

Friction Collators

HAC-120



STATE-OF-THE-ART TECHNOLOGY
FOR
THE ART OF BOOKBINDING

Horizon
B i n d e r s

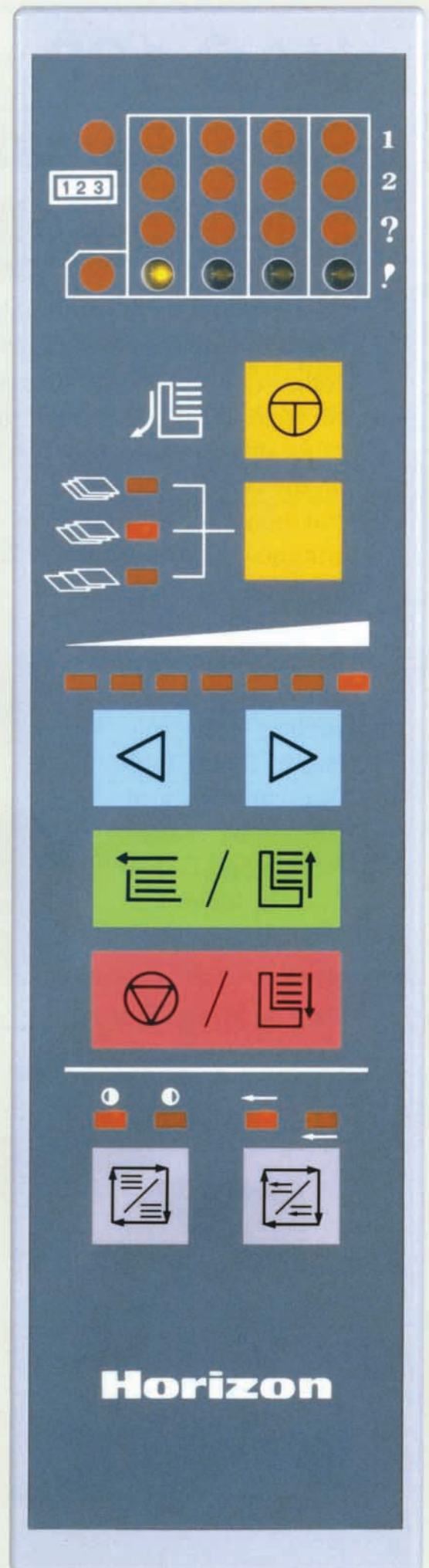
HAC-120

Programmable Friction Collator

At Horizon International,
we're dedicated to the bookbinding
technology excellence
with well-disciplined engineering staff and
most advanced manufacturing facilities,
for creating new opportunity
for your bookbinding production renovation.

Any products
Horizon is now manufacturing
have been developed by our
time-honored philosophy of
"Sticking to Quality!" commitment,
which will be able to contribute to
betterment of end-users' working environment
through decent design of every machine part and
system compatible to
established ergonomics.
This commitment has been infused
into every part of our Horizon product
through our quality-control-conscious (QCC)
engineering efforts
in combination with the most advanced
high-tech production facilities
and technologies fostered by our well-trained staff,
to produce products capable of contributing to
increasing your productivity and
ultimately generating your profits.

This Horizon HAC-120 ,
Programmable Friction Collator, is
a new product which has been developed
by our consistent commitment
of "Sticking to Quality."
And we believe this new
product will also be able to measure
up to your expectations.



Remote Control Unit

Features of HAC-120

- **Three Programmable Collating Modes**

A computer-assisted programming system built in HAC-120 will enable you to select three collating modes (Double Cycle Collation, Cover Feeding Combination Collation, and Mixed Modes of Collation) using only two remote control buttons.

- **Bin Capacity Expansion**

The collating capacity may be expanded up to 48 bins maximum by combining four modules: each module has 12 bins.

- **Three Modes of Sheet Overlapping**

You can select three modes of time lag by overlapping sheets within a set of collation depending on the paper weight and stock quality.

- **High Production Speed**

The collating speed has been raised up to 3,300 sets per hour. This production speed may be increased up to 3,800 sets per hour if no batch separation is needed at the delivery pile.

- **Bin Pile Height**

Each bin accepts a maximum feed pile as high as 40 mm.

- **Sheet Sensor**

A reliable sheet detecting system assures you of steady operation and sustained collating productivity. The sensor's projection lamp can be detached and attached from the bin side.

