

Horizon

CABS4000

Automated Binding at a New Level



Horizon introduces the new CABS4000 high speed in-line binding system, using the SB-09 9-clamp perfect binder. The CABS4000 features system automation for major setups, space efficiency, and high productivity up to 4,000 books/hour.

The new CABS4000 system consists of the MG-60H 6-hopper gatherer, the SB-09 9-clamp perfect binder, the HT-101 three-knife trimmer, and a wide range of options. The system is ideally suited for short to medium run lengths that require professional quality perfect bound books.

MG-60H 6-HOPPER GATHERER

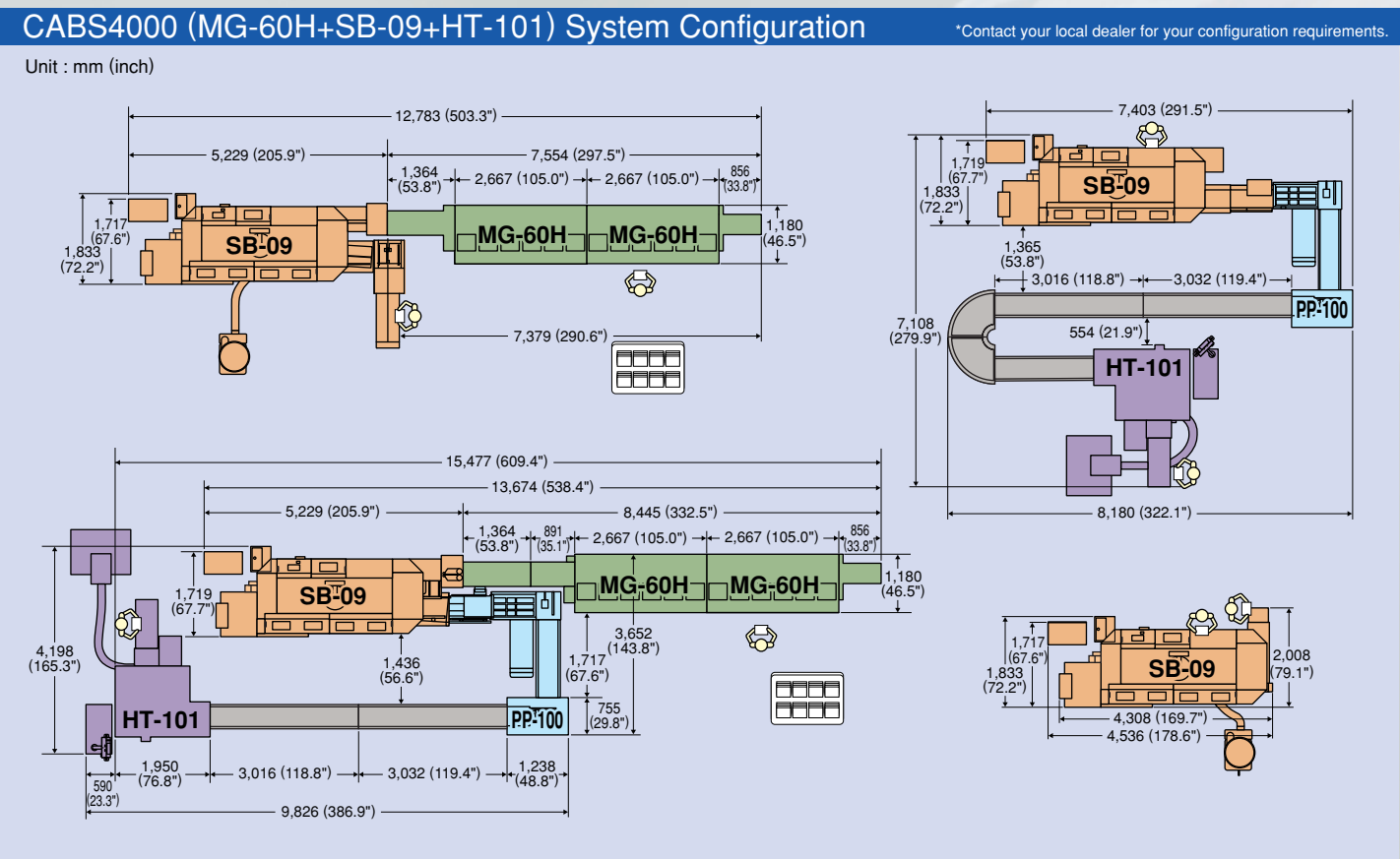
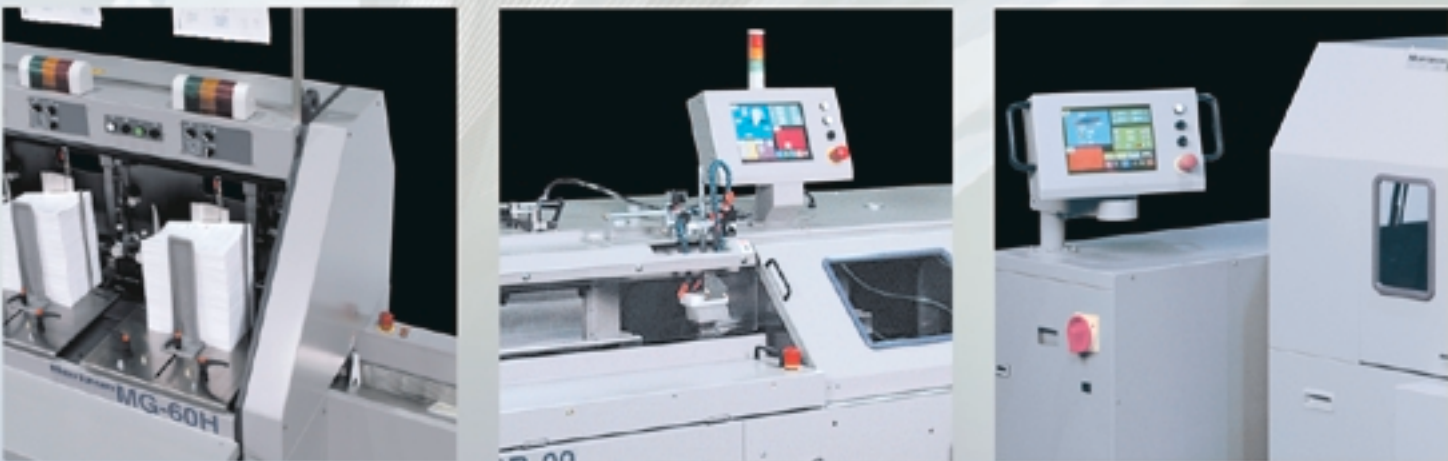
- Up to six 6-hopper signature gathering sections can be combined to create a 12, 18, 24, 30, or 36-hopper system.
- The air suction and the grip arm feeding system on the MG-60H can feed single sheets, single folded sheets, or signatures up to 32-pages.
- Horizon's state-of-the-art detection system will detect misfeeds or double feeding to insure book integrity.
- An optional optical reading system is available for each hopper to insure proper signature orientation during re-loads.

