

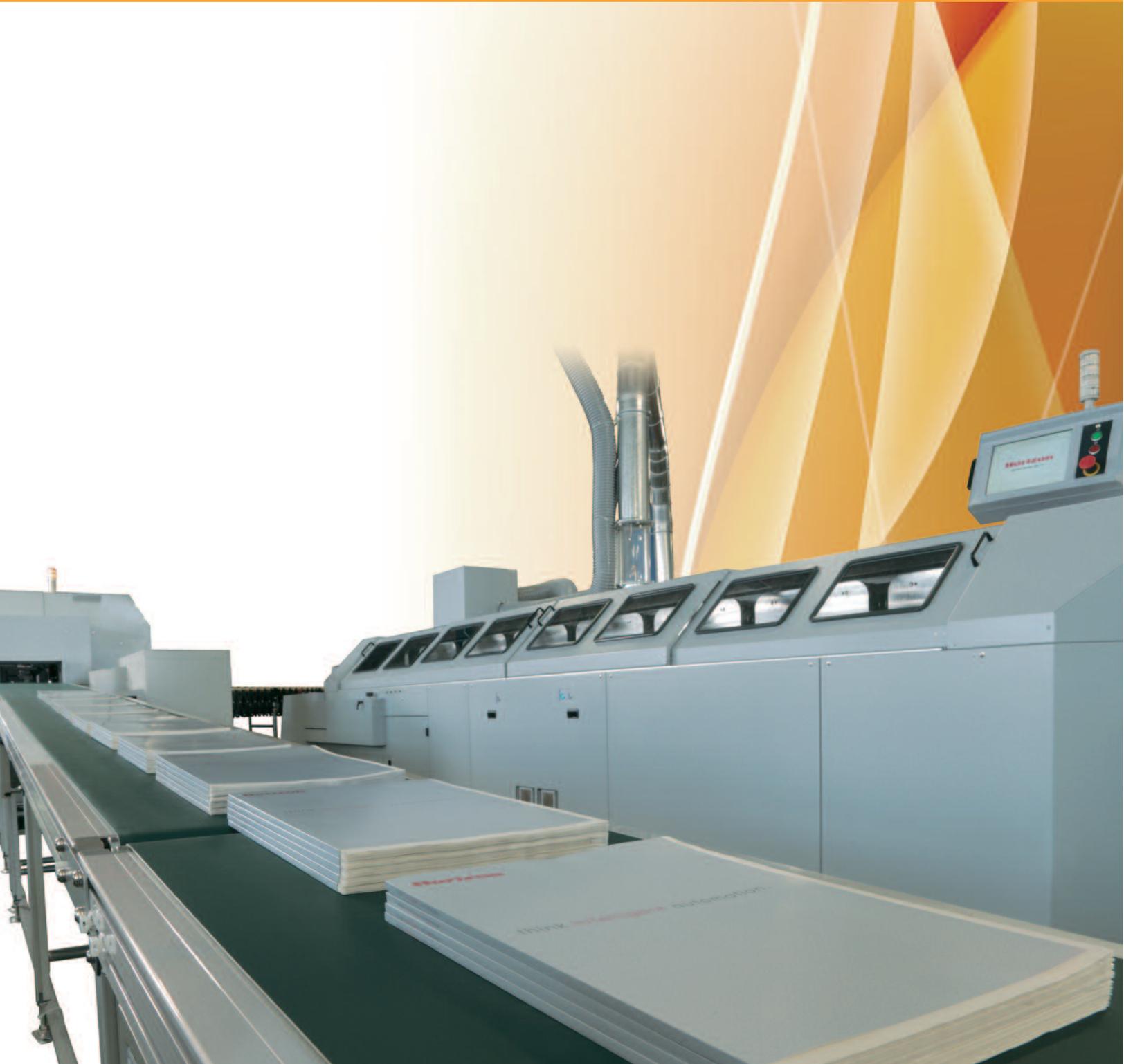
Computer-aided binding system CABS6000

Horizon



CABS6000

Computer-aided binding system



The flagship CABS6000 binder provides intuitive operation, high performance automation, high productivity, high quality control to meet your most demanding requirements.



CABS6000 Features

- 1.** High productivity at 6,000 books per hour with in-line system from gathering to trimming.
- 2.** Covers from short run to long run production challenges thanks to intuitive easy operation through the touch panel and fast, highly accurate change overs.
- 3.** Equipped with interchangeable tank unit that allows both EVA and PUR hot melt to be used.
- 4.** Various book sizes can be bound in-line, from minimum size A6 to maximum size B4.
- 5.** Off-line signature gathering is possible using the ST-600 stacker. Also, by installing the RU-600 misfeed unit the gatherer can operate non-stop.
- 6.** Quality control image checking cameras, thickness detector, weight checker, book block length detector, and other optional quality control features.
- 7.** The Horizon JDF network system (pXnet) can also be added, for further to increase in efficiency and effectiveness of the binding process.

