Horizon

CUTTING AND CREASING

SmartStacker

Process B2 digital print simpler and smarter.

GAME CHANGER

Innovative finishing process from B2 (20” x 29”) printed sheets to finished format.

Finishing is key for production efficiency. Digital printing taking pages from traditional offset printing. To finish digital printed sheet efficiently and profitably, finishing process also need to be reconsidered.
With the SmartStacker, Horizon offers cutting edge paper processing solution for automated cutting, trimming, collating and stacking. In-line or near-line, the SmartStacker is capable of delivering finished product from postcards to posters, individual sheets or sets to process at next finishing process efferently.

BENEFITS

HIGH PRODUCTIVITY

The SmartStacker process a B2 size (20" x 29") sheet into up to 28 individual cut sheets with intelligent accumulation, and stacking. The SmartStacker can process B2 (20" x 29") parent sheet maximum at 4,600 sheets per hour depending on cut pattern.

NO MANUAL INTERVENTION

The highly automated SmartStacker process ensures faster job turnaround with less waste and errors with no manual intervention.

WORKFLOW INTEGRATION

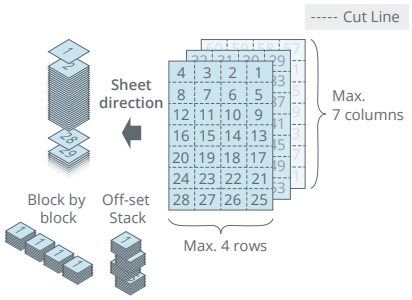
The SmartStacker can be operated near-line and in-line with digital presses. Print submission, print, and sheet processing can be performed for higher sheet integrity and an efficient workflow. The Finishing Line Controller (FLC) controls all setup and operation of the SmartStacker by use of JDF workflow.

KEY FEATURES.

Processing capabilities of the SmartStacker.

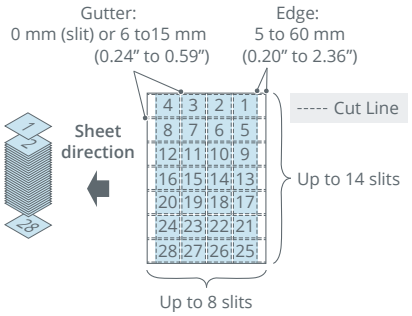
CUT, COLLATE AND STACK

SmartStacker can cut a maximum 762 x 530 mm or 30.00" x 20.86" sheet into B2, B3, A3, A4 ..... minimum A6 (100 x 105 mm or 3.93" x 4.13"). With Max. 7 columns across sheet direction and Max. 4 rows along sheet direction, 28 properly imposed 2-sided pages per sheet (i.e. 56 A6 pages) can be processed. A high capacity stack can be delivered with off-set separation or as a straight stack. Individual package delivery is also possible.



GUTTER CUT AND EDGE TRIM

Full image bleed and accurate margins are achieved through gutter cutting and edge trimming. The gutter cut is variable from 6 mm to 15 mm or slit only can be chosen. Edge trimming is adjustable from 5 mm to 60 mm. Gutter cut and trimmed waste paper are rejected into an evacuation unit.



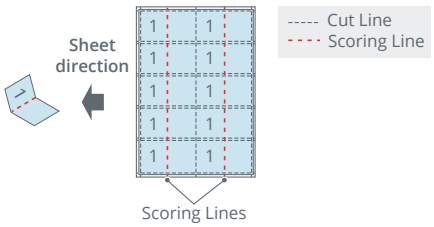
MULTIPLE JOB SEPARATION

When multiple jobs (up to two jobs per sheet) are imposed in one sheet, each job can be offset stacked.

*Requires Finishing Line Controller.

SCORING

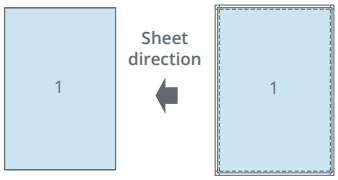
Two lines of scoring can be performed in the second processing section for greeting card and brochure applications.



