

# Horizon

DIGITAL FINISHING

# Smart Finishing Solutions

A new concept in Digital Finishing Solutions.



# FOCUS ON POST PRESS

## SMART FINISHING SOLUTIONS.



Continuous Feed Printer



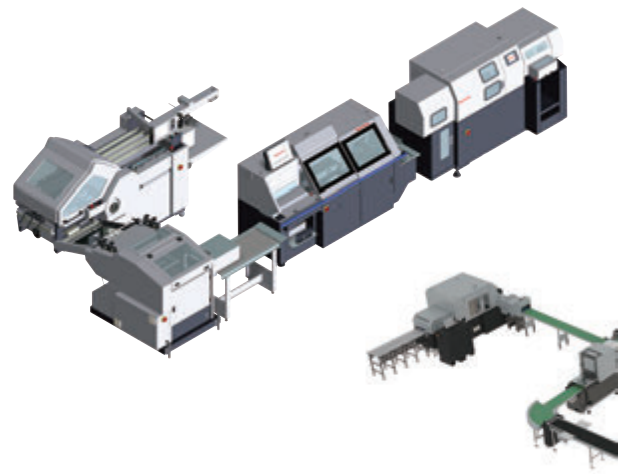
Cut Sheet Printer

### SMART **FOLDING** SYSTEM

### SMART **STITCHING** SYSTEM



### SMART **BINDING** SYSTEM



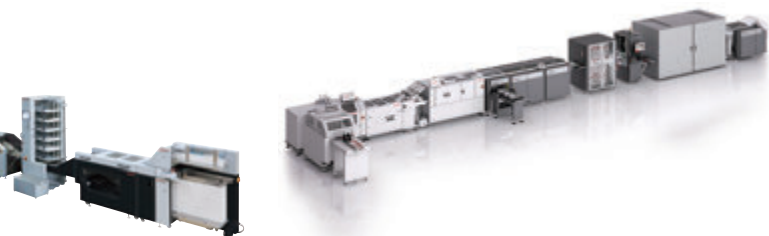
### SMART **SHEET PROCESSING**



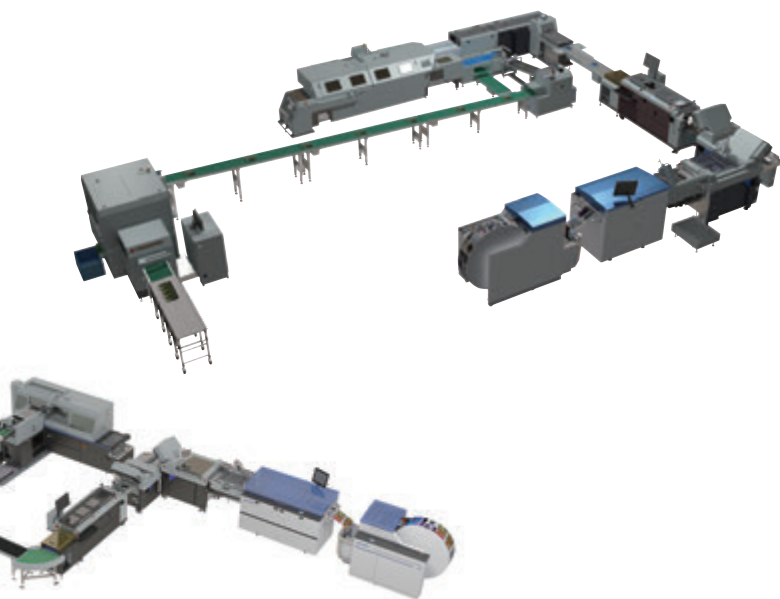
Digital print is becoming a major printing method for production printing.  
 To employ digital print effectively, **post press** plays an important role and is a key to success.  
 Focus on post press and reconsider the workflow.  
 Horizon's **Smart Finishing Solutions** will lead to an improved production flow with greater efficiency and profitability.



Fold



Booklet



Bound Book

## SYSTEM



Cut Sheet

# SMART FOLDING SYSTEM.



## AFV-564DF/566DF

Buckle Folder for Digital Printers

### BENEFIT

#### AUTOMATIC SETUP

Icon based touchscreen enables intuitive setup and operation. New functions allow for automatic and easier setup for each section.



#### ADVANCED AUTOMATION

The level of automation is increased dramatically. In addition to quick and intuitive setup, the level of accuracy during setup is increased.

#### HIGH QUALITY AND PRODUCTIVITY

Uniquely designed buckle plate and folding mechanisms ensure consistent accuracy of folding quality and durability.

#### ADVANCED SCORING ADJUSTMENT

Scoring navigator enables easy setup for scoring and perforation position.

#### SYSTEM FLEXIBILITY

Flexible configuration and a variety of options cover a wide range of applications. The DIFV-56 is available to interface with the unwinder and cutter for continuous digital production.



DIFV-56

#### DYNAMIC FOLD

Optional dynamic buckle plate is available for changing the fold patterns on the fly for book production. For example, 12 page and 8 page signatures can be produced consecutively to reduce blank pages in the book.



## STAND-ALONE 6-BUCKLE

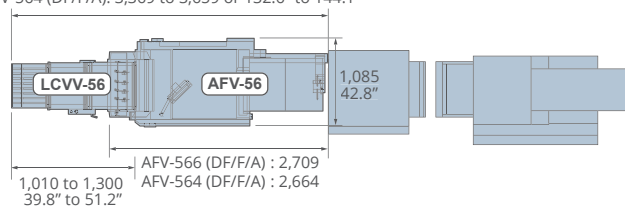
Stand-alone 6-buckle or 4-buckle configuration for brochure or leaflet folding.



AFV-56 series + LCVV-56

(Top View)

AFV-566 (DF/F/A): 3,414 to 3,704 or 134.4" to 145.8"  
AFV-564 (DF/F/A): 3,369 to 3,659 or 132.6" to 144.1"



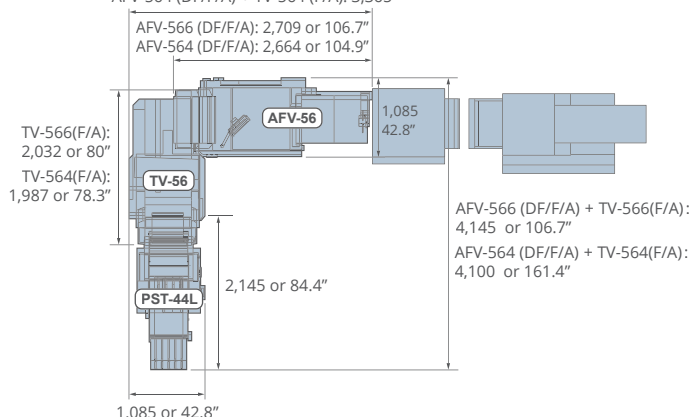
## RIGHT ANGLE 6/4 BUCKLE SYSTEM

Buckle folding system is available with 4 or 6 buckle plates in both the parallel and right angle sections. Right angle configuration expands folding patterns for applications, including direct mail and book signatures. This configuration also allows for scoring in the first station and folding on the second station for heavier weight stocks.



AFV-56 Series + TV-56 Series + PST-44L

AFV-566 (DF/F/A) + TV-566 (F/A): 3,410  
AFV-564 (DF/F/A) + TV-564 (F/A): 3,365

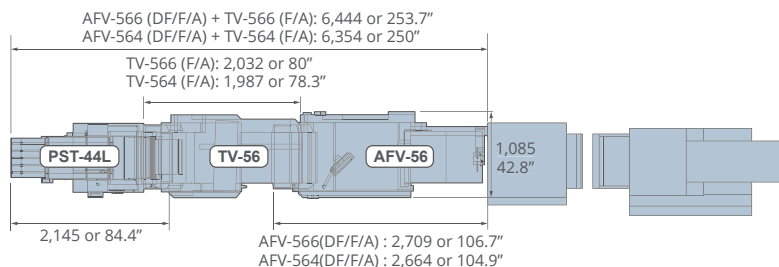


## IN-LINE 6/6 BUCKLE SYSTEM

Straight 6/6 (4)-buckle modular system for maximum 10 or 12-buckle operation. Complex fold patterns can be performed with this configuration.