HT-101 THREE KNIFE TRIMMER

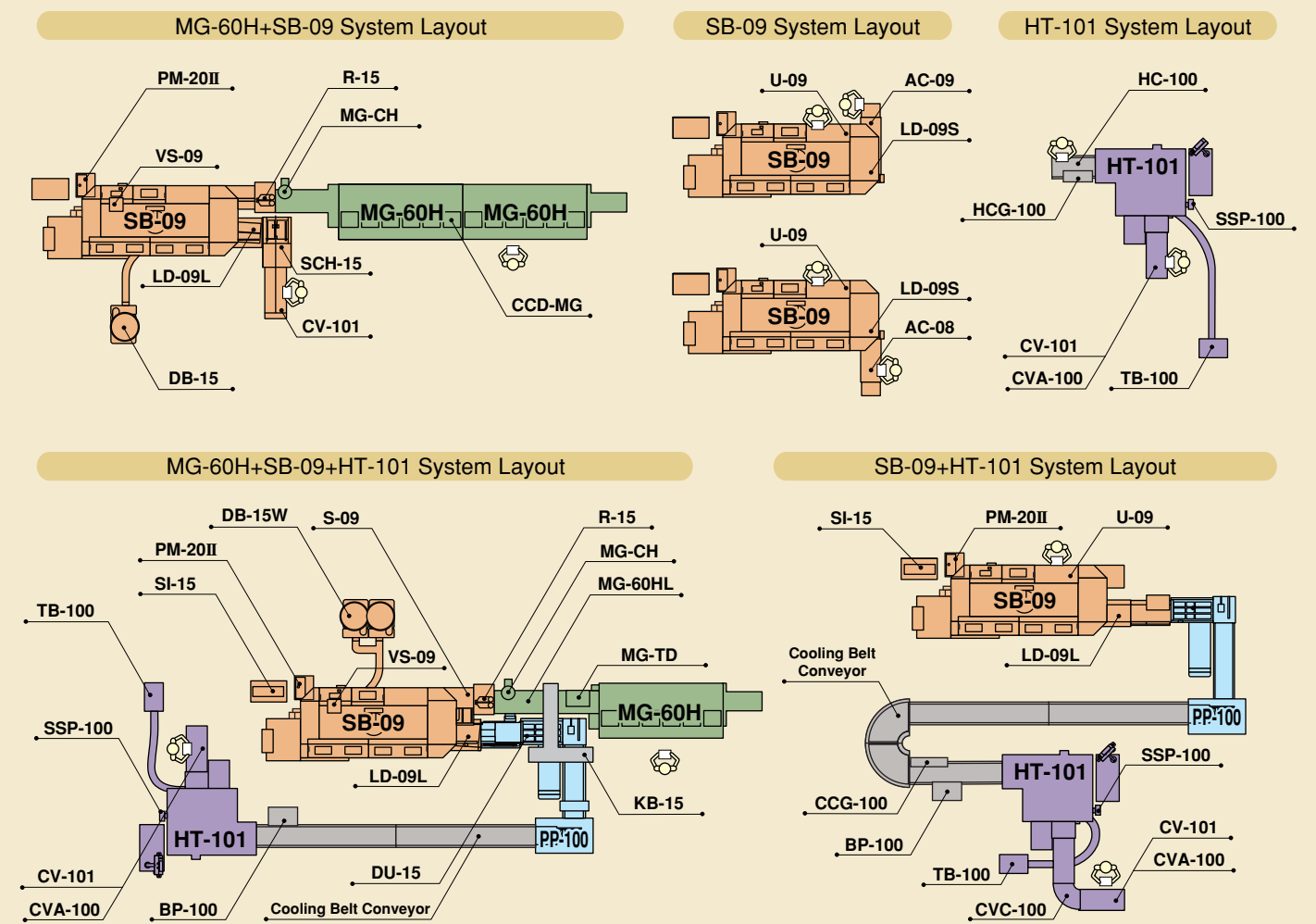
- The HT-101 features automated setup for different book sizes and precision cutting accuracy.
- Job changeovers are performed simply and quickly through the color LCD touch-screen. Unlike other three-knife trimming systems, there are very few replacement parts when changing over the HT-101.
- Knife height and cutting depth are easily adjusted through the color LCD touch-screen.

SB-09 9-CLAMP BINDER

- The SB-09 provides maximum productivity for short to medium run-lengths at up to 4,000 books/hour.
- Major system setups are performed automatically and book size or book thickness changeovers are completed within 3 minutes. The SB-09 provides quick, easy makeready for frequent job changes.
- The scoring and cover registration sections are automatically set from the input book size data, for square accurate spines from first book to last.
- Revolutionary seesaw style feed plate for increased space efficiency.



CABS4000 (MG-60H+SB-09+HT-101) Option Layout

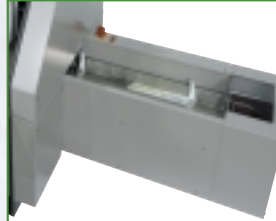


The MG-60H 6-hopper modular gathering system (36 hoppers maximum) can feed single sheets, single folded sheets, or signatures up to 32 pages.