B2 SIZE STACK

Larger sheet applications such as maps or B2 size posters can be processed on the SmartStacker with full image bleed by means of edge trim only.

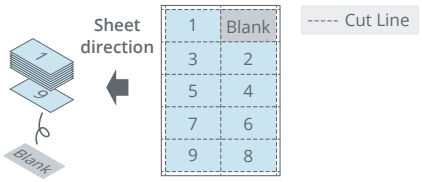
*Optional B2 Stacker is required.



BLANK PAGE REMOVAL

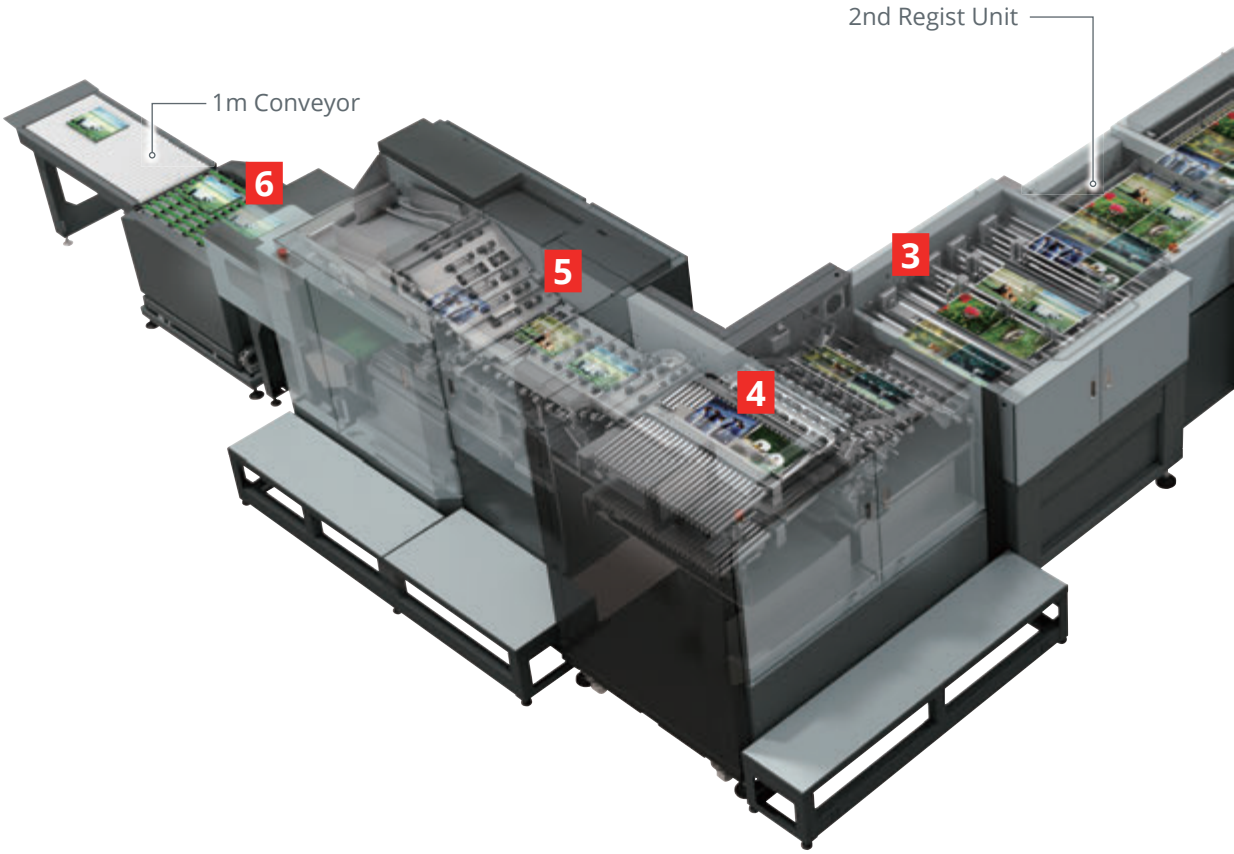
Depending on the imposition, a blank page(s) with no print may appear on the parent sheet. These blank sheets or pages are automatically rejected at the 2nd process unit. Unwanted blank pages are never stacked with printed product.