- **Error Monitor**

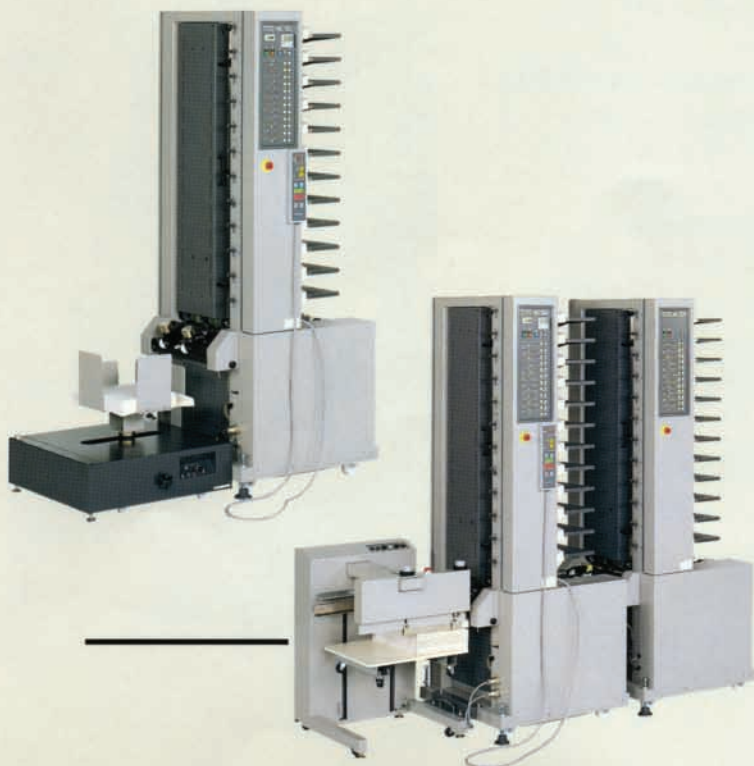
Two sets of error monitor are provided on the front panel of each module so that any error in two sets of simultaneous collation can be efficiently detected. The figure **2** on the panel indicates the bottom set (or preceding one) and the number **1** indicates the top set (or following one) of each collating sequence.

- **Receiving Trays**

HAC-120 can be combined with any type of receiving trays such as CCR-DX—Criss Cross, ST-20—Stacker, or PJ-77—Jogger depending on your operating requirements.

- **System Expansion Options**

HAC-120 can be field-retrofitted with Horizon's optional equipment to form a variety of flexible total binding systems. The most productive system including SPF-11 and FC-11 will perform six functions in a sequential operation in combination with collating. Refer to "System Expansion Options."



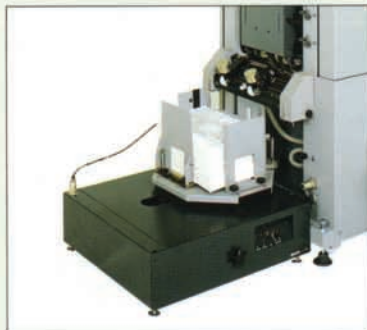
HAC-120

Programmable Friction Collators

New HAC-120 Programmable Friction Collators will improve your collating productivity substantially through our much refined programming system using only two buttons on the remote control unit. Further, you will be able to enhance your operating efficiency by using a wide variety of options featuring user-friendly convenience based on ergonomics, such as Receiving trays, Expandable bins capacity, and Capability of performing six functions in an in-line total binding system.



Receiving Trays



Criss-Cross Receiving Tray Model CCR-DX

The Criss-Cross Receiving Tray swings 90 degrees at each collating interval, clearly separating collated sets. This simplifies the post-collating processes.



Stacker Receiving Tray Model ST-20

The Stacker Receiving Tray shifts each collated set laterally, separating collated sets. A stack of collated sets can be unloaded on a wheeled pallet. The collating operation is started automatically when the stacker is raised to its home position.



Paper Jogger Model PJ-77

Driven by an independent motor, the Paper Jogger vibrates collated sheets into perfect alignment; even NCR paper can be well jogged. The Jogger Tray lowers automatically in sync with the collating speed.

Friction Feeder

- Simple bin setup procedure will allow you to easily load the friction feeder with a wide range of sheet sizes, ranging from A5 to SRA3 (5.8" x 8.3" to 12.5" x 18.5").
- The feeding bins can be automatically raised or lowered by pushing the collating Start / Stop button.
- Four sheet-separation setups can be selected to adjust the bin and pad pressures, which will permit you to efficiently handle a wide variety of quality of paper.
- Each bin is rigid enough to accept a pile of 450 sheets (normal paper 70 gsm/ #16 Bond) at a time.



