Horizon

SmartStacker

Smart Sheet Processing System

Process B2 digital print simpler and smarter.

For the HP Indigo 10000 Digital Press

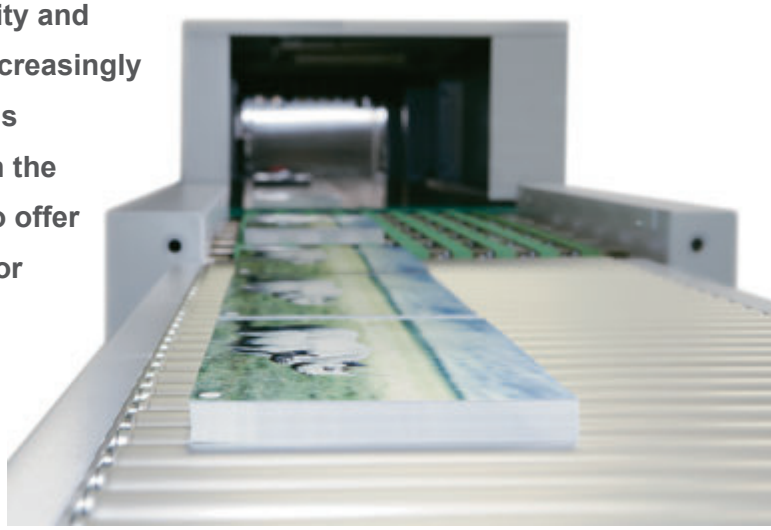
Game Changer

Innovative way to process B2 (20” x 29”) digitally printed sheets to finished format size.

The new HP Indigo 10000 Digital Press, with its B2 (20” x 29”) format, makes it possible to produce new digital commercial applications and increase imposition efficiency, boosting productivity and lowering costs. Horizon SmartStacker complements HP Indigo’s strategy of delivering an efficient end-to-end solution.

The SmartStacker helps increase automation for faster job turnaround and less waste and errors, resulting in higher productivity, quality and profitability.

The world of digital printing is now at 'commercial' quality and reliability, and the upstream processes are smart and increasingly automated. Traditional, labor intensive finishing methods cannot keep pace and erode profit and efficiencies. With the introduction of the SmartStacker, Horizon and HP Indigo offer a revolutionary, integrated, high-performance 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 in-line folding or stitching, book block output for book binding or stacked output for packaging.