*Requires Finishing Line Controller.



DETAILS FOR EACH DEVICE.

From start to finish.



FLC (FINISHING LINE CONTROLLER)

FLC receives imposition information from DFE or direct from the Press in JDF format. The FLC sends setup information to the SmartStacker or further in-line finishing devices. The FLC also monitors the SmartStacker and Press. When any error occurs in the SmartStacker, the FLC immediately transfers this information to the press to pause printing.

1 SHEET FEEDER

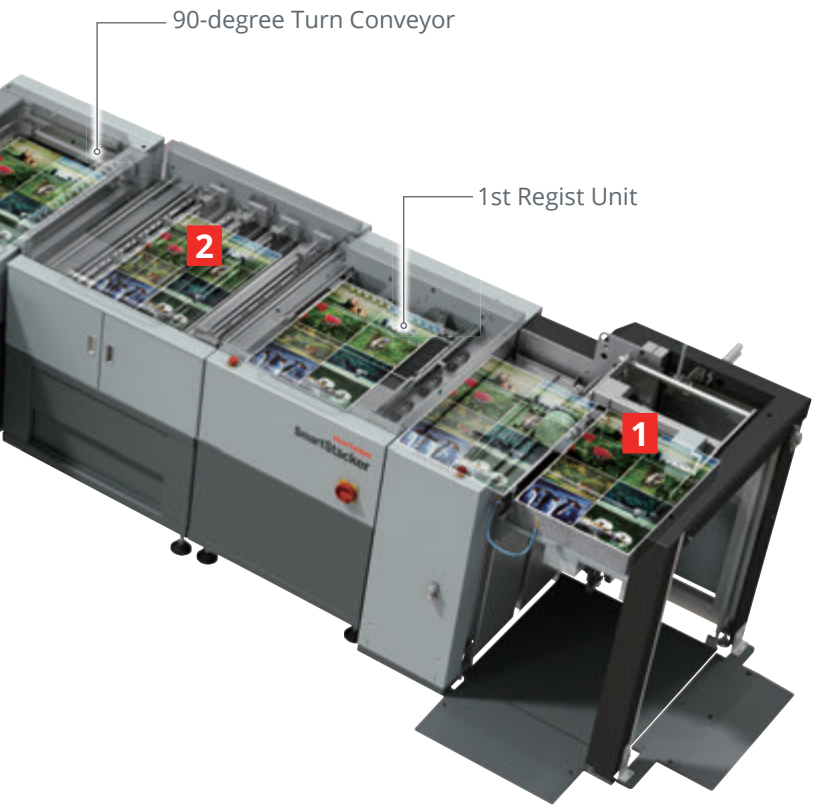
When the SmartStacker is used as a near-line system, printed sheets from the digital press are transferred to the sheet feeder. An extremely reliable suction feeding mechanism feeds individual sheets into the SmartStacker for finishing.

OPERATION CONSOLE

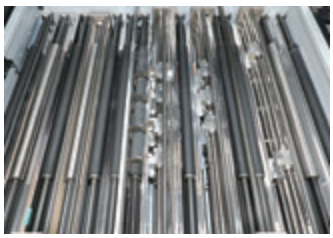
New generation touch screen provides graphical user interface for easy recognition and operation. This console is mainly used for monitoring the system, but can also be used for fine adjustment of the cutter blades or scoring wheel position as required.

2 1ST PROCESS UNIT

Sheets from the sheet feeder are registered and transferred to the 1st processing unit for cutting along the long edge. A maximum of 6 gutters and two edge trims are possible in this unit to produce 7 sheets cut to bleed at the edge and gutters.