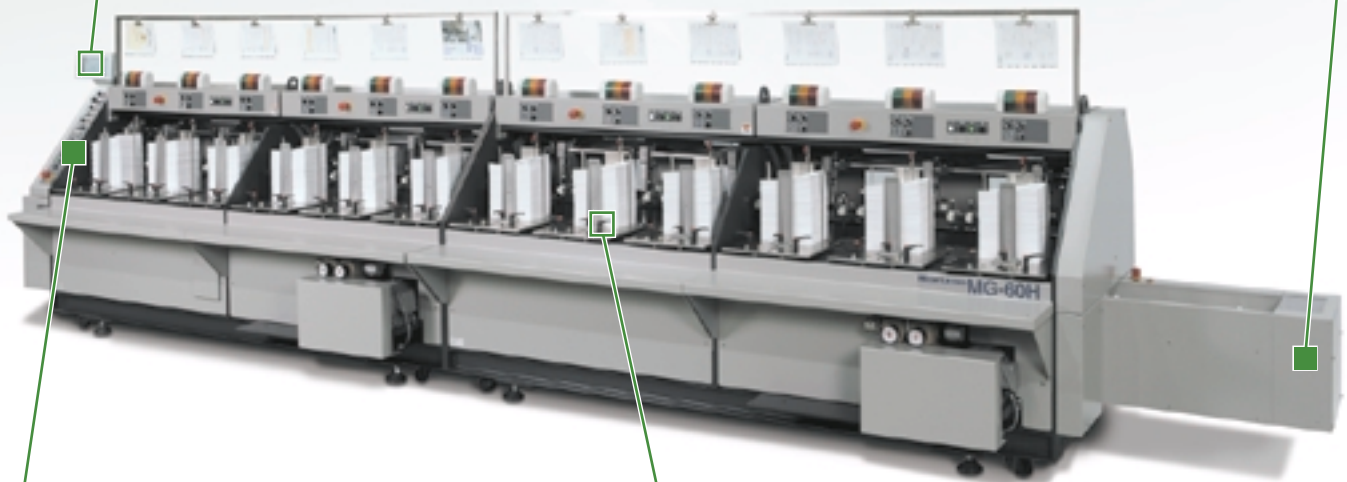
OPTION

Image Checking System (CCD-MG) : Monitor

Hand Feed Section



The hand feed station allows the operator to feed additional signatures or sheets. The hand feed station triggers the start of feeding from the MG-60H gatherer.



OPTION

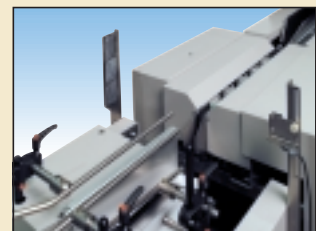
Image Checking System (CCD-MG) : CCD Camera

Hopper and Operation Panel



The MG-60H features a reliable grip arm feeding mechanism. Each feeding section is equipped with a lamp to allow the operator to easily monitor feeding conditions. No special skill is required for operating the MG-60H.

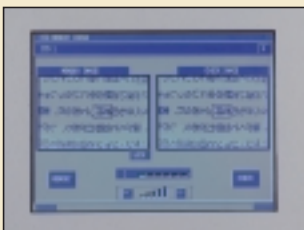
■ Book Block Sensor (MG-CH)



This sensor stops the gatherer when it detects that a gathered book block is mis-aligned.

OPTION For MG-60H

■ Image Checking System (CCD-MG)



CCD Camera

The CCD cameras check the image on each feed cycle to prevent incorrect signature or sheet feeding, to insure document integrity. The captured images are displayed on the monitor.

■ Book Thickness Detector (MG-TD)



This sensor stops the gatherer when it detects that the thickness of a gathered book block is incorrect.


The SB-09 is a compact 9-clamp perfect binder with semi-automated setup and a maximum production speed of 4,000 books/hour.

Clamp Adjusting Lever



A single lever can be used to adjust all clamps at one time for spine thickness changes up to 1 cm (0.39").

Operator Console



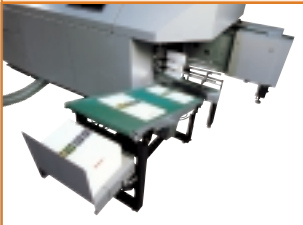
The 10.4 inch large color LCD screen provides simple and easy operation. Book size input, function setups, and micro-adjustments for each section are available through this icon based screen.

Cover and Book Registration



A built-in matching mechanism guarantees precise alignment of the cover to the book during high-speed operation.

Delivery Section




Descending books drop onto a conveyor, which delivers them to a spring-loaded catch tray.

Cover Feeder




All guides are setup automatically. A warning buzzer alerts the operator when covers are running low. Covers can be loaded on-the-fly.

In-Feed Section



A revolutionary seesaw style feed plate is employed for space efficiency.

Scoring Section



The cover scoring wheel is setup automatically from the input book size data.

Opening Adjusting Knob



An adjusting knob easily opens the clamp to the proper book block thickness.

Hand Feed Section



Comfortable working space and safety guards are provided at the hand feed station.

Milling



Milling height, rotation speed, and notching pitch can be adjusted through the control panel. Clamp speed is adjusted automatically. Changeover between binding with milling and binding without milling is easily accomplished.

Gluing



Dual application rollers ensure the hot melt glue penetrates deep into the book for stronger binds. Side gluing setup can be performed through the control panel.

Pre-Melt Tank (PM-20II)


OPTION



Adhesive is pre-melted and fed into the glue tank as needed.