AFV-56 series + TV-56 series + PST-44L



### AFV-56 / TV-56 SERIES

Machine Configuration	First Station (AFV-56) AFV-566DF, 566F, 566A: 6 Buckles AFV-564DF, 564F, 564A: 4 Buckles
	Second Station (TV-56) TV-566F, 566A: 6 Buckles TV-564F, 564A: 4 Buckles
Sheet Size	<b>Width x Length</b> Max. 560 mm x 900 mm or 22.04" x 35.43" *1,100 mm or 43.310" with optional long table Min. 130 mm x 148 mm or 5.12" x 5.83" *105 mm or 4.14" with optional small guide
Sheet Weight Range	Uncoated Paper 40 to 250 gsm Coated Paper 50 to 232 gsm
Belt Speed	30 to 270 meters per minute or 98 to 885 feet per minute
Production Speed	Suction Head 40,000 cycle per hour
Buckle Fold Length	AFV-56 1st / 2nd / 3rd / 5th Buckle Chute: 35 to 450 mm or 1.375" to 17.700"
	TV-56 4th / 6th Buckle Chute: 35 to 330 mm or 1.375" to 12.990"
Voltage/Frequency	AFV-566DF, 566F, 566A, 564DF, 564F, 564A: 3-phase 200 to 230 V, 50 or 60 Hz 3-phase 380 or 400 or 415 V, 50 or 60 Hz (Step down to 200 V by Transformer) TV-566F, 566A, 564F, 564A: 3-phase 200 to 230 V, 50 or 60 Hz

Machine Dimensions	AFV-566DF, 566F, 566A: 2,709 (W) x 1,085 (D) x 1,526 (H) mm or 106.7" (W) x 42.8" (D) x 60.1" (H)
	AFV-564DF, 564F, 564A: 2,664 (W) x 1,085 (D) x 1,481 (H) mm or 104.9" (W) x 42.8" (D) x 58.4" (H)
	TV-566F, 566A: 2,032 (W) x 1,085 (D) x 1,412 (H) mm or 80" (W) x 42.8" (D) x 55.6" (H)
	TV-564F, 564A: 1,987 (W) x 1,085 (D) x 1,412 (H) mm or 78.3" (W) x 42.8" (D) x 55.6" (H)

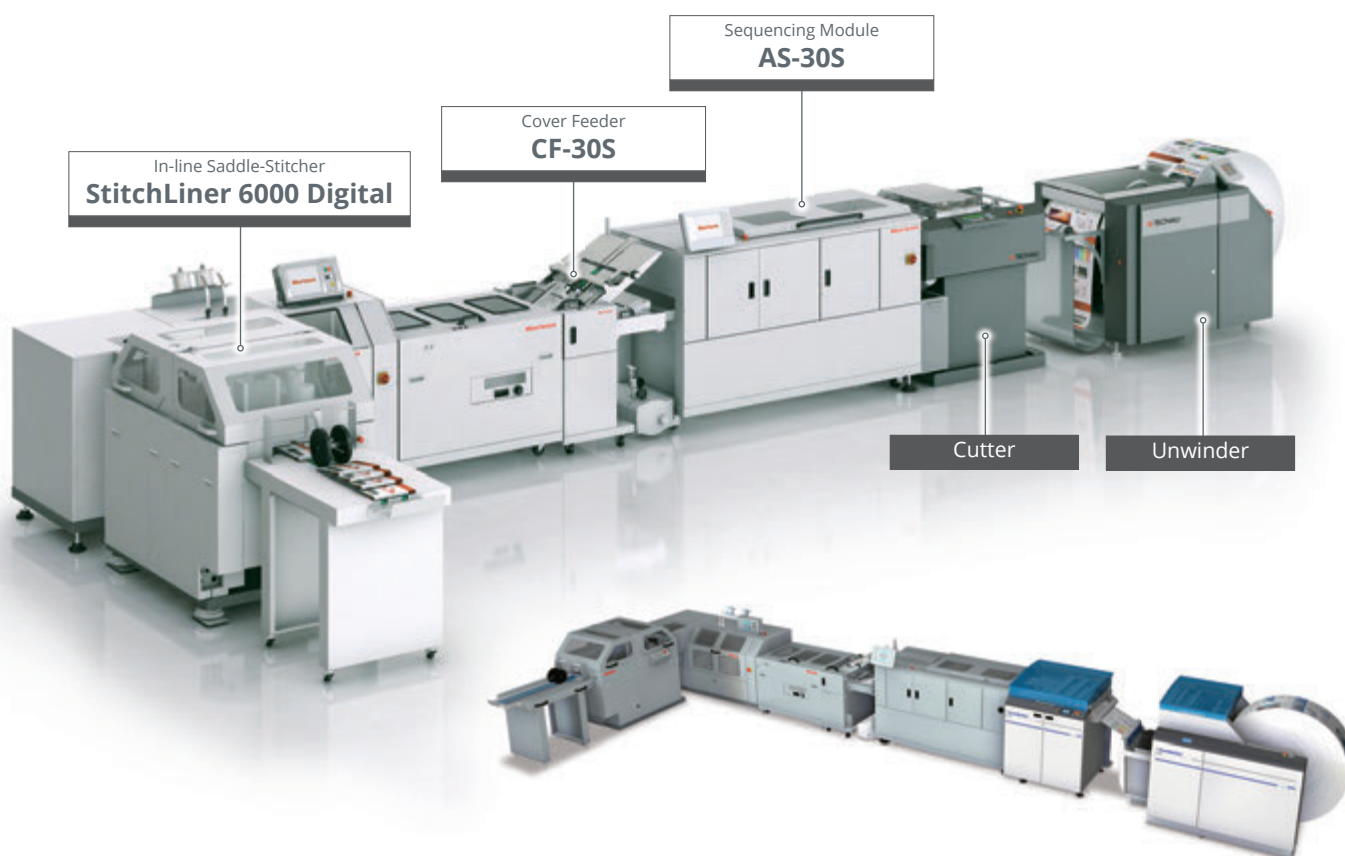
### DIFV-56

Sheet Size	<b>Width x Length</b> Max. 520.7 mm x 900 mm or 20.500" x 35.435" Min. 165.1 mm x 230 mm or 6.500" x 9.060" *140 mm (L) or 5.515" (L) when feed rotor is used
Sheet Weight Range	Uncoated Paper 40 to 250 gsm Coated Paper 50 to 232 gsm
Belt Speed	270 meters per minute or 885 feet per minute (Synchronizing with the folder)
Voltage/Frequency	3-phase 200 to 220V, 50 or 60 Hz
Machine Dimensions	Conveyor: 780 (W) x 1,205 (D) x 350 (H) mm or 30.7" (W) x 47.5" (D) x 13.8" (H) Slide-away pedestal: 790 (W) x 610 (D) x 320 (H) mm or 31.1" (W) x 24.0" (D) x 12.6" (H)

\*The machine design and specifications are subject to change without any notice.

\*Specifications may vary depending on the job, paper quality, environmental influences, and various other factors. Please do a test run before starting production.

# SMART STITCHING SYSTEM.



## StitchLiner 6000 Digital In-line Saddle-Stitcher

### BENEFIT

#### HIGH QUALITY

##### Scoring

Accurate sheet registration, scoring and folding. In-line plow fold mechanism eliminates unnecessary folding steps.