MG-600

System Gatherer



1. Up to 6 gathering units (36 stations can be combined.)
2. Intuitive operation through intelligent touch screen control.
3. Image checking cameras (option IC2-MG600) detect sheets that have been improperly positioned or misprinted.
4. Used stations and settings of the detecting sensor can be memorized.
5. The ST-600 on/off-line stacker allows gathering to be performed off-line from the binder.

Option

Bookblock thickness detector (TD-600)

For enhanced quality control, the book block thickness is measured so that only good books proceed to the next steps. Set up is done through the intuitive touch screen.



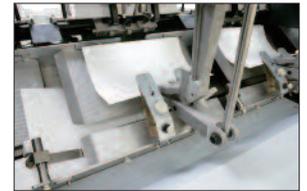
Operation section

Large color touch screens are used on each unit for efficient operation. Settings on a gatherer can be memorized in job memory.



Feeding section

Stable paper feeding is provided. Each feed station is equipped with a status indicator lamp.



Option

Image checker (IC2-MG600)

Image checking camera checks the image on each feed cycle to prevent incorrect signature or sheet feeding, for absolute document integrity. The captured image is shown on each display for visual confirmation.



Option

Book rejecting unit (RU-600)

RU-600 rejects any incorrectly collated signatures so the whole system can run non-stop, for maximum productivity.

Option

On/Off-line stacker (ST-600)

The MG-60H can run as a stand alone gatherer when the ST-600 stacker is installed.



Option

Hand feed unit for MG-600H (HF-600)

HF-600 allows an operator to feed additional signatures or sheets. The MG-600 starts collating when the signature is hand fed, so that both signatures combine smoothly.



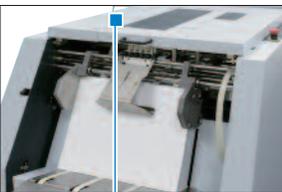
SB-17



1. Highly accurate automated set-up is performed with simple and easy operation.
2. Book production of up to 6,000 books per hour can be achieved.
3. Both EVA hotmelt and PUR hotmelt can be used by using the interchangeable melt tanks.
4. EVA tank provides exceptional glue application, even at high speed, thanks to 3 application rollers and 1 scraper roller on the EVA glue tank.
5. Two milling stations provide a versatile range of spine milling preparations. The system can also produce string-shaped milling powder for easier recycling.

Cover feeding section

Rotary style cover gripper holds the cover firmly for stable cover feeding. Any misplaced covers are detected by a image checking camera, and any double-feeds are detected by a super-sonic sensor. Covers can be loaded while running.



Option

Gauze feeder unit (GF-17)

When making book blocks for case binding books, the GF-17 cuts the gauze to the appropriate length before feeding.



Cover feeding / Scoring section

The cover scoring wheels can create up to 4 score lines, and can be automatically set-up according to the book thickness.



Nipping section

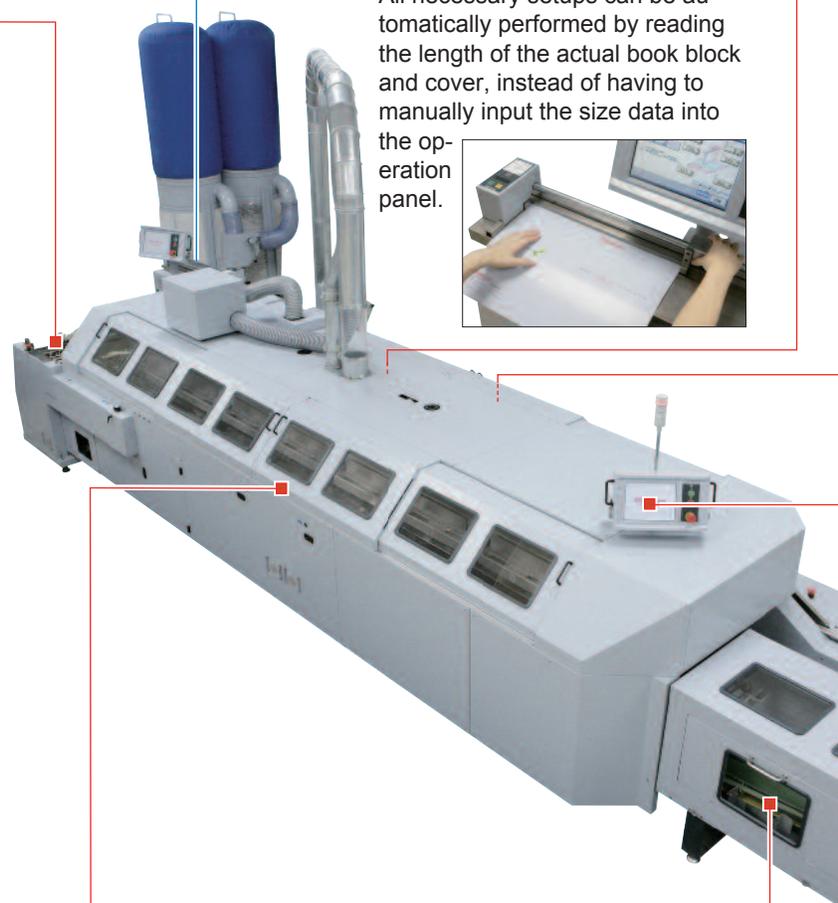
A superior nipping system exerts powerful nipping pressure to create strong, durable binds with sharp spine corners. Nipping pressure can be adjusted during operation.