3 2ND PROCESS UNIT



Sheets from the 90-degree conveyor are registered on the long edge and transferred to the 2nd process unit for gutter cut and trim to final size. A maximum of 3 gutters and 2 edge trims are performed in this unit to produce finished size sheets with full bleed if required. Two up scoring is also possible at this section.

4 MERGE CONVEYOR

This unit collates and merges individual cut sheets in page order. To maximize the speed of the SmartStacker, the merge unit uses a dual transport system with automatic divert between the two.

5 MERGE STACKER

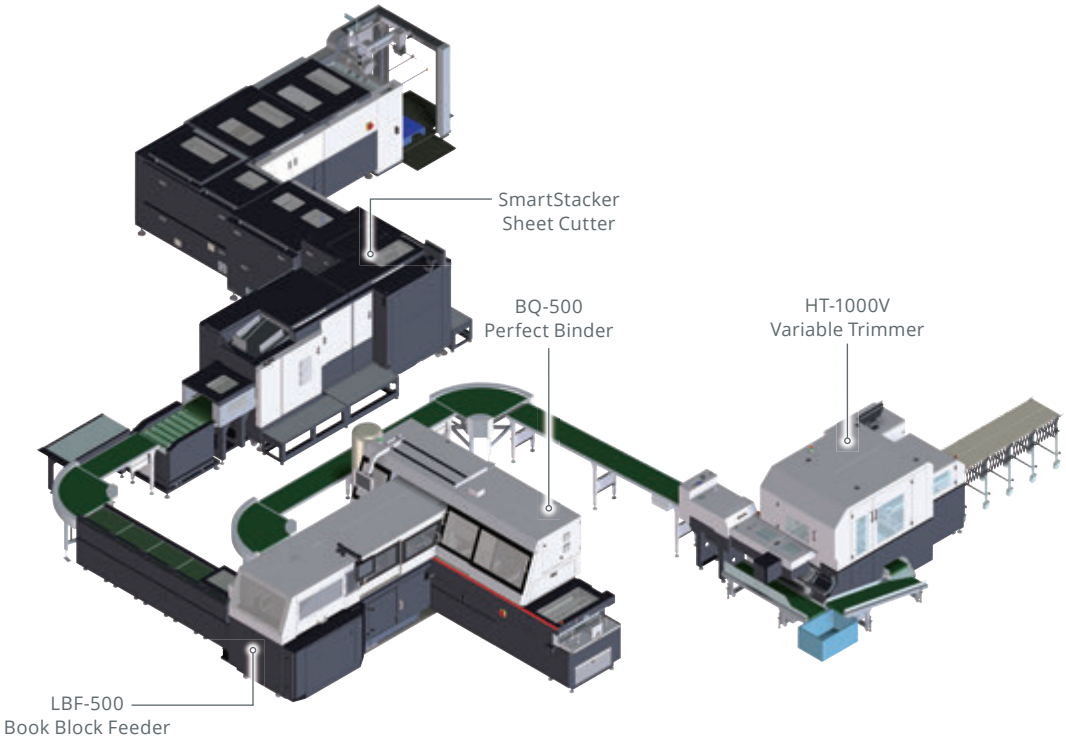
Collated and merged sheets are stacked in order at the stacker unit. There are three different stacking options, off-set stack, straight stack or individual set or book block delivery. Maximum stack height is 254 mm or 10”. Stacked sheets are delivered to the output conveyor for easier handling or downstream finishing.

SPECIFICATIONS.