##### Stitching

The folded sets are jogged from the head and foot, then centered on the saddle by the centering mechanism before the heavy-duty stitching heads produce accurately stitched booklets.

##### Trimming

Precision automated knife positioning and in-feed provides for accurate booklet registration and three-knife trimming.

#### HIGH SPEED

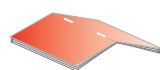
Maximum production speed is 6,000 booklets per hour (depending on application). An advanced interface maximizes the upstream system efficiencies.

#### VARIABLE DATA HANDLING

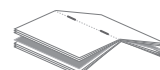
Personalized and variable page count applications can be handled. The in-line configuration insures sheet-to-sheet integrity.

#### FLEXIBLE INSERTION

An intelligent cover feeder enables flexible insertion of up to 5 sheets plus cover anywhere in the booklet.



Cover Feed Only



Single Sheet Inserting



Multiple Sheet Inserting

#### EASY OPERATION

Easy and intuitive operation is achieved with touch screen control. No specialized operator skills are needed to set up and operate the system.

# CONFIGURATIONS OF STITCHLINER 6000 DIGITAL

## StitchLiner 6000 Digital

### ACF-30S ACCUMULATOR & FOLDER

Sheets are scored and plow folded to form crisp, tightly folded booklets.



### SPF-30S SADDLE STITCHER

Folded sheets are accumulated on the saddle, perfectly jogged, and accurately stitched.



### HTS-30S THREE KNIFE TRIMMER

Professional-quality three knife trimming applies the final finish. A center-cut option enables two-up production.



## StitchLiner 6000 Digital Options

### AS-30S ADVANCED SEQUENCING MODULE

A four-stage buffering section synchronizes the speed of the roll cutter and the saddle stitching unit.

### HSF-30S HIGH-SPEED OFF-LINE FEEDER

Flexible sheet feeder enables you to operate StitchLiner6000 Digital both in-line and off-line. Simple & quick change over between in-line and off-line production. 500 mm or 19.68" high pile capacity for minimized loading time. Mark reader is equipped as standard for variable sheet count production. Barcode reader can be mounted for high security production.



### CF-30S COVER FEEDER

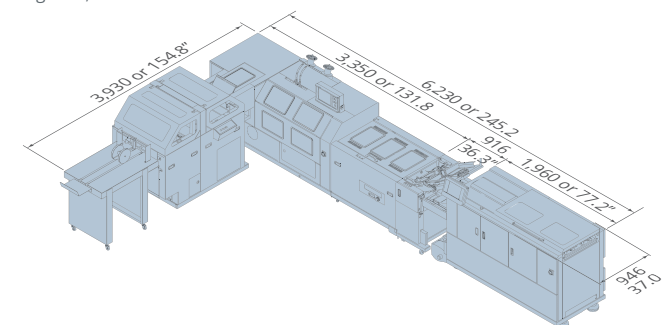
One or two modular cover feeding stations can be added, to insert up to 5 sheets plus cover anywhere in the booklet.



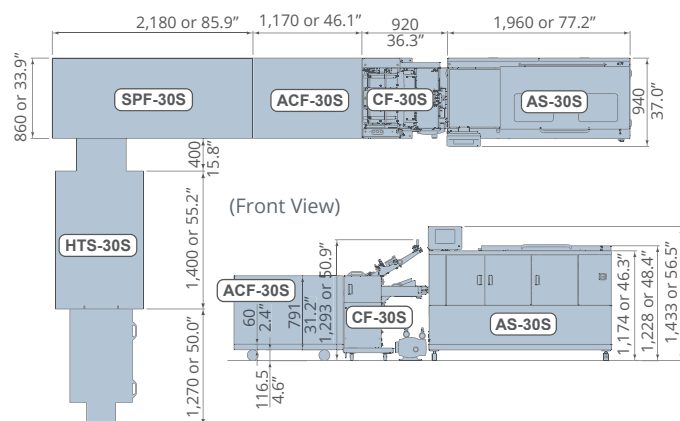
# SPECIFICATIONS.

## Machine Dimensions. (Unit: mm or inch)

Height : 1,433 mm or 56.5"



(Top View)




(Front View)

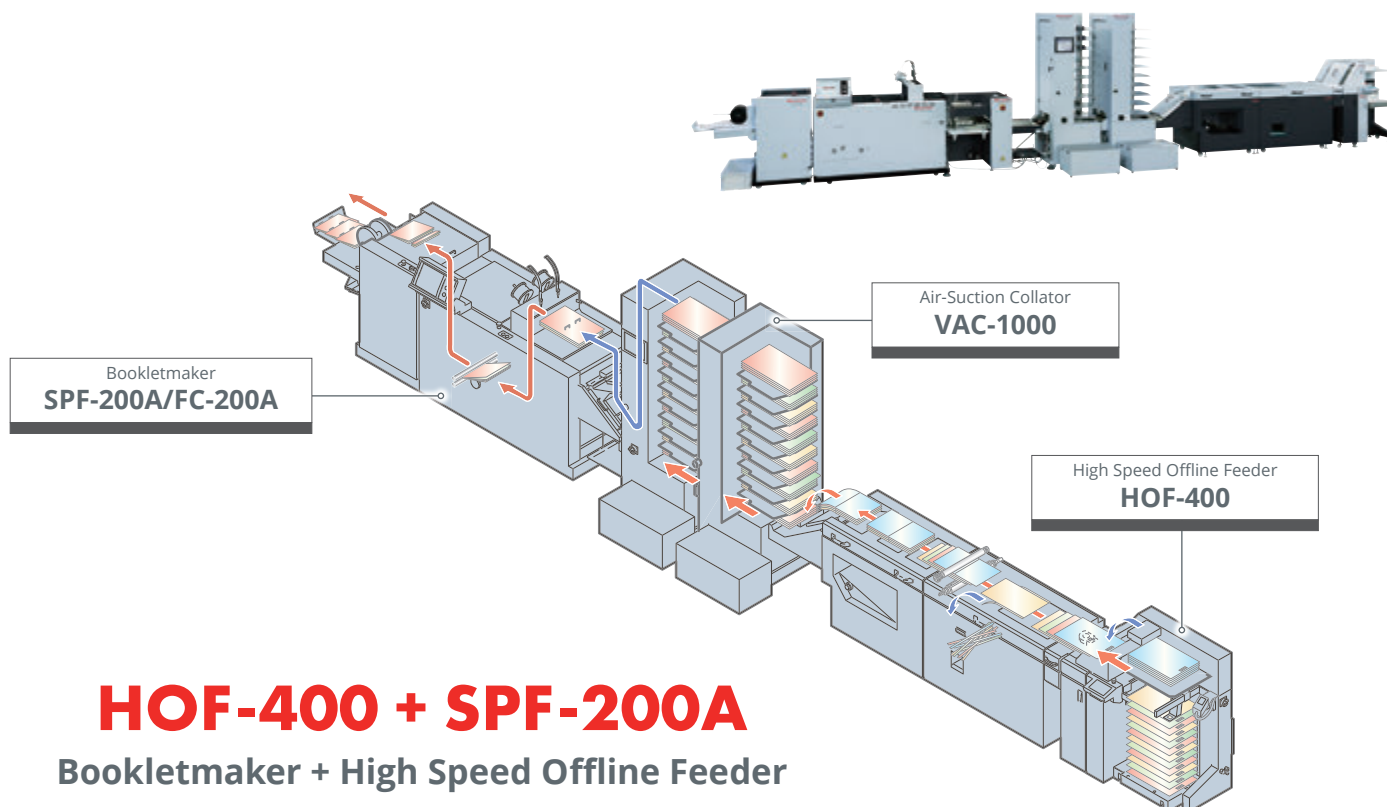
\*The machine design and specifications are subject to change without any notice.