Option

Book/Cover sheet size input interface (SI-17)

All necessary setups can be automatically performed by reading the length of the actual book block and cover, instead of having to manually input the size data into the operation panel.



Delivery section

Book blocks are delivered smoothly from the clamper to the delivery section. Cover registration is checked on each book during delivery. If a registration error is detected, the book is automatically rejected to the optional reject conveyor.



Melt tank section

Three application rollers promote superior penetration of hotmelt glue into the book for stronger binds. The glue tank can be separated into two separate sections so that two different glues can be used for enhanced binding quality. Side glue adjustment is done through the touch panel display.



Milling section

Pressing rollers apply firm pressure to the book block and clamber for accurate milling. 2 milling stations prepare the book spine for enhanced binding quality. The system can also produce string-shaped milling powder for easier recycling. The notching pitch can be also adjusted through the touch panel screen.



Operator Console

2 large color touch screens on the SB-17 provide simple and easy operation. All necessary set-ups can be performed through the touch panels.



In-feed Section

Gathered signatures are checked by a height detecting sensor, and inserted into the clamber while being jogged. A4 size landscape books can also be bound using the Hand Feed.



Option

Weight checking unit (WD-17)/Book rejecting unit (RU-17)

The weight checking system detects any books that are missing a cover or signature, and delivers the errored books into a reject tray.

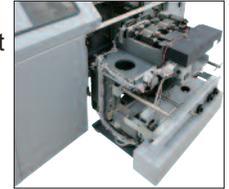


Option

Melt tank unit for EVA glue

Melt tank unit for PUR glue (Open drum)

Interchangeable melt tanks-allow both EVA hotmelt and PUR hotmelt to be used.



Option

Pre-Melt Tank (PM70)

Glue is pre-melted in a separate, high-capacity tank (70 liters) and fed into the glue tank as needed.

Option

Side glue supply unit (TM-17)

The side glue tank is automatically replenished when the level drops below a certain point.

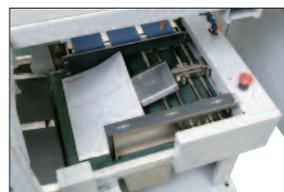


Connected delivery section

Option

Stack stream unit (SS-110)

Bound books are transported into the stream stack orientator (SS-110) to accumulate a predetermined number of books (up to 100mm) for trimming in HT-110. SS-110 is set-up automatically according to the setting data from HT-110. Fine adjustment is performed through a large touch panel display. The speed of the conveyor to HT-110 is also adjusted automatically.



HT-110

Three-knife Trimmer



1. Highly accurate set-ups are performed with easy and simple operation.
2. Trimming cycle can be adjusted in 13 stages from 400 to 1,600 cycles/hour. By accumulating 4 books at once at the Stream stack orientator, productivity 6,000 books per hour can be achieved.
3. Rigid framing and durable structure provides the utmost in trimming accuracy.

Operation Console

The trimmer is simple and easy to operate, with all necessary settings performed through the large, icon-based color touchscreen. If the system has an error, the error type and location are indicated for quick resolution.



Option

Chip Extractor (TB-100)

The three-knife trimming waste is extracted by the chip extractor.



In-Feed section

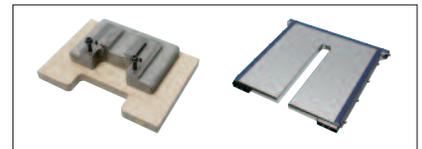
A pressing unit in the in-feed section compresses the books to remove air for reduced bulk and accurate trimming.



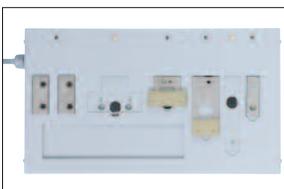
Option

Plate for trimming for each size

Clamper plate and Cutting table for each size are available as options.



Chuck plate recognition device



LED lamps light up to indicate which chuck plate is suitable for each book size. Replacement of the chuck plate is fast and easy.