Remote Control Buttons for Collating Program and Monitor Panel

- Frequently used operation buttons, including Start, Stop and Collating Speed and monitor lamps, are accommodated in the remote control unit.
- This remote control unit (with an extension cable 2.7 m or 9 ft) helps you to efficiently operate and monitor the entire operations with stitching and folding units combined.
- Easy-to-identify LED displays in each module indicate any collating errors such as misfeed, double, or jamming in each separate collating set.
- A memory function is built in to store the caliper of the sheet to be run to prevent double-sheet.
- The sensitivity of the sheet sensor at each bin can be adjusted in 5 levels according to the quality of paper to be handled.
- The preset counter is provided to stop the operation as a desired number of collated sets is completed.
- The total counter is also provided
- The tab insertion can be preprogrammed.



Remote Control Unit
(with an extension cable
2.7 m / 9 ft)

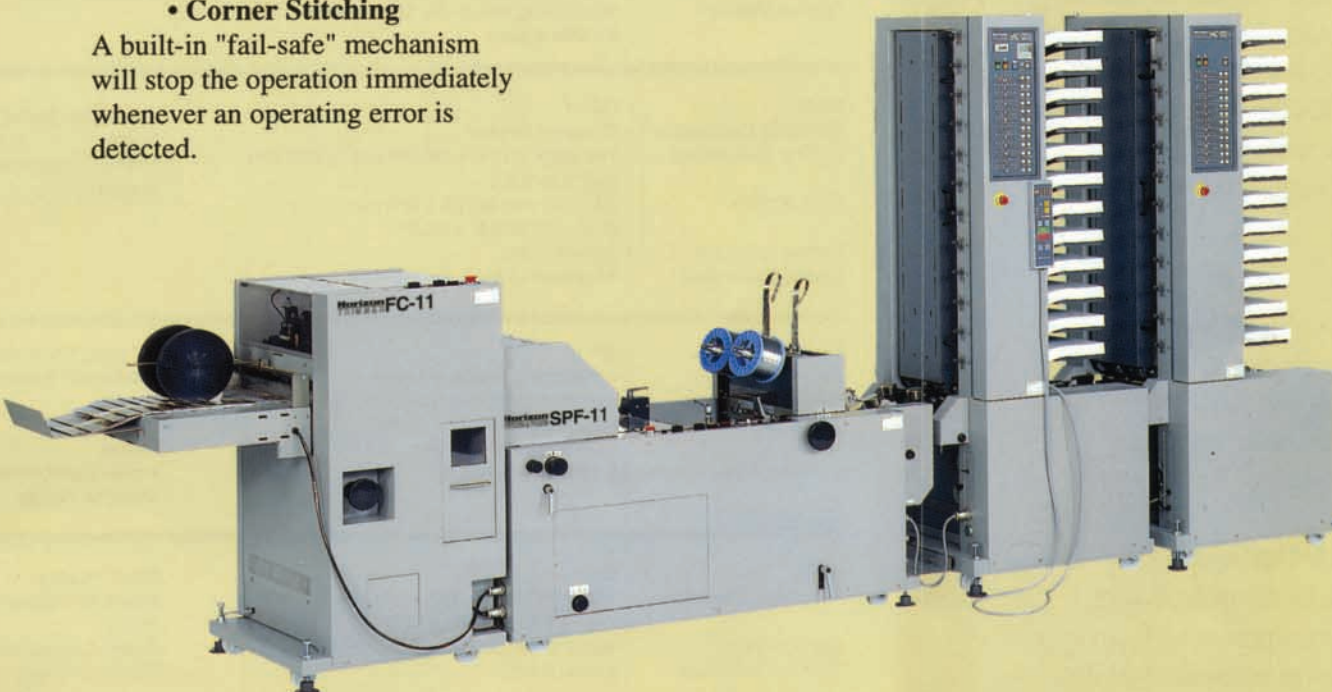
System Expansion Options:

Stitching and Folding System Model SPF-11

Model SPF-11 performs three types of stitching:

- **Stitching and Folding**
- **Top Stitching**
- **Corner Stitching**

A built-in "fail-safe" mechanism will stop the operation immediately whenever an operating error is detected.



Fore-edge Trimmer Model FC-11

By adding the Fore-edge Trimmer, Model FC-11, the booklets can be processed in an in-line production system. As soon as the trimming process is completed, booklets are ready for packing and shipment.