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## STITCHLINER 6000 DIGITAL

Sheet Size		<b>Width x Length</b> Max. 502 x 340 mm or 19.76" x 13.38" Min. 279.4 x 210 mm or 11.0" x 8.27"
Sheet Weight Range	Normal Paper : 52 to 209 gsm Coated Paper : 73 to 209 gsm	
Web Speed	5 to 180 meters per minute	
Stitch Thickness	Max. 5 mm or 0.19" (Booklet thickness 10 mm or 0.39") *For loop stitching, Max. 3 mm or 0.11" (When doing center-cuts, the width is limited to half of the center-cut width.) Min. Two Sheets	
Stitch Distance	Max. 150 mm or 5.90" *Up to two additional stitcher heads can be added. Min. 66 mm or 2.60"	
Untrimmed Booklet Size		<b>Width x Length</b> Max. 338 x 228 mm or 13.30" x 8.97" Min. 210 x 139.7 mm or 8.27" x 5.50"
Trim Width	Max. 25 mm or 0.98", Min. 2 mm or 0.08"	
Center-cut Width	6 mm or 0.236", 8 mm or 0.315"	
Finished Booklet Size		<b>Width x Length</b> Max. 336 x 230 mm or 13.22" x 9.05" Min. 160 x 114.7 mm or 6.30" x 4.52"  When center-cut is performed Max. 167 x 220 mm or 6.57" x 8.66" (6 mm width center-cut) Min. 90 x 114.7 mm or 3.55" x 4.52"
Sheet Sizes for Cover Feeder		<b>Width x Length</b> Max. 500 x 350 mm or 19.68" x 13.77" Min. 199 x 140 mm or 7.84" x 5.52"
Sheet Weight Range for Cover Feeder	Normal Paper: 81 to 270 gsm, Coated Paper: 85 to 300 gsm For feeding six-page signatures and eight-page signatures, 10 mm or 0.4" gap between sheet edges is required at least.	
Sheet Stack Height	Max. 30 mm or 1.18" (Sheets can be loaded while running)	
Production Speed	Max. 6,000 booklets per hour (A3, one block, up to 6 sheets) Min. 2,400 booklets per hour (A3, 12 sheets, two block)	
Voltage/Frequency	AS-30S: 3-Phase 200, 208, 220, 230 V, 50 / 60 Hz 3-Phase 240 V, 50 Hz CF-30S: 3-Phase 200, 220, 240, 400 V, 50 / 60 Hz 3-Phase 208 V, 60 Hz ACF-30S / SPF-30S / HTS-30S: 3-Phase 200, 220, 400 V, 50 / 60 Hz	

# SMART STITCHING SYSTEM.



## HOF-400 + SPF-200A

Bookletmaker + High Speed Offline Feeder

### Intelligent Function

The high quality booklets can be produced efficiently from both digital and off set print. The Horizon HOF-400 High Speed Offline Feeder can be connected with the finishing devices for the off set outputs to process both digital and off set prints through one efficient system.

## BENEFIT

### FINISHING DEVICE FOR DIGITAL PRINT

Digitally printed sheets are fed reliably with care from the HOF-400 to the saddle-stitching system. A standard mark sensor enables variable sheet count documents to be handled with integrity and verification.

### FINISHING DEVICE FOR OFFSET PRINT

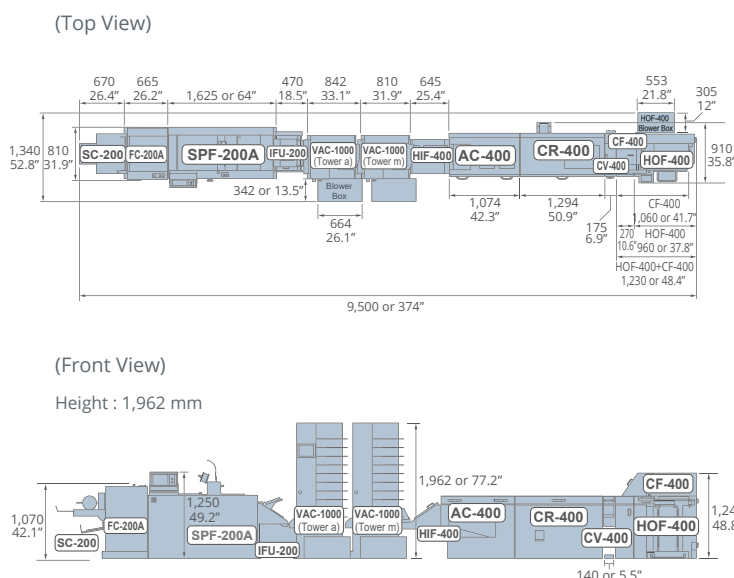
A VAC series collator can be connected in line, for processing conventional offset printed work.

### VARIOUS MODULAR OPTIONS

The HOF-400 is compatible with a wide variety of system configurations such as sheet feeding, cover feeding, accumulating, bleed trimming, and center creasing depending on your needs.

### FLEXIBLE BOOKLET MAKING SYSTEM SELECTION

The HOF-400 can be connected to the SPF-200A, SPF-200L, or StitchLiner5500.





# SMART BINDING SYSTEM.

## BENEFIT

### SIGNATURE BOOK/JOB PRODUCTION

Each job is processed one by one, making it easier to schedule and control jobs. The sheets are folded into signatures at the folder and accumulated into book blocks at the presser/stacker. This process makes it easier to handle the sheets for more efficient production.

### VARIABLE SIZE FINISHING

The same size book blocks can be finished in various sizes without changing the format at the folder by reading a unique code at the trimmer. The changeover via servo motor is done quickly to match the various sizes.

### JOB TRACKING

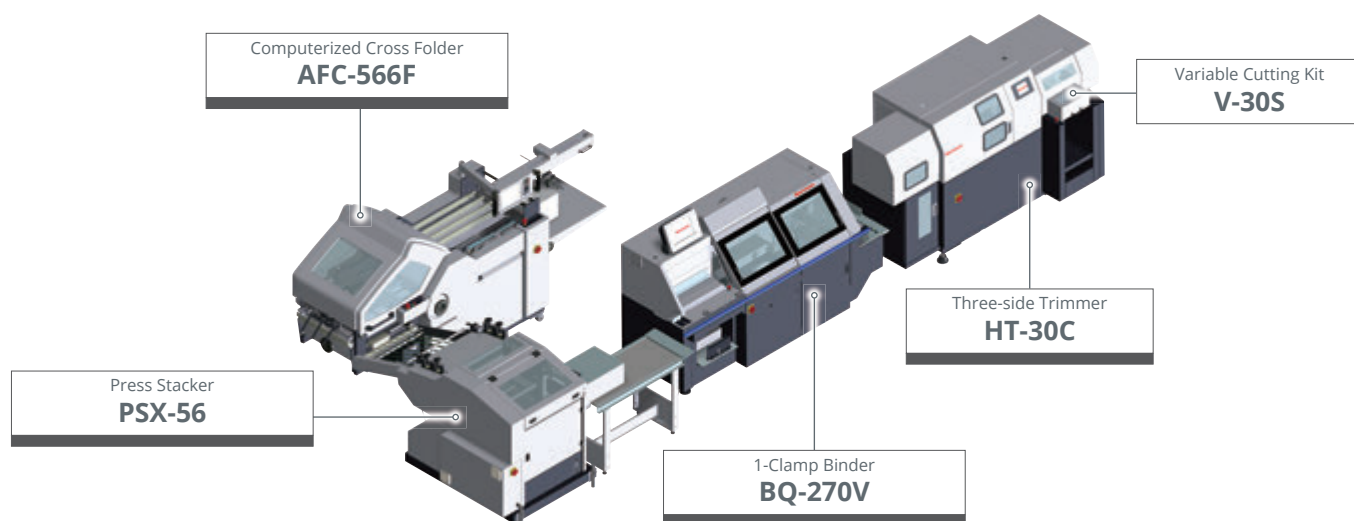
Signature order is tracked by barcode and ejected if it is in the wrong order. A book block and cover matching system is also available to match book block and cover by barcode.