Trimming section



The height of each knife and the angle of the fore-edge knife can be adjusted through the color touch screen during operation. Trimmings are blown away from the knife by strong air nozzles mounted on the knife holders.



PUR

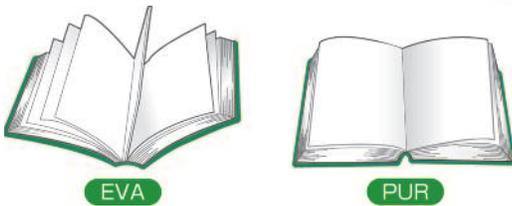
Strong, Environmentally Friendly PUR Solution

Polyurethane Reactive, also called PUR, is a polyurethane adhesive attracting attention for binding strength and eco-friendliness.

Strong and Lay-Flat Binding

As the printing industry diversifies, there is growing demand for binding with color sheets. EVA hotmelt glue has difficulty binding coated stock firmly, and does not currently enable acceptable lay-flat binding. However, PUR hotmelt glue can provide adequate binding strength and lay-flat quality for both offset and digital prints.

PUR hotmelt glue provides the best page spread compared to traditional EVA hotmelt glue. High binding strength allows for the application of a small amount of glue, allowing the pages to lay flat when the book is opened.



Durable against Temperature

PUR hotmelt glue retains durability and flexibility in both high and low temperatures. The temperature resistance for PUR hotmelt glue ranges from -20 to 120 degrees Celsius versus 0 to 60 degrees Celsius for EVA hotmelt glue. This allows PUR bound books to be handled in almost any climate or location.

Ecology

PUR adhesive is environmentally friendly, allowing PUR-bound books to be recycled. PUR also has a lower melting point (120 degrees Celsius) than EVA for operational energy savings.

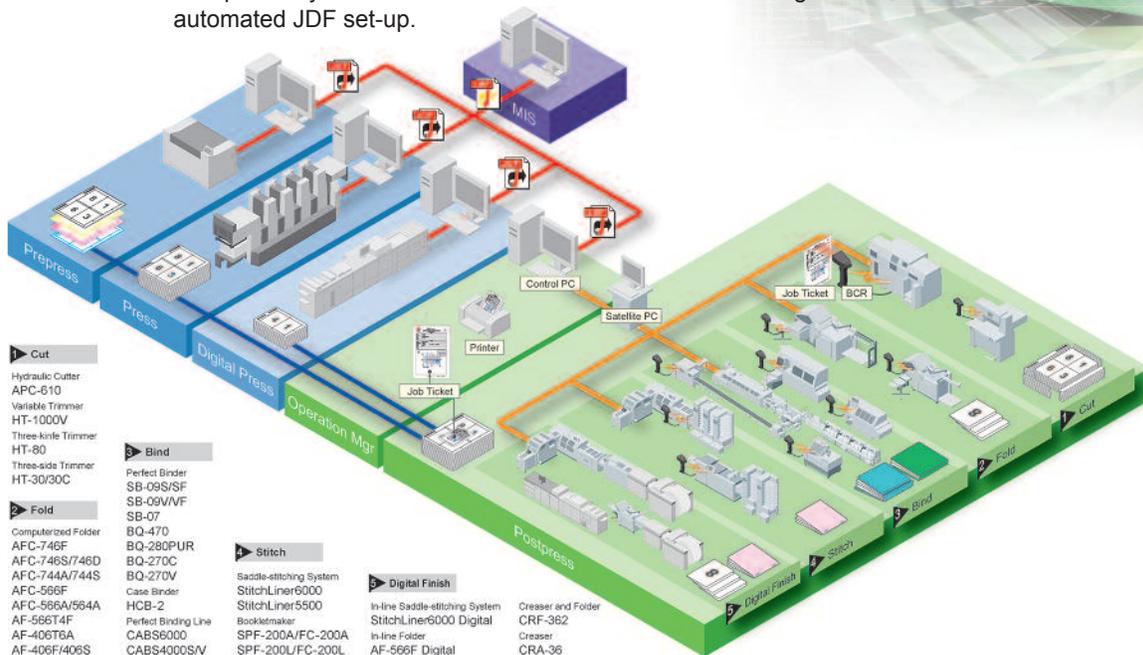
pXnet system

Manage your bindery with JDF enabled control system.



The Horizon pXnet Bindery Control System is used as a central control point to schedule work, send job data to each finisher, monitor status of finishers and collect production statistics from finishers in real-time. pXnet brings efficiency and value in high-mix/low-volume production environments where frequent job changeovers are needed.