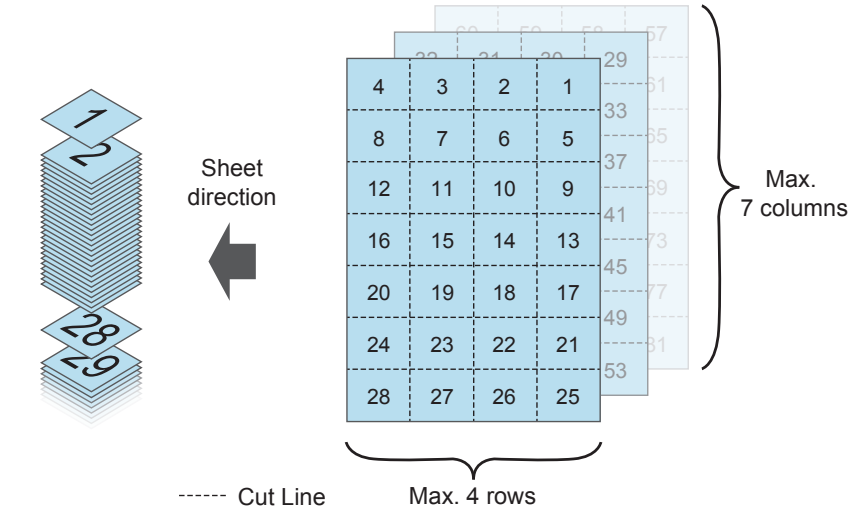
Configurations

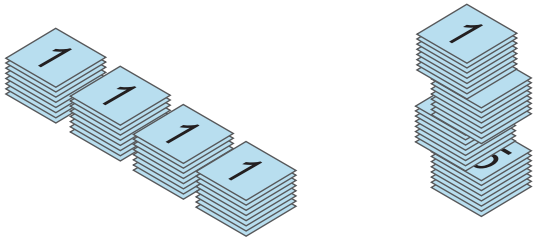
1. **Near-line operation with Sheet Feeder**
   The SmartStacker can be operated as a near-line system. The Horizon, newly designed sheet feeder accommodates B2 (20" x 29") sheets at up to 4,500 sheets per hour. The Finishing Line Controller (FLC) controls all setup and operation of the SmartStacker by use of JDF workflow. Near-line SmartStacker can serve multiple HP Indigo 10000 Digital Press units and other HP Indigo presses.
2. **In-line operation with HP Indigo 10000 Digital Press**
   The SmartStacker can be connected directly to the HP Indigo 10000 Digital Press. Print submission, print, and sheet processing can be performed without any manual operation for higher sheet integrity and an efficient workflow.
3. **Finishing extension (planned)**
   The SmartStacker can be connected with the Horizon signature folder, saddle-stitcher or perfect binder to achieve total finishing automation.

What are the processing capabilities of the SmartStacker?

Cut, Collate and Stack

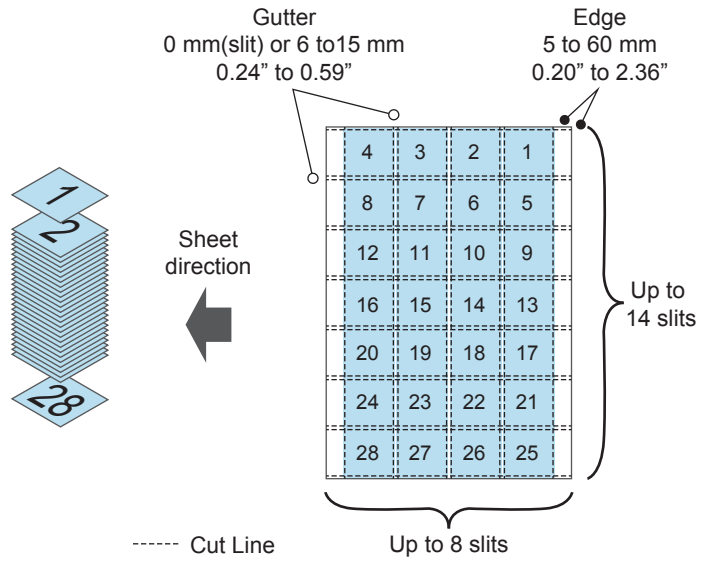
SmartStacker can cut a maximum 762 x 530 mm (30.00” x 20.86”) sheet into B2, B3, A3, A4 …… minimum A6 (100 x 105 mm / 3.93” x 4.13”). With Max. 7 columns across sheet direction and Max. 4 rows along sheet direction, 28 properly imposed 2-sided pages per sheet (i.e. 56 A6 pages) can be processed. A high 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

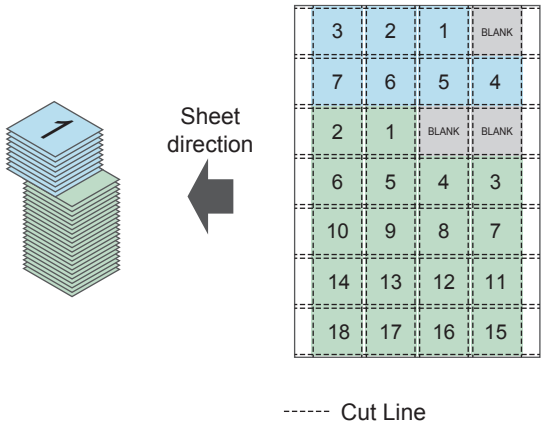
Full image bleed and accurate margins are achieved through gutter cutting and edge trimming. The gutter cut is variable from 6 mm to 15 mm or slit only can be chosen. Edge trimming is adjustable from 5 mm to 60 mm. Gutter cut and trimmed waste paper are rejected into an evacuation unit.



Multiple Job Separation

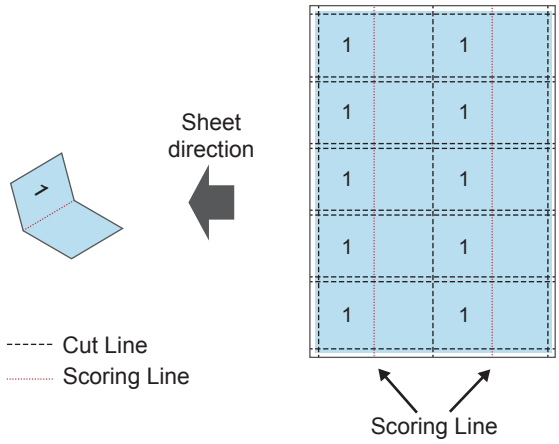
When multiple jobs (up to two jobs per sheet) are imposed in one sheet, each job can be offset stacked.