### CONSISTENT WORKFLOW WITH PRE-PRESS

The pXnet bindery control system accepts JDF setup data and quantity from the pre-press workflow to automate and manage the binding process.

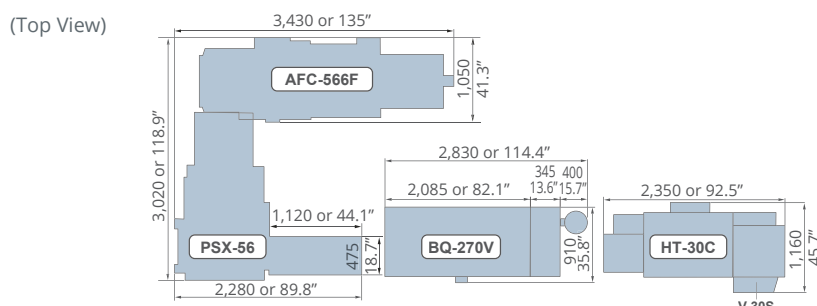
## BQ-270V + HT-30C Binder + Trimmer

Configuration of post-processing suitable for digitally printed sheets. Collated cut sheets are processed flexibly for real short run production.



## SPECIFICATIONS.

Machine Dimensions. (Unit: mm or inch)

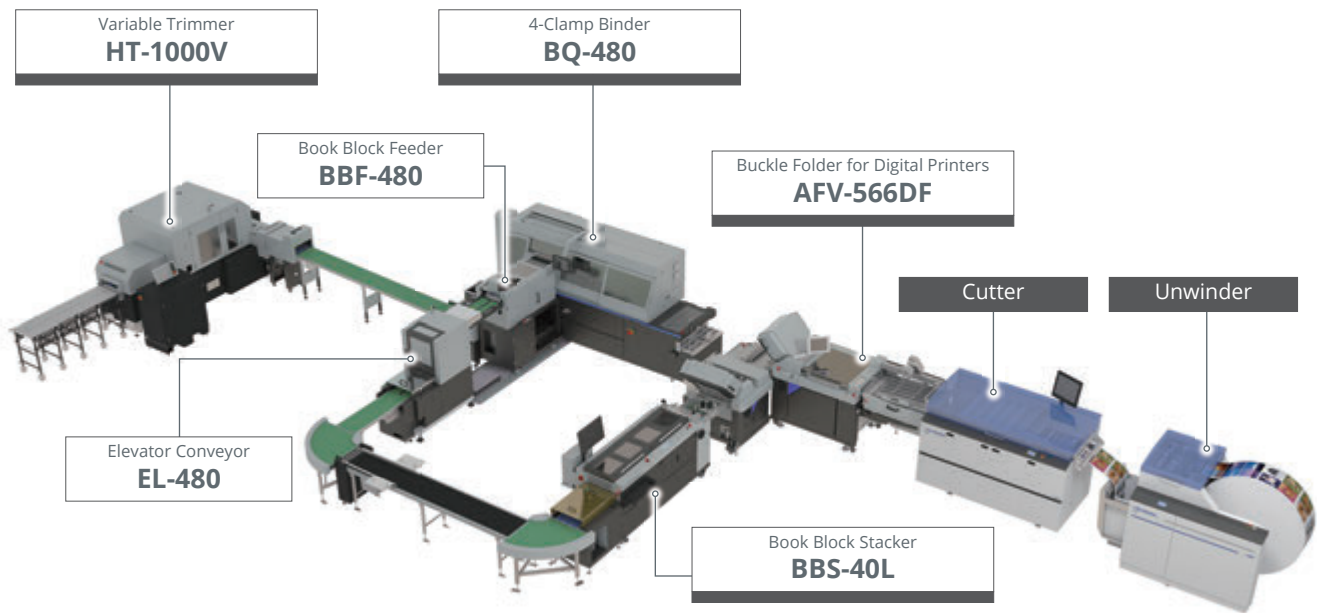


# SMART BINDING SYSTEM.

## BQ-480 + HT-1000V

Binder + Trimmer

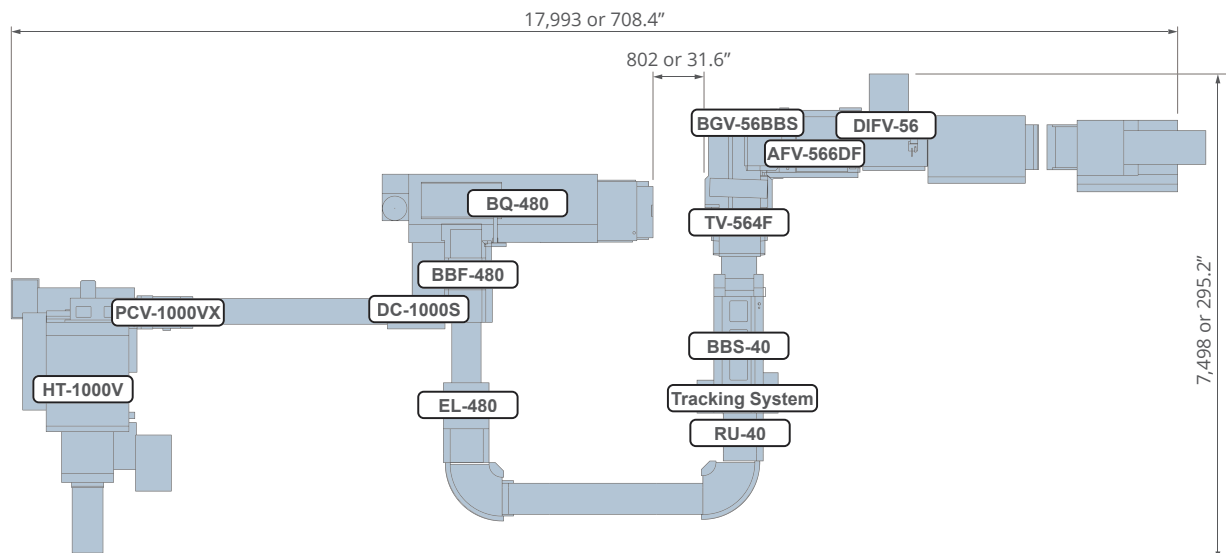
Roll to finish configuration suitable for medium to short run production. It processes the books into various finished sizes by the quick changeover. Tracking system is also available with this configuration.