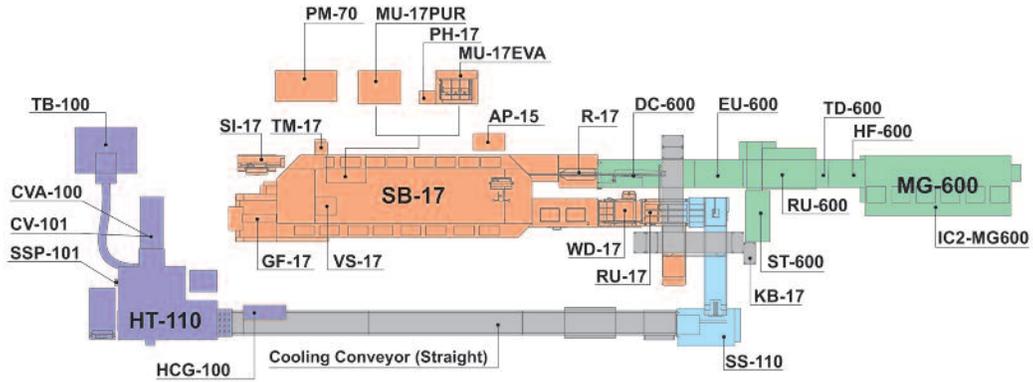
The pXnet system can also be interfaced with an existing workflow for automated JDF set-up.