Kicking Unit Model PK-10

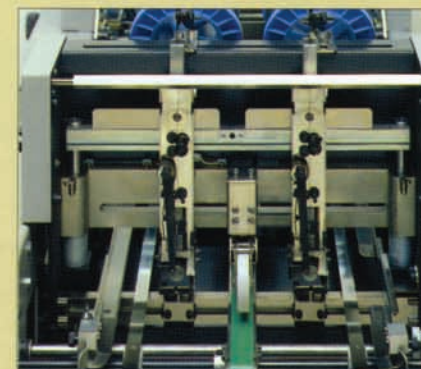
The Kicking Unit, fitted to Models SPF-11 and FC-11, will much improve your book-binding efficiency.

Model PK-10 features a mechanism of sliding the Conveyor Unit sideways to clearly set apart a preset batch of booklets.

The Stitching and Folding Unit, Model SPF-11, is specially designed to streamline a series of in-line operations for efficient booklet production. Collating, Jogging, Stitching, Folding and Trimming (with FC-11) are completed in one continuous, high-speed run.

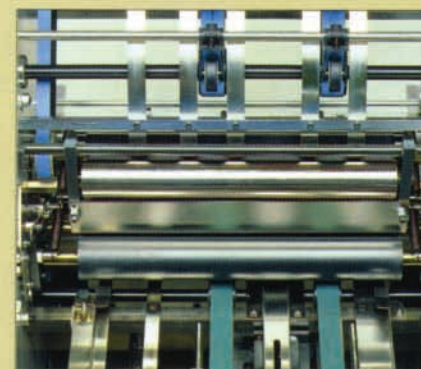
Jogging and Stitching

- The collated sets are neatly jogged by the front and side joggers.
- The stitching position can be easily set up by the handwheel.
- The maximum stitching thickness is 4 mm.
- A safety cover over the stitching station prevents possible hazards.
- Optional three- or four-stitcher heads are available.



Folding

- The knife folder with extra pressure rollers produces sharp folds.
- The stitching head, roller gap and folding knife can be easily adjusted to suit the varying size and thickness of booklets.
- The folding section is covered by a safety guard.



Stitching Units

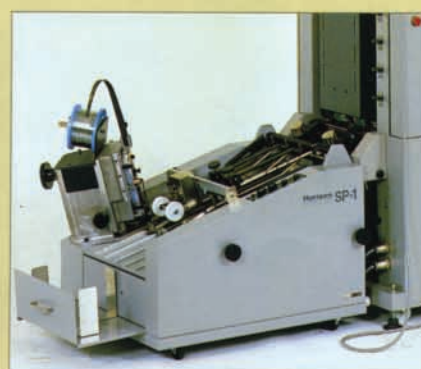
Stitching Unit Model SP-10

- Collated sets are jogged and stitched in one controlled sequence.
- The SP-10 can be used either for flat stitching or for corner stitching.
- Combined with either Horizon's Friction Collators or Air Suction Collators, the Model SP-10 greatly increases the in-line productivity.



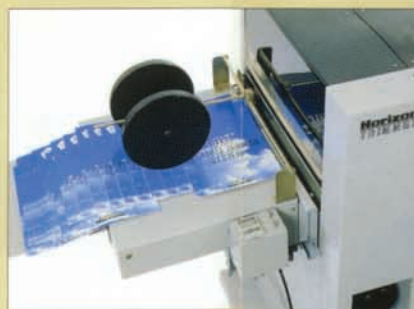
Corner Stitching Unit Model SP-1

- The Corner Stitching Unit, Model SP-1, is specifically designed to operate in sync with the collating speed.
- This unit uses wire stitching heads, instead of staples.
- This unit stitches 2,880 booklets per hour maximum.



Six Functions in One System

Trimming	Folding	Stitching			Collating
		center	top/side	corner	
←	←	←			←
	←		←		←
	←			←	←
			←		←
				←	←
	←				←
					←
FC-11		SPF-11			AC-1200 HAC Series MC Series HAC



Major Specifications

Module Type	HAC-120a (Main Module) HAC-120b (Extension Module)	Collating Speed (A4)	3,800 sets/hr (12 bins) 2,900 sets/hr (24 bins) 2,400 sets/hr (36 bins) 2,100 sets/hr (48 bins)
Module Configuration System	HAC-120a (12 bins) HAC-120a + 120b (24 bins) HAC-120a + 120b + 120b (36 bins) HAC-120a + 120b + 120b + 120b (48 bins)	Error Detection	Miss, Double and Jam detection system (photocell) 5 sensitivity selections 2 sets of Feed Error Monitors
Sheet Size	148 x 210 mm to 318 x 470 mm (SRA3) (5.8" x 8.3" to 12.5" x 18.5")	Monitor	100 V 50/60Hz 120 V 60 Hz 230 V 50Hz
Bin Pile Height	40 mm (1.6")	Power	1 module : 360 W 2 modules : 720 W
Stock Weight	50 gsm to 150 gsm (11 lb. to 110 lb.)	Power Consumption	3 modules : 1100 W 4 modules : 1560 W
		Machine Weight	HAC-120a : 226 kg (499 lb) HAC-120b : 175 kg (386 lb)