## SPECIFICATIONS.

Machine Dimensions. (Unit: mm or inch)

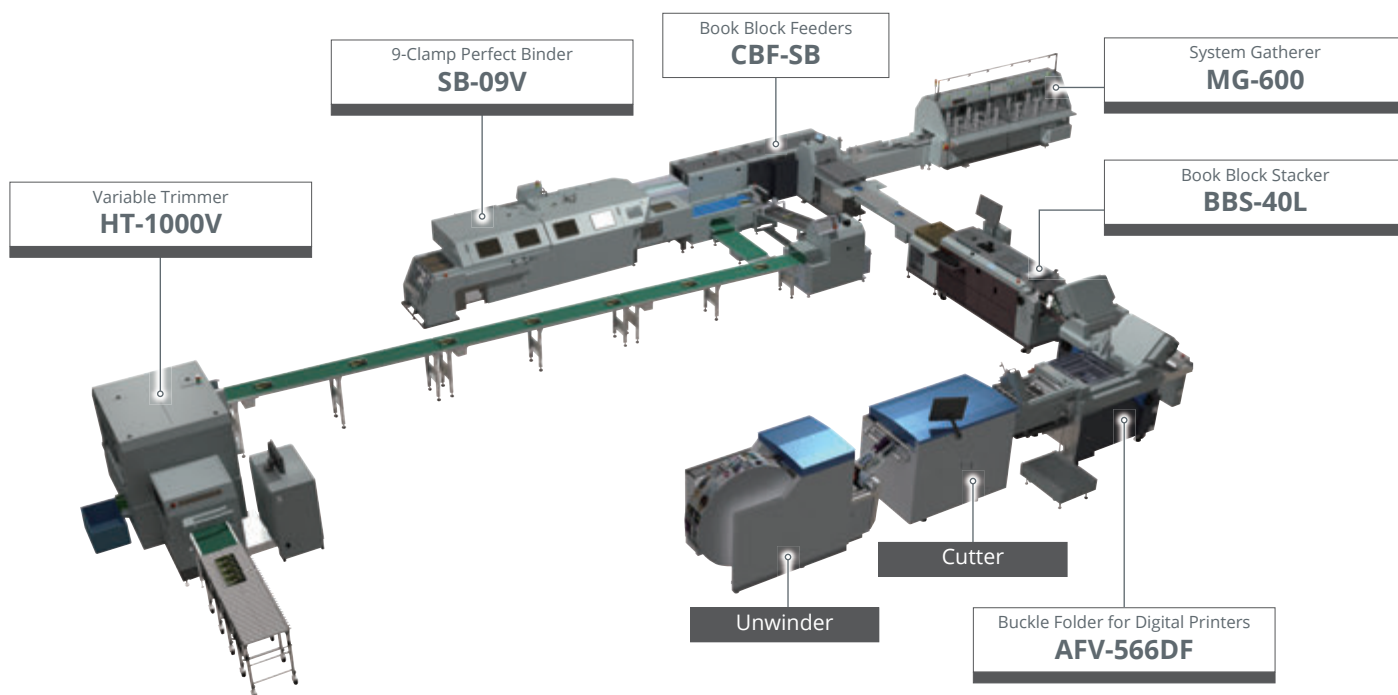
(Top View)



# SB-09V + HT-1000V

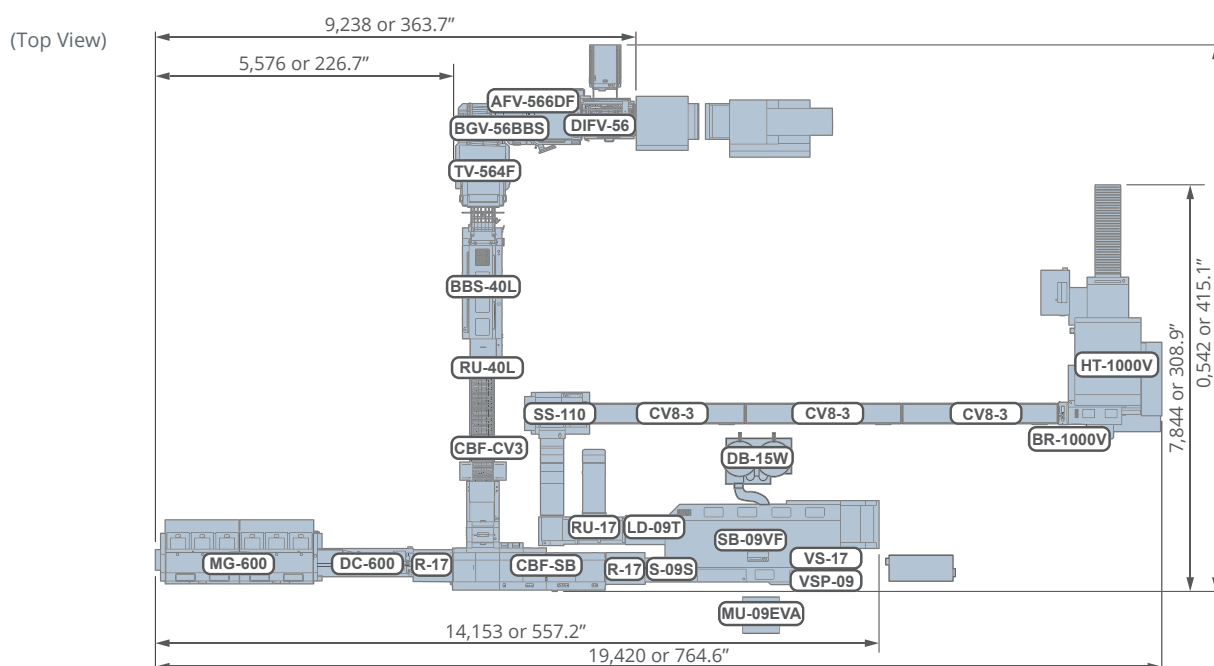
## Binder + Trimmer

This hybrid binding system is suitable post-processing solution for both digital and offset prints. The system is suitable from short run production to long run production. The installed tracking system ensures the binding accuracy to provide a higher level of quality control.



# SPECIFICATIONS.

Machine Dimensions. (Unit: mm or inch)

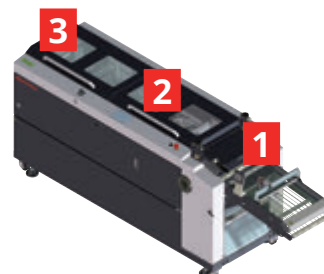


# SMART BINDING SYSTEM.

## COMPONENTS

### BBS-40/BBS-40L Book Block Stacker

The signatures are temporarily bound by spot-gluing and transported to the next binding process. The optional tracking system verifies the sequence of sheets before gluing. This process insures the page order and provides a higher level of quality control.



#### 1 Infeed Section

A book block separation mark is read at the infeed section to create book blocks. The sheet length measuring function detects improper folding and faulty signatures are diverted.

#### 2 Spot-gluing Section

The glue is applied on the head and foot of the signatures to secure the book block. Glue tacking is within the trim area.

#### 3 Book Block Accumulate and Press Section

The signatures are accumulated into book blocks and separated one by one by a separation mark. This uniquely designed system includes a pressing station to set the glue and enables book block delivery at a maximum speed of 2,000 cycles per hour.

#### BBS-40

<b>Sheet Size</b> 	<b>Length x Width</b> Max. 385 x 275 mm or 15.15" x 10.82" Min. 148 x 105 mm or 5.83" x 4.13"
<b>Production Speed</b>	Press Roller Speed: 50 to 160 meters per minute Transport Section Speed: 30 to 80 meters per minute Delivery Section Conveyor: 20 to 40 meters per minute Infeed Speed: Max. 16,000 sheets per hour (*1) Output Cycle: Max. 2,000 blocks per hour

\*1: The infeed speed depends on the signature size. The following figures are the standard maximum speed. However, these figures are not the guaranteed since the infeed speed changes depending on the paper or temperature.

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### CBF-SB Book Block Feeder, ASF-SB Additional Sheet Feeder

Book block feeder transports the book block delivered from the upstream book block stacker to the binder. An additional sheet can be inserted in the front and rear of the book block by using the optional ASF-SB additional sheet feeder.

#### 1 Conveyor Section

Infeed conveyor for inline configuration with upper stream or hand feeding. 1 m, 2 m and 3 m are available.

#### 2 Book Block Feed Section

Book block is delivered on the conveyor and fed into the binder. Barcode reader is equipped for book block and cover matching and setup of the binder is accomplished by pulling the job from memory. Thickness sensor is equipped to setup the binder according to the measured value.