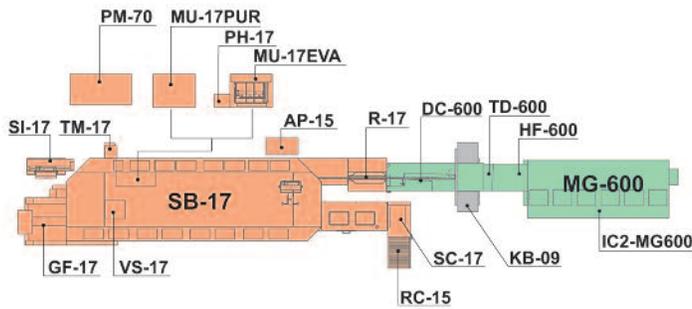
System Components

CABS6000 floor plans

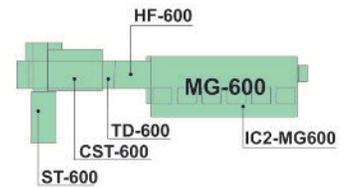
MG-600+SB-17+HT-110 Connected



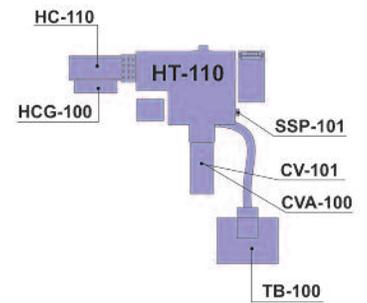
MG-600+SB-17 Connected



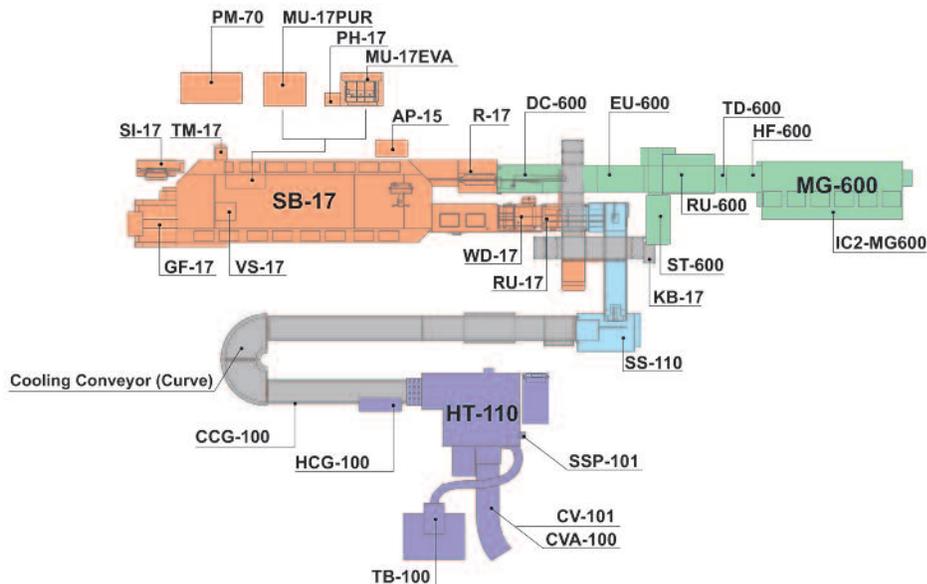
MG-600 Stand alone



HT-110 Stand alone



MG-600+SB-17+HT-110 Connected



CABS Components

System Gatherer MG-600

Model name	Description	Remarks	
EU-600	Extra connecting unit	EU-600 is needed between MG-600 and SB-17 when the weight checker is installed	
IC2-MG600	Image checker	Image checking cameras check the image of each signature to prevent incorrect loading	
TD-600	Bookblock thickness detector	TD-600 detects the thickness of gathered signatures installed on HF-600	
ST-600	On/Off-line stacker	MG-600 is possible as stand alone	
RU-600	Bookblock rejecting unit	Incorrect signatures are rejected for non-stop operation	
HF-600	Hand feed unit for MG-600H	HF-600 allows an operator to hand feed additional signatures or sheets	
Selection	DC-600	Docking conveyor unit	DC-600 is connecting unit between MG-600 and SB-17
	CU-600	Connecting unit	CU-600 is needed when using MG-600 with RU-600 as off-line, but possible to expand to SB-17 on-line
	CST-600	Docking conveyor unit	CST-600 is docking unit for MG-600 and ST-600 off-line.

System Binder SB-17

Model name	Description	Remarks
R-17	Connecting belt unit	Connectiong unit between MG-600 and SB-17
AP-15	Air pump for insert section	An air pump for book block insertion section SB-17
PM-70	Pre-melt tank	Pre-melt automatic feeding tank for EVA (70 liters)
TM-17	Side glue supply unit	Automatic side glue supply unit
SI-17	Book/Cover sheet size input interface	SI-17 measures the book block and cover sizes, and sends the data to SB-17
RU-17	Book rejecting unit	RU-17 rejects a faulty book detected on WD-17
WD-17	Weight checking unit	WD-17 checks weight of each book
TC-17	By-pass conveyor	When not using WD-17, TC-17 is needed for by-passing.
SC-17	Stack conveyor	When not using HT-110, SC-17 is needed as delivery unit
RC-15	Delivery Roller Conveyor Unit	Delivery roller conveyor unit for SC-17
VS-17	Smoke extractor unit	Smoke extractor for SB-17
MU-17EVA	Melt tank unit for EVA glue (Drum rollers application)	MU-17 EVA is used for EVA glue application
MU-17PUR	Melt tank unit for PUR glue (Open drum) (Drum rollers application)	MU-17PUR is used for PUR glue application (open drum)
NU-17PUR	PUR melt tank unit (Nozzle application style)	NU-17PUR is used for Nozzle style PUR glue application
GF-17	Gauze feeder unit	GF-17 is the unit which cuts the gauze to the appropriate length
PH-17	Pre-tank-heater	PH-17 is used to heat up the EVA unit MU-17EVA for short-make-ready of glue tank change

Connecting delivery section

Model name	Description	Remarks
SS-110	Stack stream unit	Bound books are transported into the stream stack orientator (SS-110) to accumulate a predetermined number of books (up to 100 mm) for trimming in HT-110
KB-09	Bridge	Bridge over delivery section
KB-17	Bridge	Bridge over delivery section. This is needed when MG-600, SB-17, and HT-110 are connected
-	Cooling conveyor	Various configurations are arranged depending on space requirements
CCG-100	Guide for curve conveyor	The guide for adjusting position of delivered book on the cooling conveyor