(Requires Finishing Line Controller.)



Scoring

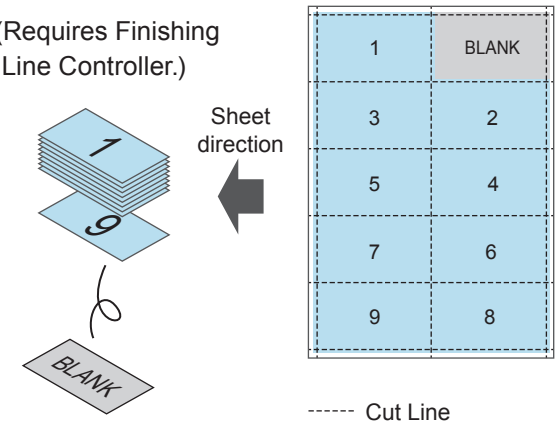
Two lines of scoring can be performed in the second processing section for greeting card and brochure applications.



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.

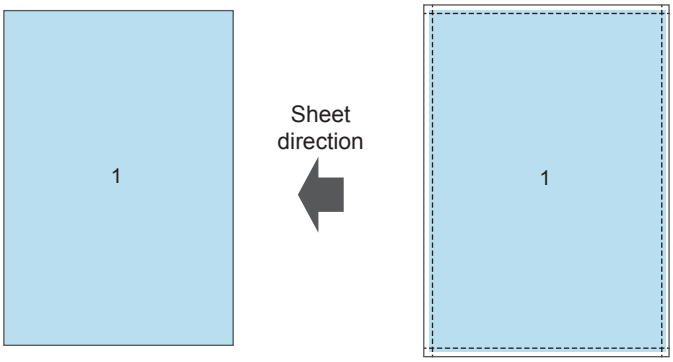
(Requires Finishing Line Controller.)