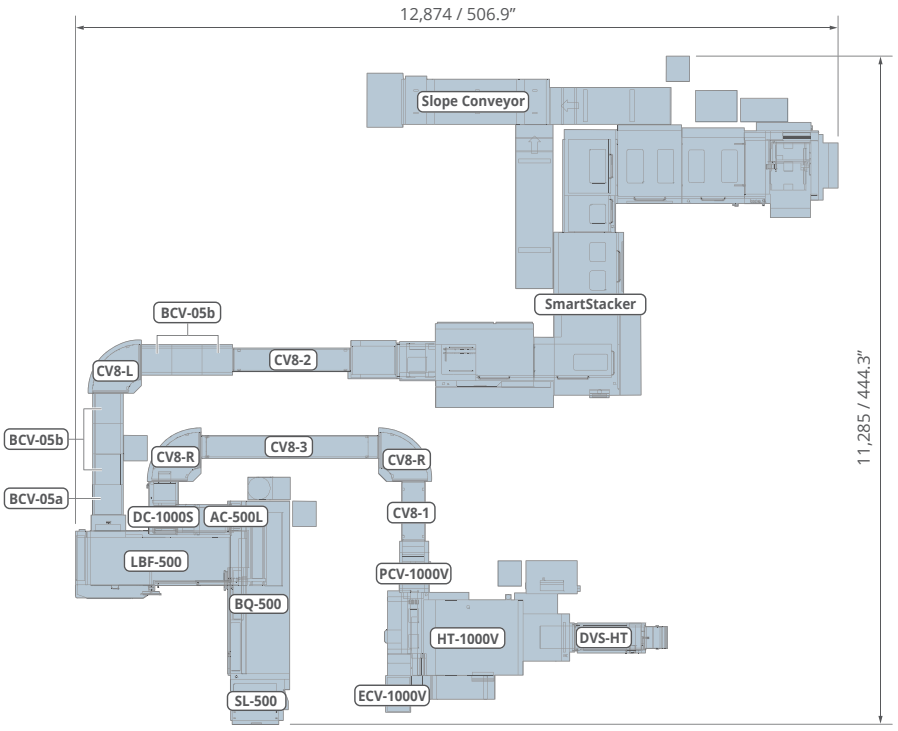
Machine Dimensions. (Unit: mm / inch)

SMART SHEET PROCESSING SYSTEM FOR THE DIGITAL PRESS

SMARTSTACKER + BQ-500 + HT-1000V

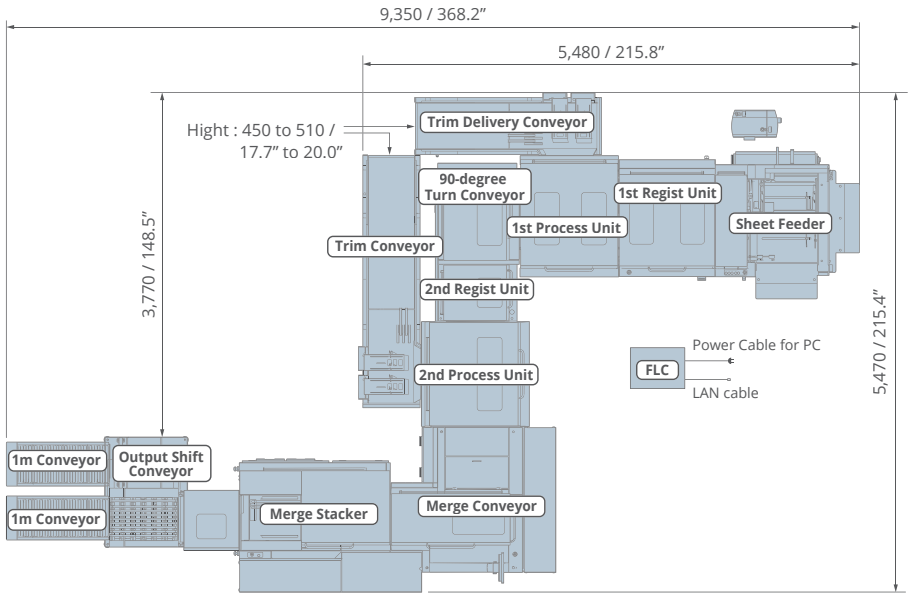


(Top View)