#### 3 Book Block Receiving Section

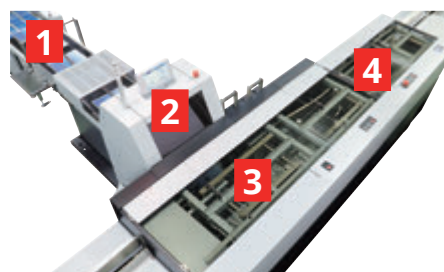
Water wheel style transport mechanisms allows for the feeding of loose signatures or cut sheets.

#### 4 Delivery Section

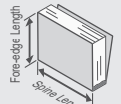
The book block is jogged during transport for accurate binding quality.

#### 5 Additional Sheet Feeder: ASF-SB (Option)

The ASF-SB adds a sheet to the front or rear of the book block. It is possible to feed a signature to a section and also to feed an end sheet for case binding.



#### CBF-SB

<b>Book Block Size</b>		<b>Spine Length x Fore-edge Length</b> Max. 385 x 320 mm or 15.15" x 12.59" Min. 148 x 105 mm or 5.83" x 4.13"
<b>Book Block Thickness</b>	Min. 3 mm or 0.12" Max. 50 mm or 1.96" (When SB-17 is connected) 45 mm or 1.77" (When SB-09V is connected)	
<b>Production Speed</b>	Max. 3,000 cycles per hour (Maximum 6,000 cycles per hour when using a collator.)	

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## Tracking System

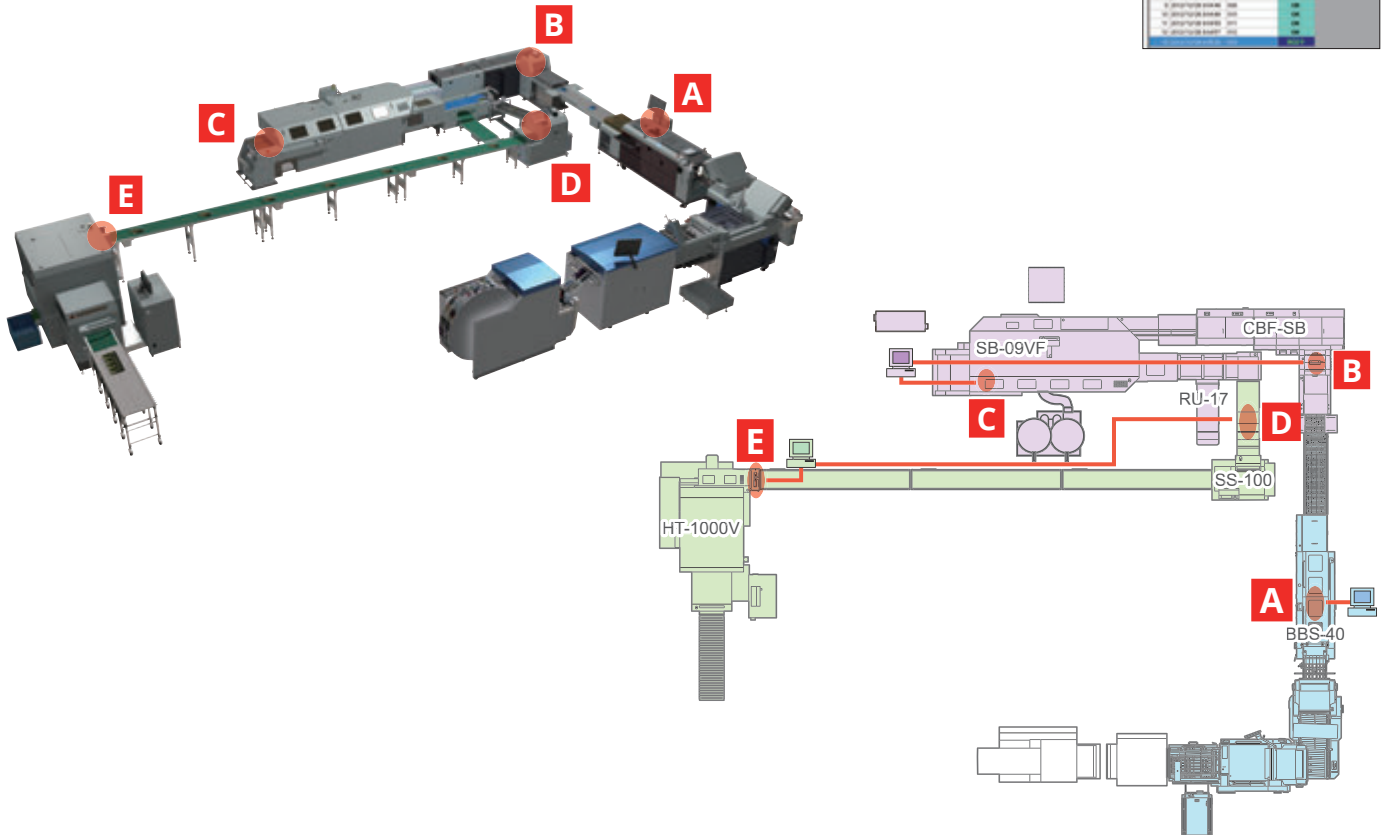
Tracking system verifies the book ID, total number of pages, and page order.

(The system checks if there is a missing signature or wrong order.) The tracking results are saved to the PC.

## Barcode Verification System

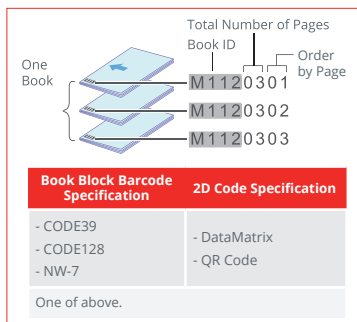
The barcode verification system reads a barcode printed on each signature to verify page order.

DATE	TIME	BOOK ID	PAGE ORDER
2018-05-01	10:00	M1120301	1
2018-05-01	10:01	M1120302	2
2018-05-01	10:02	M1120303	3
2018-05-01	10:03	M1120304	4
2018-05-01	10:04	M1120305	5
2018-05-01	10:05	M1120306	6
2018-05-01	10:06	M1120307	7
2018-05-01	10:07	M1120308	8
2018-05-01	10:08	M1120309	9
2018-05-01	10:09	M1120310	10



### A Reading Barcode on Book Block

Read barcode on each individual signature to check order. Only good books are delivered down stream and bad books are ejected. Error record can be reported.



### C Reading Code on Cover

Book block and cover is matched by barcode. Only good books are delivered down stream and bad books are ejected at RU-17 reject unit. Higher scale tracking system is also available which can monitor the status in real time and also report the error record.



### D Reading Code for Book Title Separation

Barcode printed on the cover (Book ID) is read prior to the book stacking unit to separate by book title. Only the same title is stacked and this avoids mixing multiple titles in the stack.



### B Reading Code on Book Block

Barcode reader is equipped for the following functions.

- 1: Book block and cover matching
- 2: Recalling jobs from memory for automatic setup.
- 3: Recalling jobs from pXnet (JDF workflow).



### E Reading Code for Trimmer Setup

Barcode printed on cover is read to set up the trimmer automatically. Following options are available.

- 1: Recalling job from memory for automatic setup.
- 2: Read the code which includes setup parameters for automatic setup.
- 3: Recalling jobs from pXnet (JDF workflow).



