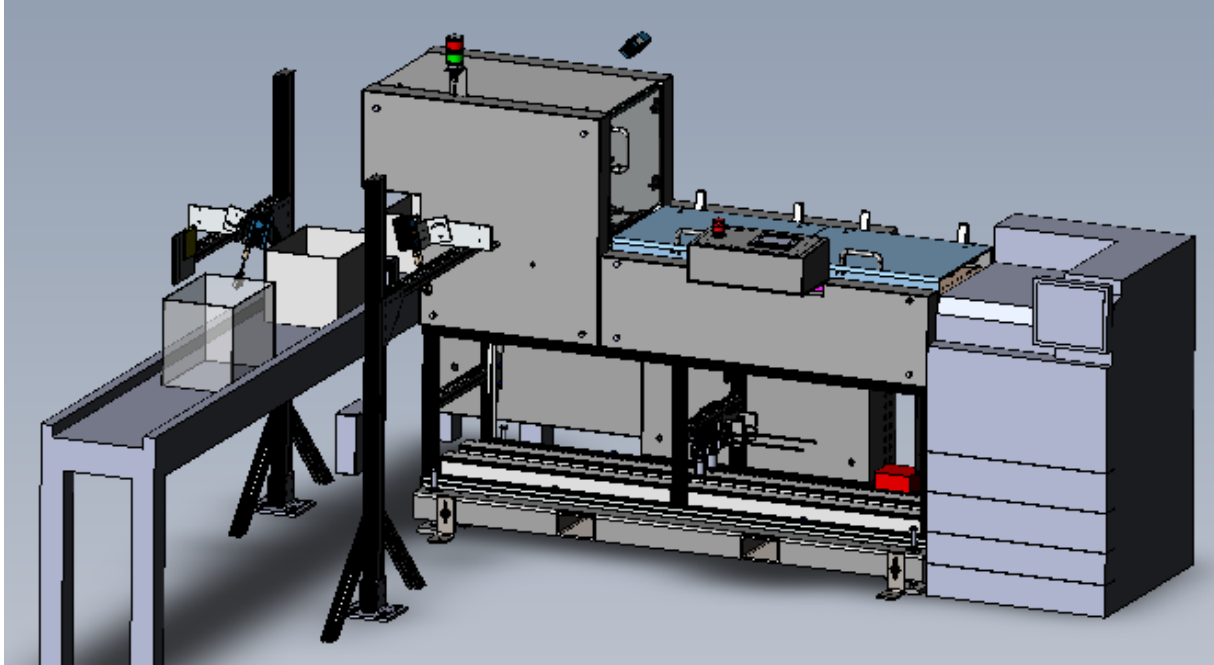
- Print Engine B/w (optional printers)
- Flat sheet no fold
- Rate 18 PER MINUTE AT 1-2 PAGES
- Rate on larger gathered documents will depend upon printing device
- Label stock, loose sheets (1-4) or bound documents.
- QR / Bar Code Verification
- Top of carton insertion (positive push insertion)
- 220V / 1ph
- Touch Screen controls

OPTIONAL FEATURES

- GATHERER
- 480v/1ph or 220v / 3ph
- Communication configurable at time of order.

PRINT/FOLD/TOP INSERT

BC2000750



FEATURES:

- Print Engine B/w (optional printers)
- Fold type see illustration
- Rate 18 PER MINUTE AT 1-2 PAGES
- QR / Bar Code Verification
- Top of carton insertion
- 220V / 1ph
- Touch Screen controls