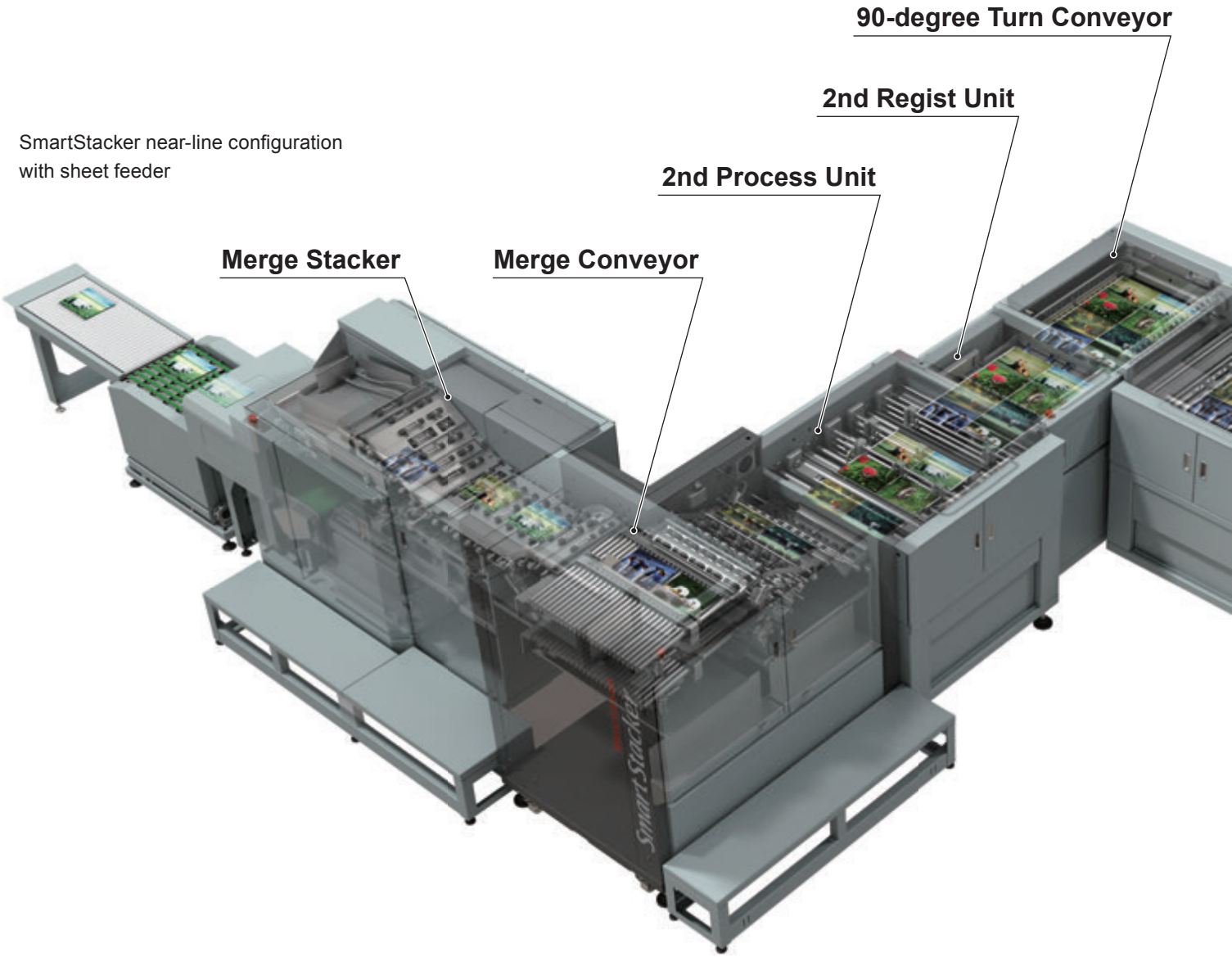
B2 Size Stack

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 (Planned) is required.



SmartStacker near-line configuration
with sheet feeder



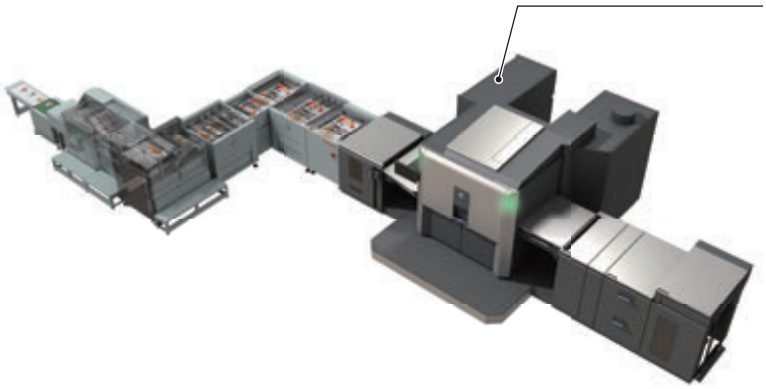
FLC (Finishing Line Controller)

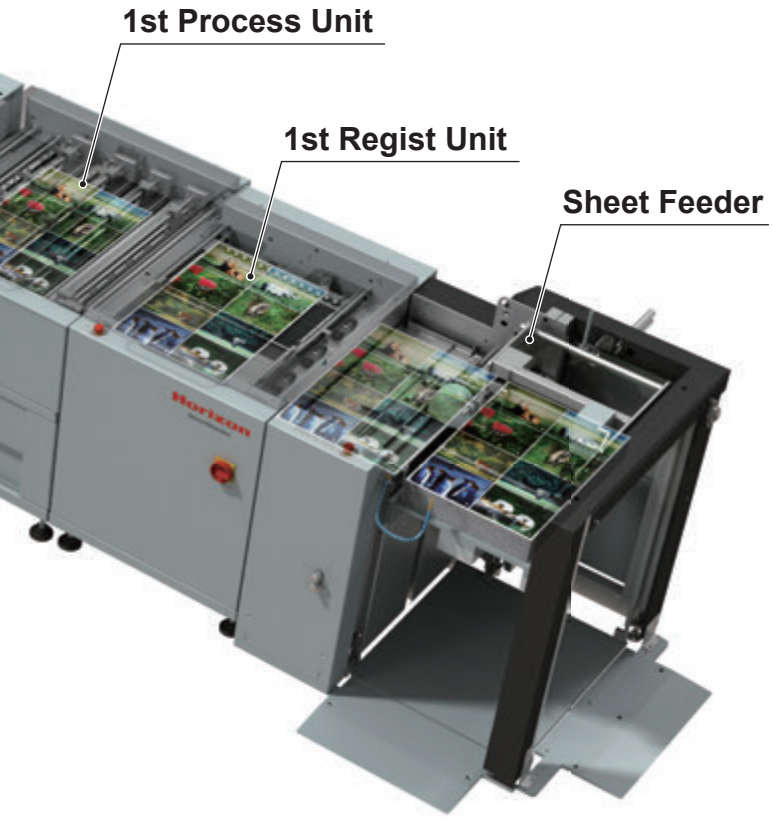
FLC receives imposition information from DFE or direct from the Press in JDF format. The FLC sends setup information to the SmartStacker or further in-line finishing devices.
The FLC also monitors the SmartStacker and Press. When any error occurs in the SmartStacker, the FLC immediately transfers this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