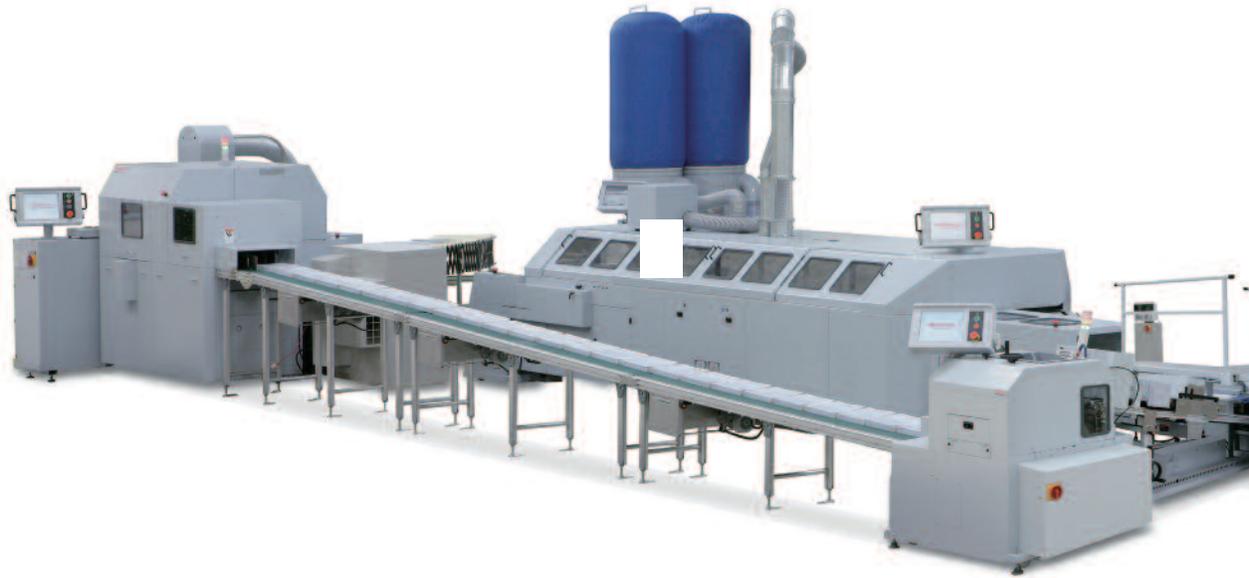
Three-knife trimmer HT-110

Model name	Description	Remarks	
HC-110	Hand feed conveyor	HC-110 is needed to feed books when HT-110 is used as stand alone. HC-110 is 1.3 m length conveyor and its speed can be adjusted in three phases	
HCG-100	Hand feed guide set	Guide set for delivered books, installed at the entrance section of HT-110 on the cooling conveyor	
-	Cutting table and clamber plate	Cutting table and clamber plate for each size	
Selection	CV-101	Delivery roller conveyor	CV-101 is 1 m length of Roller conveyor for delivery section HT-110
	CVA-100	Delivery extension conveyor	CVA-100 extension conveyor which can be extended from 1.5 m to 3.8 m
SSP-101	Automatic silicon spraying system	SSP-101 sprays Silicon to Top-Bottom knives to inhibit glue from sticking to the knives while trimming	
TB-100	Trimming waste extractor unit	TB-100 uses air blowering for the trimming waste	

- Set : Need to have both unit as a set.

- Selection : Select one of the option.

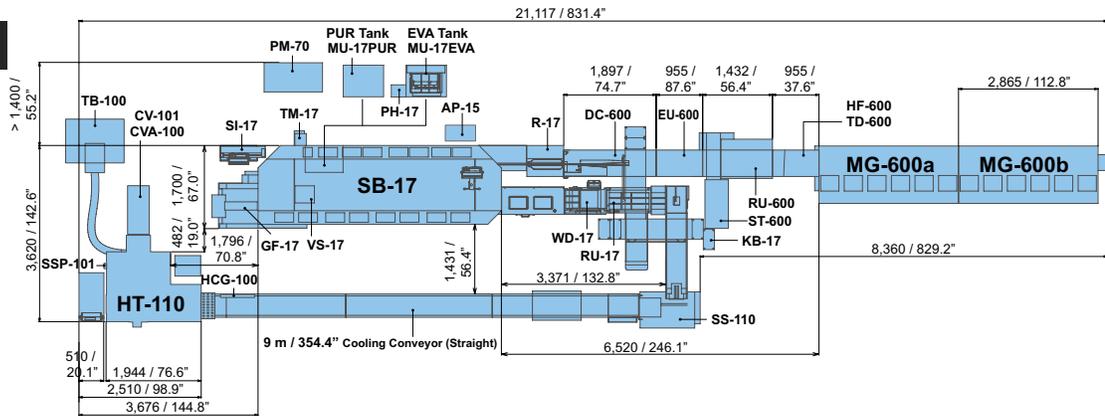
System configurations



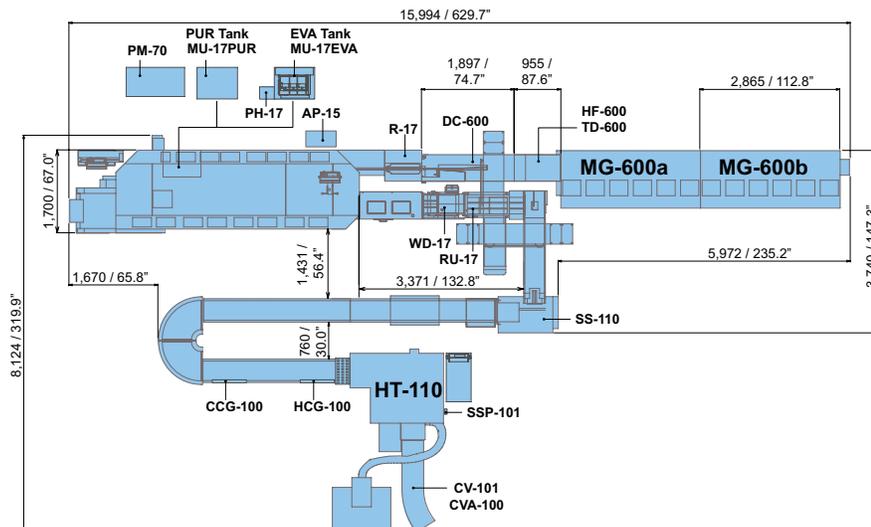
*Contact your local dealer for more information