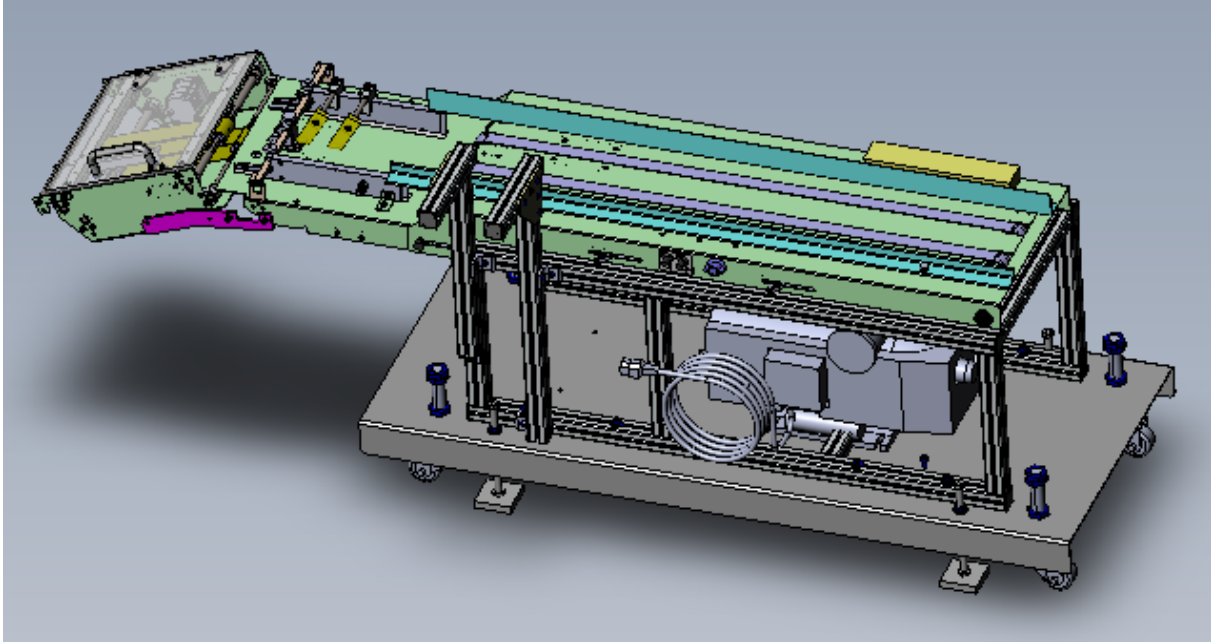
OPTIONAL FEATURES

- GATHERER
- Multi-level insertion for variable box heights.
- 480v/1ph or 220v / 3ph
- Communication configurable at time of order.



SINGLE PAGE FEEDER

BC2000850



FEATURES:

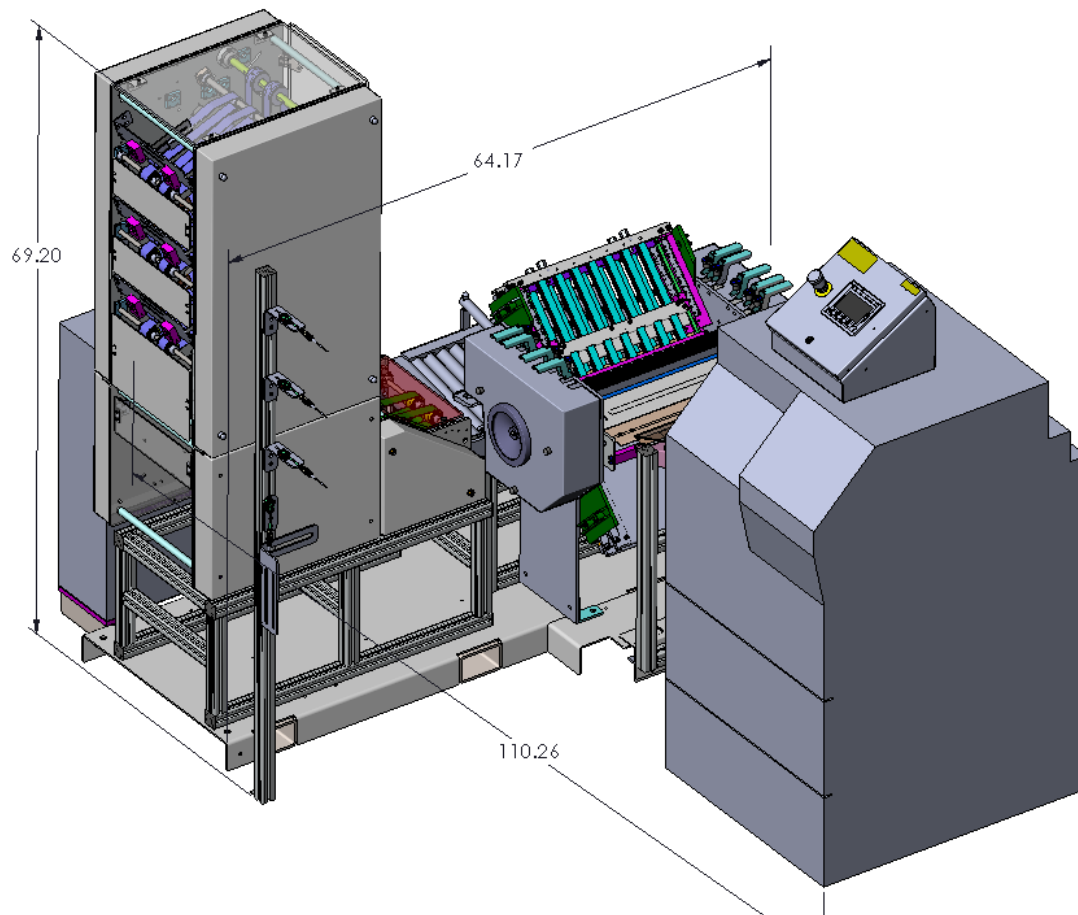
- Pre-printed forms Friction or air feed Feeder
- Rate dependent on form type.
- Top of carton insertion
- On demand feeding
- 220V / 1ph

OPTIONAL FEATURES

- 480v/1ph or 220v / 3ph
- Communication configurable at time of order.

OPTIONAL MULTIPLE LEVEL INSERTION

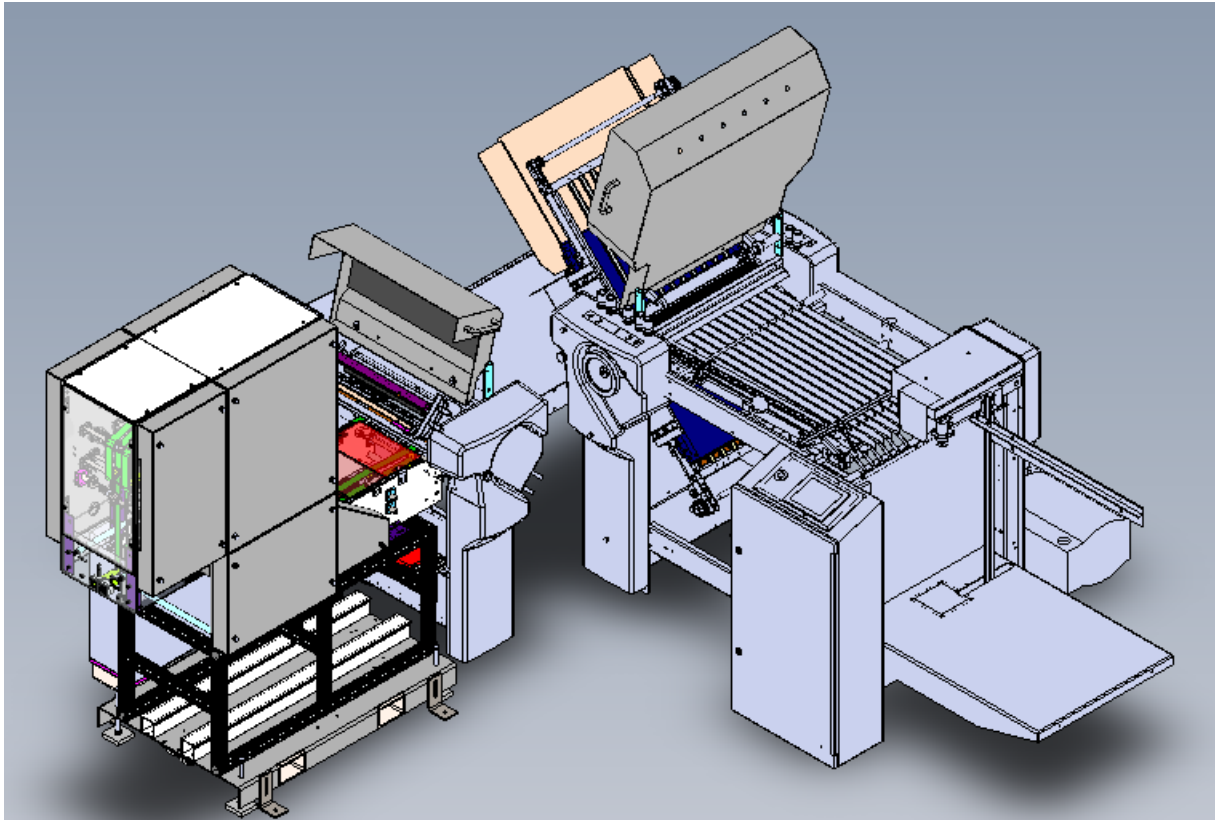
Different height boxes on the same conveyor.