Model	SPF-11	Stitching Pitch	Adjustable within the range from 80 to 280 mm (3.1" x 11")
Runnable Sheet Size	210 x 210 mm (8.3" x 8.3") to 330 x 470 mm (13" x 18.5")	Stitching Wire Diameter	0.52 mm (Standard)
Stitching x Folding	148 x 210 mm (5.8" x 8.3") to 330 x 364 mm (13" x 14.3")	Stitching Thickness	4 mm (0.16") Max.
Top Stitching	148 x 210 mm (5.8" x 8.3") to 330 x 297 mm (13" x 11.7")	Production Speed	2,600 booklets/hr
Corner Stitching	148 x 210 mm (5.8" x 8.3") to 330 x 297 mm (13" x 11.7")	Power	100 V 50/60 Hz 120 V 60 Hz 220/240 V 50 Hz
Stitcher Motion	All stitching heads are cam-operated simultaneously	Power Consumption	300 W
		Machine Weight	271 kg (598 lb)

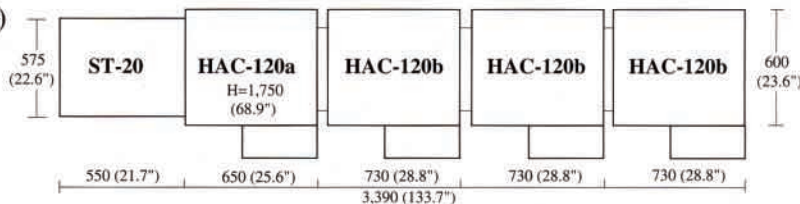
Model	FC-11	Production Speed	2,600 booklets/hr (in sync with SPF-11)
Trimming Mechanism	Shearing System	Power	100 V 50/60 Hz, 120 V 60 Hz, 230 V 50 Hz
Cutting Dimensions	The back to fore-edge: 99 mm to 225 mm (3.9" x to 8.9")	Power Consumption	300 W
Booklet Size	99 x 200 mm to 255 x 320 mm (3.9" x 8" to 8.9" x 12.6")	Weight	170 kg (375 lb)
Trimming Margin	15 mm (0.6")		
Cutting Thickness	44 sheets of 81.4 g/sqm stock		

Model	SP-10	Stitching Thickness	4 mm (0.16") Max.
Stitcher Motion	All Stitching heads are cam-operated simultaneously.	Production Speed	1,600 booklets/hr (12 sheets) 1,300 booklets/hr (16 sheets) 2,350 booklets/hr (2 sheets)
Stitching Pitch	Adjustable within the range from 80 to 280 mm (3.1" to 11")	Power	100 V 50/60 Hz 120 V 60 Hz 220/240 V 50 Hz
Stitching Wire Diameter	0.52 mm (Standard)	Power Consumption	300 W 50 Hz 325W 60 Hz
		Machine Weight	130 kg (287 lb)

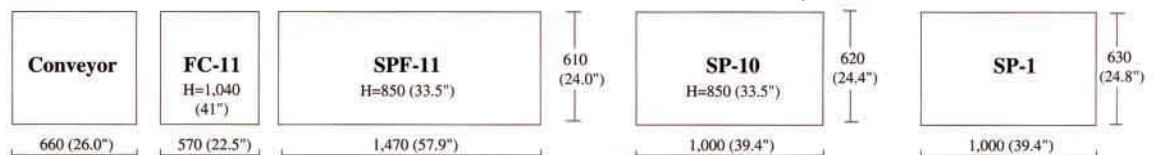
Model	SP-1	Stitch Position	Angled corner stitch
Runnable Sheet Size	148 x 210 mm to 257 x 364 mm (5.8" x 8.3" to 10.1" x 14.3")	Production Speed (A4)	2,880/hr (2 sheets)
Stitcher Head	Acme Champion Head	Power	100 V 50/60 Hz
Stitchint Thickness	4 mm (0.16")	Power Consumption	200 W
		Machine Weight	70 kg (154.4 lb)

Installation Space

Collators : mm(inch)



Expansion Options : mm(inch)



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

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