Machine dimensions and configuration examples [Unit : mm (inch)]

Example 1



Example 2





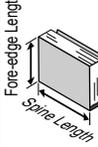
Specifications

MG-600 Specifications

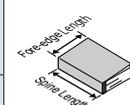
Module Configuration	MG-600a / MG-600b / MG-600c / MG-600b / MG-600b / MG-600b
Number of Hopper	6 hoppers / 12 hoppers / 18 hoppers / 24 hoppers / 30 hoppers / 36 hoppers
Sheet Size	Max. 385 x 275 mm / 15.15" x 10.8" Min. 148 x 105 mm / 5.83" x 4.14"
Sheet Weight Range	Normal Signature sheet
Bin Pile Height	Normal paper signature Max. 300 mm / 11.81" Coated paper signature Max. 150 mm / 5.90"
Max. Transport Thickness	Max. 50 mm / 1.96"
Production Speed	Max. 6,000 sets per hour
Voltage/Frequency	3-phase 200 to 220 V, 50 / 60 Hz 3-phase 400 V, 50 / 60 Hz
Machine Dimensions	MG-600a : W3,200 x D1,180 x H1,690 mm / 126.0" x 46.5" x 66.6" MG-600b/c : W2,860 x D1,180 x H1,690 mm / 112.6" x 46.5" x 66.6"

Voltage/Frequency	3-phase 200 V, 50 / 60 Hz, 3-phase 208 V, 50 / 60 Hz 3-phase 220 V, 50 / 60 Hz (Step down to 200 V by Transformer) 3-phase 400 V, 50 / 60 Hz (Step down to 200 V by Transformer)
Machine Dimensions	W7,100 x D1,700 x H1,500 mm / 279.6" x 67.0" x 59.1"

SB-17 Specifications

Book Block Size		Spine Length x Fore-edge Length		
		In-line	Portrait	Max. 385 x 275 mm / 15.15" x 10.82" Min. 148 x 105 mm / 5.83" x 4.14" (A6)
			Land Scape	Max. 250 x 320 mm / 9.84" x 12.59" Min. 135 x 185 mm / 5.32" x 7.29" (B6)
		Off-line	Portrait	Max. 400 x 280 mm / 15.74" x 11.02" Min. 148 x 105 mm / 5.83" x 4.14"
Land Scape	Max. 330 x 320 mm / 12.99" x 12.59" Min. 135 x 185 mm / 5.32" x 7.29" (B6)			
Book Thickness	2 to 50 mm / 0.08" to 2"			
Cover Size		Length x Width Max. 400 x 660 mm / 15.74" x 25.98" Min. 135 x 220 mm / 5.32" x 8.67"		
Cover Weight Range	Normal Paper : 82 to 302 gsm Coated Paper : 105 to 348 gsm			
Cover Pile Height	Max. 130 mm / 5.1"			
Production Speed	Max. 6,000 books per hour			

HT-110 Specifications

Untrimmed Book Size		Spine Length x Fore-edge Length Max. 410 x 320 mm / 16.14" x 12.59" Min. 148 x 105 mm / 5.83" x 4.14"
Finished Book Size		Max. 366 x 300 mm / 14.40" x 11.81" Min. 145 x 103 mm / 5.71" x 4.05"
Trim Width	Fore-edge : Max. 45 mm / 1.77" (Maximum trim width for fore-edge is 23 mm when the finishing size is A4E-Landscape.) Top and Bottom : Max. 30 mm / 1.18"	
Trim Height	2 to 100 mm / 0.079" to 3.93" Limitations : a. Max. 50 mm / 1.96" for books which measure 145 mm / 5.71" or shorter length between spine and fore-edge b. Limitation for books which have a finished length of 325 mm / 12.80" or longer between top and bottom For example : Max. 55 mm / 2.16" for books which measure 400 mm / 15.74" between top and bottom before trimming Max. 80 mm / 3.14" for books which have a length of 364 mm / 14.33" between top and bottom before trimming	
Standard Size Trimmed by Standard Accessory	A4/A5 (±3 mm) 8.5" x 11" / 5.5" x 8.5" (±0.11")	
Clamp System and Pressure	Operated by Servo Motor 4 kN to 12 kN (Adjustable in 9 steps)	
Production Speed	400 to 1,600 cycles (Adjustable in 13 steps)	
Voltage/Frequency	3-phase 200-230 V, 50 / 60 Hz 3-phase 380-415 V, 50 Hz	
Machine Dimensions	Main Body : W1,950 x D2,150 x H1,910 (including pole lamp) mm / 76.8" x 84.7" x 75.2" Power Box : W510 x D1,000 x H1,450 mm / 20.1" x 39.4" x 57.1"	

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

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