Operation Console

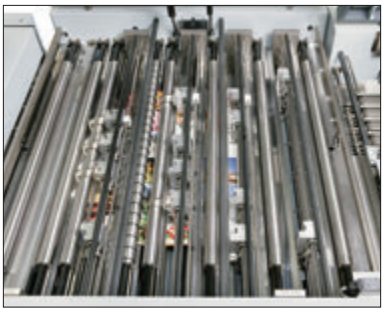
New generation touch screen provides graphical user interface for easy recognition and operation. This console is mainly used for monitoring the system, but can also be used for fine adjustment of the cutter blades or scoring wheel position as required.

SmartStacker in-line configuration with the HP Indigo 10000 Digital Press



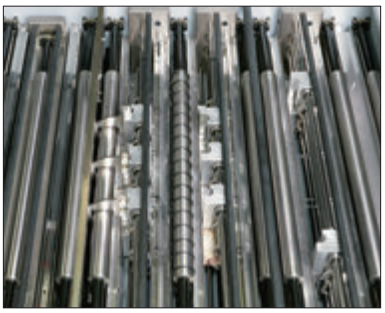


1st Process Unit



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.

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.

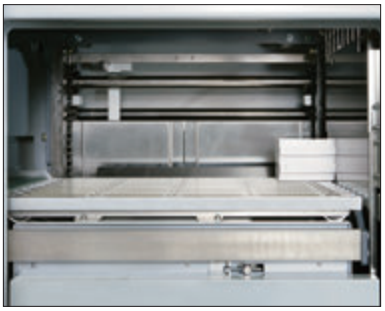
Merge Conveyor

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

Sheet Feeder

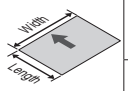
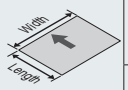
When the SmartStacker is used as a near-line system, printed sheets from the HP Indigo 10000 Digital Press are transferred to the sheet feeder. An extremely reliable suction feeding mechanism feeds individual sheets into the SmartStacker for finishing.

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 (10”). Stacked sheets are delivered to the output conveyor for easier handling or downstream finishing.