OPTIONAL FEATURE

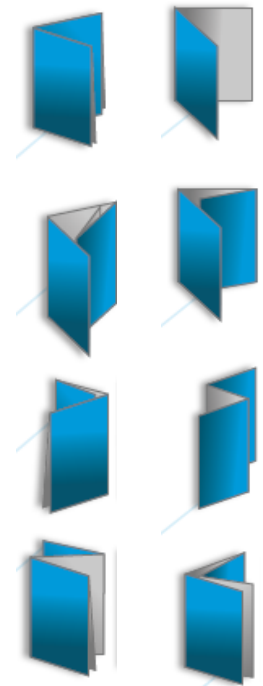
- Feature available for models offered
- Can feed up to 48" box height variations.
- Communication configurable at time of order.

OPTIONAL FEEDER FOR PREPRINTED MATERIAL



OPTIONAL FEATURE

- Feature available for models that has pre-printed forms
- Can feed larger than 8.5x11" forms
- Applications that are higher speeds
- Communication configurable at time of order.
- Feature can be configured to various types of folds to achieve shapes and sized most systems cannot.



Inserter Signal summary

Signals can be sent and received through Discrete I/O, or ethernet connections.
This is done with relays found in the Inserter enclosure and Conveyor enclosure.

Signals Sent to Conveyor from Inserter:

1) "Inserter On"

Description: Inserter running and has no faults. This signal is held high until there is an Inserter Fault or Emergency Stop. This signal is sent after the "Run signal to Inserter" is sent by the conveyor. During production, this signal will be dropped if there is a Fault/Estop on the Inserter.

2) "Bar Code Passed"

Description: When there is a successful Barcode match between the Box and the Invoice, this signal is sent to the conveyor and held high for 300ms.

3) "Bar Code Failed"

Description: When there is an unsuccessful Barcode match between the Box and the Invoice, this signal is sent to the conveyor and held high for 300ms.

Signals Sent to Inserter from Conveyor:

4) "Box in Place"

Description: The Conveyor will send the Inserter a "Box in Place" signal when the box has stopped in front of the Inserter and is ready for the Invoice to be inserted. This signal will need to be held high for 300ms. If there is a box that does not require an Invoice on the conveyor, the Conveyor will not send a "Box in Place" signal for that box when it arrives in front of the Inserter.