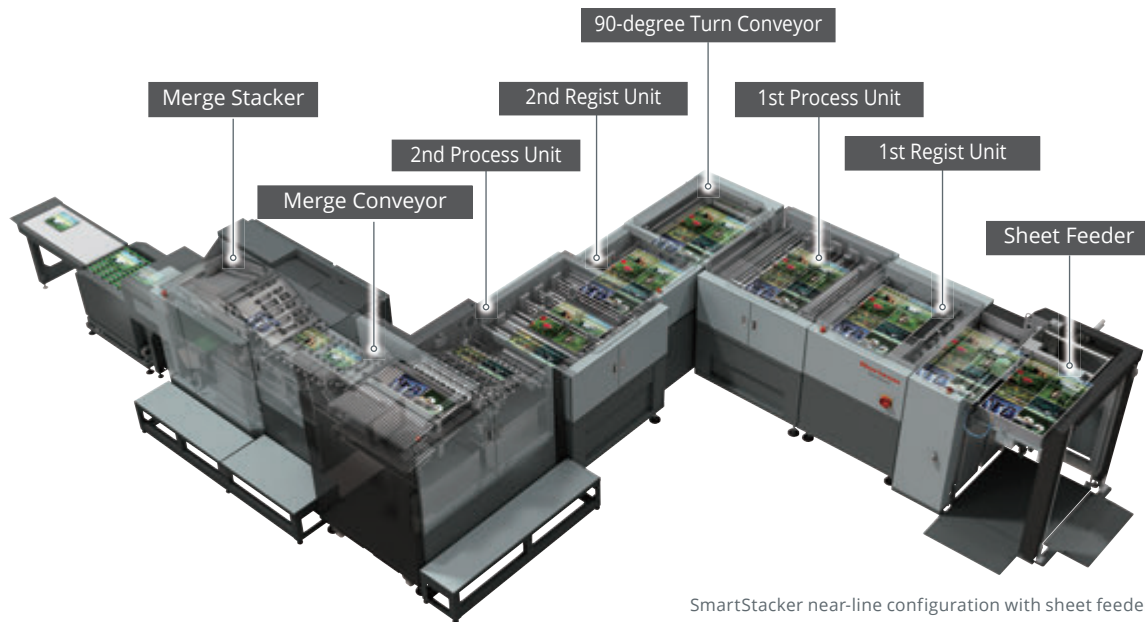
# SMART SHEET PROCESSING SYSTEM.

## SmartStacker

### Smart Sheet Processing System

The SmartStacker can process a B2 (20" x 29") sheet to finished format size efficiently.

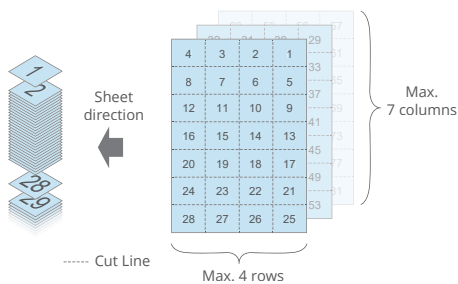
The SmartStacker can be connected directly to the HP Indigo 10000 Digital Press or operated as a near-line system with sheet feeder.



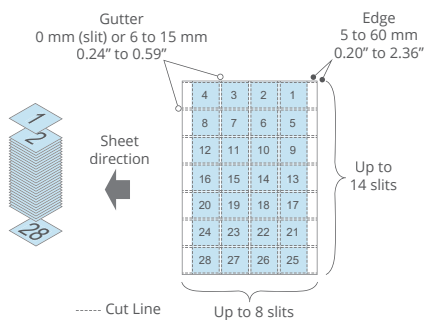
SmartStacker near-line configuration with sheet feeder

## FEATURES OF SMARTSTACKER

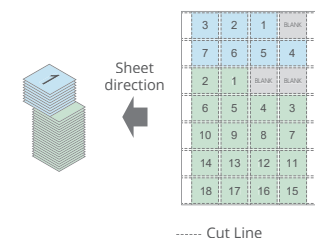
### Cut, Collate and Stack



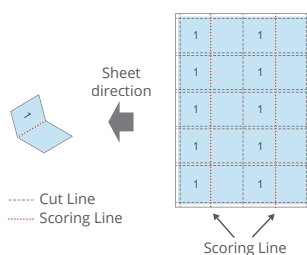
### Gutter cut and Edge trim



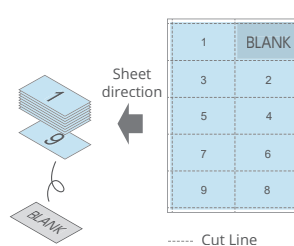
### Multiple Job Separation



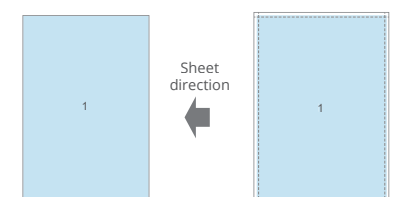
### Scoring



### Blank page removal



### B2 Size Stack



# SmartSlitter

## Sheet Cutter and Creaser



### BENEFIT

#### CREASING, PERFORATING, AND SHEET CUTTING IN ONE PASS

The creasing, perforating and sheet cutting can be performed for various applications such as business cards, shop cards, invitation cards, greeting cards, laminated sheets, and covers for perfect binding.

#### SKIP PERFORATION

The SMSL-PR optional perforation cassette enables skip perforation for various applications such as coupons, tickets and checks.

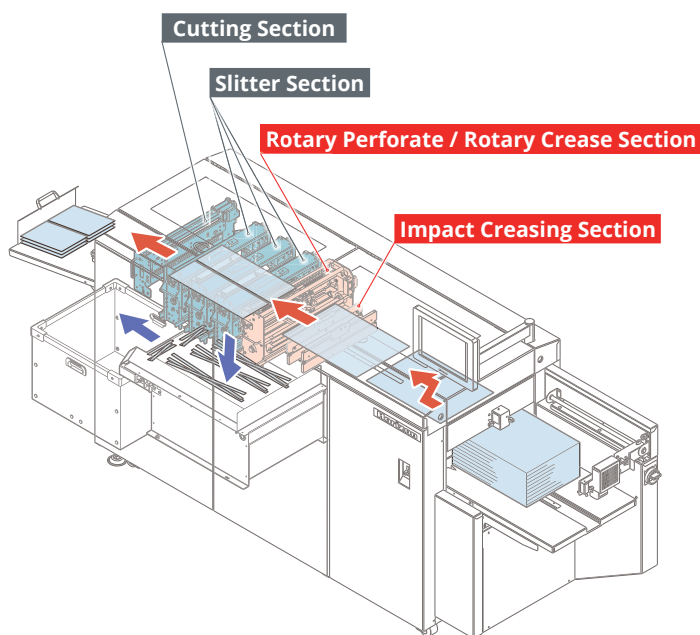
#### USER FRIENDLY OPERATION

New high resolution color touch screen display for easy and intuitive operation.

#### JDF WORKFLOW

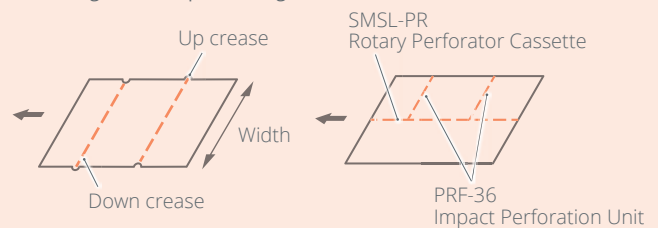
System can be enhanced with JDF workflow from upstream to postpress using the Horizon pXnet Bindery Control System.

### FEATURES OF SMARTSLITTER



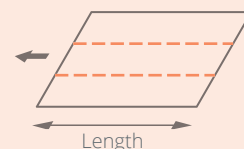
#### Impact Creasing Section

The creasing lines and perforating lines are made in the width direction.



#### Rotary Perforate/ Rotary Crease Section

Creasing lines or perforating lines can be made in the length direction.



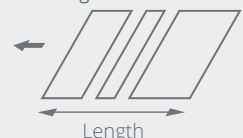
#### Slitter Section

The slitter blades cut each sheet into three parts at maximum in the width direction.



#### Cutting Section

The cutting knives cut each sheet in the length direction



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