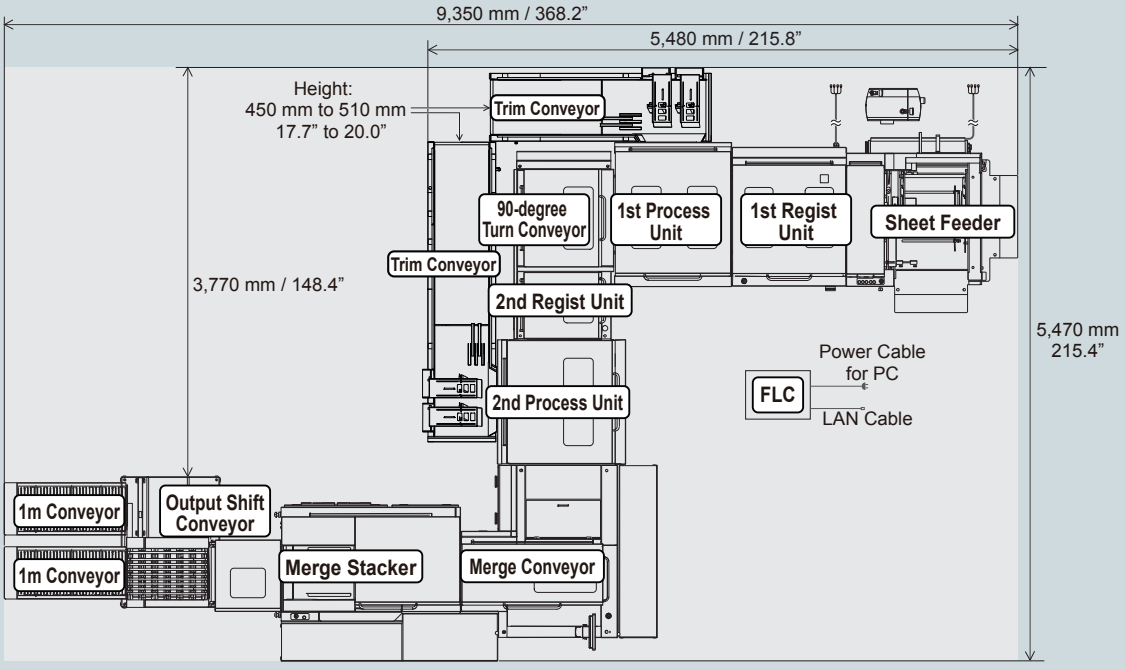
SmartStacker Specifications

Sheet Size (Before Cut)		Merge Stacker	**Width x Length** Max. 762 x 530 mm / 30.000” x 20.865” Min. 279.4 x 330 mm / 11.000” x 12.995”
		B2 Stacker	Max. 762 x 530 mm / 30.000” x 20.865” Min. 380 x 330 mm / 14.965” 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)		Merge Stacker	**Width x Length** Max. 381 x 530 mm / 15.000” x 20.865” Min. 100 x 105 mm / 3.940” x 4.135”
		B2 Stacker	Max. 762 x 530 mm / 30.000” x 20.865” Min. 380 x 210 mm / 14.965” x 8.270”
Sheet Weight Range	Normal Paper : 81.4 to 370 gsm Coated Paper (for Merge Stacker) : 90 to 360 gsm Coated Paper (for B2 Stacker) : 104.7 to 360 gsm Paper Thickness : 4 to 15 pt (0.1 to 0.381 mm) *1pt = 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 offline)	Max.920 mm / 36.2” Weight limit on table is 600 kg / 1,322 lb.		
Sheet Stacking	Merge Stacker	Straight Stack or 10 mm / 0.39” Offset Stack Maximum Stack Height : 254 mm / 10.00”	
	B2 Stacker	Straight Stack or 10 mm / 0.39” Offset Stack Maximum Stack Height : 850 mm / 33.46” (including the pallet 125 mm / 4.92”) Weight limit on table is 600 kg / 1,322 lb * The stack capacity lowers depending on conditions.	

Number of Cuts	1st Process Unit : 1 to 7 columns (14 cutters) 2nd Process Unit : 1 to 4 rows (8 cutters)	
Edge Trim Width	0 mm (slit) or 5 to 60 mm / 0.20" to 2.36”	
Gutter Trim Width	0 mm (slit) or 6 to 15 mm / 0.24” to 0.59”	
Scoring	One positive scoring line at center when the sheet is divided into two at the 2nd process unit.	
	Finished Size	Max. 177.8 x 254 mm / 7” x 10” Min. 127 x 177.8 mm / 5” x 7”
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. * HP 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 / 60 Hz 3-phase 380 / 400 / 415 V, 50 / 60 Hz (Step down by Transformer)	
Rated Current	SmartStacker	208 V, 50 / 60 Hz, 19 / 20 A 220 V, 50 / 60 Hz, 18 / 19 A 400 V, 50 / 60 Hz, 9.6 A
	Sheet Feeder (Option for Near Line and Offline)	208 V, 50 / 60 Hz, 12 / 14 A 220 V, 50 / 60 Hz, 11 / 12 A 400 V, 50 / 60 Hz, 7 / 7.1 A
Power Consumption	SmartStacker	208 V, 50 / 60 Hz, 5.6 / 5.9 kW 220 V, 50 / 60 Hz, 5.7 / 5.9 kW 400 V, 50 / 60 Hz, 6.0 / 5.9 kW
	Sheet Feeder (Option for Near Line and Offline)	208 V, 50 / 60 Hz, 3.3 / 4.3 kW 220 V, 50 / 60 Hz, 3.1 / 4.0 kW 400 V, 50 / 60 Hz, 3.6 / 4.2 kW

Horizon SmartStacker was designed in for the HP Indigo 10000 in cooperation with HP Indigo.

Machine Dimensions [Unit : mm / inch]



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

Horizon

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