5) "Run signal to Inserter"

Description: The Inserter will start running in "Run Mode" when this signal is received from the conveyor. The signal needs to be held high for as long as the conveyor wants the Inserter to remain in "Run Mode".

If the Inserter has a Fault and cannot continue in "Run Mode", the "Inserter On" signal will be held Low (or dropped (see Item 1)). At this time, The Conveyor will need to hold Low (or drop) this signal to the Inserter until the Inserter is ready to run.

Typically, the operator will reset the Inserter or handle printer issues first, then press a button located on the conveyor line restarting this signal.

This signal is usually dropped to the Inserter after a specified time of inactivity at the conveyor line. This prevents the Inserter from running during extended breaks, shift changes and weekends.

Description of System - Sample

Customer will scan cartons four (4) zones ahead of the point of insertion and send a PCL or PDF file to the Print driver on the network. The individual print file will be printed (1 page) simplex and then folded in half. After the document is folded, it will be staged for timing purposes. At the point of insertion, this system will read the barcode on the box and match the barcode to the document for verification and then be inserted into the box. If there is no match, a signal will be sent from the Baumfolder system to the conveyor to stop and display an error. The document will not be inserted. This description will vary depending on the Solution required. Items that do not change are:

1. Requirement for the customer/ integrator to scan cartons/boxes (4) zones ahead of point of insertion and to send a PCL or PDF individual file to the Print driver on the network.
2. Staging for timing purposes
3. Signals on pass/fail of verification

Customer to provide:

1. If Printer is provided by customer, customer sends printer to Baumfolder 1 month prior to shipment of system for testing purposes. Printer is shipped back to customer with Baumfolder Document Inserter.
2. Two (2) electrical power drops will need to be provided. One electrical drop will be for the printer - TBD. The second electrical drop is for the inserter system which requires (480/1 -20 amps) & 220v/1ph – 40 amps). Drops are to be compliant with local electrical codes that includes capability to be disconnected if the Baumfolder unit needs to be moved. The customer is to make all arrangements and to have these connections in place prior to installation, based upon power consumption requirements provided by Baumfolder.
3. Qualified personnel for training on the equipment to maintain the Baumfolder units after the installation and training are complete. Would request end customer to send maintenance personnel or technicians responsible for maintaining system to Baumfolder for factory training during FAT (factory acceptance test).
4. A filtered air supply of 90 PSI (56 Bar) to the Baumfolder Unit is required.
5. All interface communications between Baumfolder system and warehouse management system.
6. Sample material including the cartons and printed material for testing.

A Factory Acceptance Test (FAT) will be performed at the Baumfolder Corporation factory in Sidney, OH. The FAT consists of basic equipment inspection and functionality testing given factory conditions and limitations.

Before the FAT, an evaluation of the machine operation is conducted, which typically includes performance testing, an (8) eight-hour continuous dry cycle run, and complete safety checks. Baumfolder will require the customer to provide sample materials for testing to insure proper set-up and testing prior to the actual FAT. A standard FAT includes one day for testing.

BAUMFOLDER CENTURY SERIES

(Typically, at the FAT test, Baumfolder will provide training for customers technicians responsible for ongoing support, and the maintenance personnel and operators of your customer. This would be a 1.5-day period).

Warranty & Maintenance:

The warranty for all items, except the Printer, is (1) year on parts only. This does not include normal wear items. If service labor is needed beyond the training and installation from Baumfolder, there will be a charge for this training at a rate of \$125.00 per hour. This rate is the same for travel time and time on your site. The maintenance contract on the Printer would be handled through copier maintenance contract.

Lead times for order:

Baumfolder lead times range between 12 to 22 weeks, from the date of receipt of the deposit. Lead time is the shipping date from Baumfolder Corporation docks. Installation and training at the customer site must be added to the Baumfolder lead time provided when determining lead time for an operational system.

Upon completion of Information Requirement – a quote is completed for the system. Installation is a separate line item on the quote.