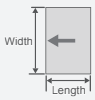


SMARTSTACKER

(Top View)



SMARTSTACKER

Sheet Size (Before Cut)		**Width x Length** Merge Stacker Max. 762 x 530 mm or 30.000" x 20.865" Min. 279.4 x 330 mm or 11.000" x 12.995"
		Matrix Size ISO A Series: A2 / A3 ISO B Series: B2 / B3 Inch Series: 18" x 24" / 17" x 22" / 13" x 19"
Piece Size (After Cut)		**Width x Length** Merge Stacker Max. 381 x 530 mm or 15.000" x 20.865" Min. 100 x 105 mm or 3.940" x 4.135" *When the length is 136 mm or 5.34” or less, it is not possible to set the finished size whose width is more than twice as long as the length.
Sheet Weight Range		Normal Paper: 81.4 to 370 gsm Coated Paper (for Merge Stacker): 90 to 360 gsm Paper Thickness: 4 to 15 pt or 0.1 to 0.381 mm *1 pt = 1/1,000" Production speed needs to be reduced depending on sheet weight range and type of sheet.
Sheet Feeder Capacity (Option for near-line and off-line)		Max. 920 mm or 36.2" (including the pallet 120 mm or 4.72") Weight limit on table is 600 kg or 1,322 lb.
Sheet Stacking		Merge Stacker Straight Stack or 10 mm or 0.39" Offset Stack Maximum Stack Height: 254 mm or 10.00"
Sheet Cut Type		Slit or Gutter Cut
Number of Cuts		Merge Stacker 1st Process Unit: 1 to 7 columns (14 cutters) 2nd Process Unit: 1 to 4 rows (8 cutters)
Trim Accuracy		1st Process Unit: 1 to 7 columns (14 cutters)
Edge Trim Width		2nd Process Unit: 1 to 4 rows (8 cutters)
Gutter Trim Width		0 mm (slit) or 6 to 15 mm or 0.24" to 0.59"
Scoring		Line: One positive scoring line at center when the sheet is divided into two at the 2nd process unit
		Finished Size: When the optional scoring unit is installed, the size is limited as follows.
		With Scoring : Width 100 to 381 mm or 3.94” to 15” Length 177.8 to 265 mm or 7” to 10.43”
		Without Scoring (Min.) : Width 148 mm or 5.83” Length 105 mm or 4.13”

Production Speed	Up to 4,600 sheets per hour *Production speed differs depending on number of cuts in 1st Process Unit and type/condition of sheets. *Press may need to slow down depending on the sheet condition in case of inline configuration.
User Interface	12-inch Touch Panel (Mounted on the merge conveyor) Merge Stacker Delivery Button (Mounted on the merge stacker) Emergency Stop Buttons (Mounted on the 1st regist unit, the 2nd Regist Unit, the Merge Conveyor, and the Merge Stacker)
Voltage/ Frequency	3-phase 200 to 220 V, 50 or 60 Hz 3-phase 380 or 400 or 415 V, 50 or 60 Hz (Step down by Transformer)

SPECIFICATION REQUIREMENT ON PC FOR FLC

Computer Processor	CPU with Intel Core i5 or later
Operating System	Windows 7 Professional (64 bit), Windows 7 (32 bit), Windows 8 (32 bit, 64 bit), Windows10 (32 bit, 64 bit)
Computer Memory	4 GB or more
Hard Disk Drive	512 GB or more
Screen Resolution	1,920 x 1,080 pixels
Screen Size	Maximum Size: 17 inch Depending on the thickness of frame and the screen weight, up to 22 inch of screen can be installed to the supplied vertically multijoint arm.
Screen Weight	Maximum: 6 kg
Screen Installation Pitch	VESA Standard: 75 mm x 75 mm or 2.95" x 2.95" or 100 mm x 100 mm or 3.94" x 3.94"

*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.

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