OPTION For SB-09

■ Book Size Input Caliper (SI-15)



Measures the dimensions of the actual book block to be bound and sends those values to the binder.

■ Milling Blower Unit (DB-15/15W)



Vacuumed paper chips from the milling process are collected into a high capacity plastic bag.

DB-15W

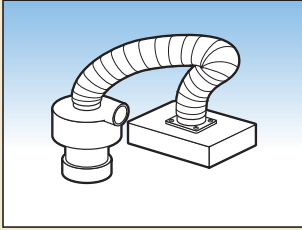
※DB-15 / Single Tower
DB-15W / Twin Tower

■ Pre-Melt Tank (PM-20II)



Adhesive is pre-melted and fed into the glue tank as needed.

■ Smoke Extractor (VS-09)



Extracts any smoke or fumes from the hot melt glue.

■ Faulty Book Eject Unit (DU-15)



Rejects any incomplete books after receiving a signal from the binder or the weight checker.

The HT-101 is a fully automated three-knife trimmer, with a user-friendly color touch-screen control console.

Operation Console



The large color LCD screen provides for simple and easy operation. All necessary settings can be performed through the icon-based touch-screen. If the system has an error, the error type and location are indicated on the color LCD for quick resolution.

Trim Section



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

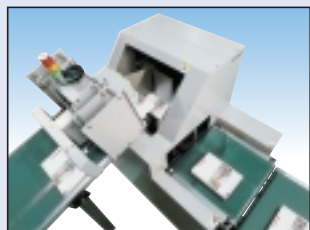
In-Feed Section



The in-feed section is equipped with a pressing unit that compresses the books to remove air for reduced bulk and accurate trimming.

Conveyor Unit

■ Stack Orientator (PP-100)



Bound books are transported into the stack orientator to accumulate a predetermined number of books for trimming in the HT-101.

OPTION For HT-101

■ Chip Extractor (TB-100)




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



■ Automatic Silicon Spraying System (SSP-100)

Silicon is sprayed onto the top and bottom knives to avoid glue adherence when trimming bound books.

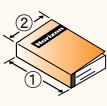
MG-60H Major Specifications

Module Configuration	MG-60Ha / MG-60Hb / MG-60Hc / MG-60Hd / MG-60He / MG-60Hf					
Number of Hoppers	6 hoppers / 12 hoppers / 18 hoppers / 24 hoppers / 30 hoppers / 36 hoppers					
Sheet Size		①		②		(Optional attachment is capable of A6 size.)
		Max.	330 mm (12.99")	250 mm (9.84")		
		Min.	182 mm (7.17")	128 mm (5.04")		
Sheet Weight Range	Normal Signature Sheet					
Sheet Feeding System	4-page to 32-page Signatures Air suction bottom feed					
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. 4,000 sets/hr. (When SB-09 is interlocked)					
Error Detector / Indicator	Misfeeds, Double Feeds, Jams (Linear Detection System)					
Other Function	Synchronized collation starting by hand feed					
Voltage / Frequency	3-Phase AC 200 V, 50 / 60 Hz					
	3-Phase AC 220 V, 60 Hz					
	3-Phase AC 400 V, 50 Hz					
Rated Current	MG-60Ha : AC 200 V, 50 Hz, 8.5 A / AC 200V, 60 Hz, 8.8 A					
	MG-60Hc : AC 200 V, 50 Hz, 30.3 A / AC 200 V, 60 Hz, 35.7 A					
Power Consumption	50 Hz	1 unit	2 units	3 units	4 units	5 units
	60 Hz	2.5 kW	4.1 kW	5.7 kW	13.6 kW	15.2 kW
		2.7 kW	4.6 kW	6.5 kW	12.9 kW	14.8 kW
Motors	MG-60Ha : 1.5 kW x 2 / MG-60Hb : 1.5 kW x 1					
Heat Output	MG-60Ha : 3,460 kJ (830 kcal) / MG-60Hb : 2,110 kJ (500 kcal)					
Machine Dimensions	1 unit	2 units	3 units	4 units	5 units	6 units
	4,887(W) x 1,232(D) x 1,690(H) mm	7,554(W) x 1,232(D) x 1,690(H) mm	10,221(W) x 1,232(D) x 1,690(H) mm	12,888(W) x 1,232(D) x 1,690(H) mm	15,555(W) x 1,232(D) x 1,690(H) mm	18,222(W) x 1,232(D) x 1,690(H) mm
	(192.5" x 48.6" x 66.6")	(297.5" x 48.6" x 66.6")	(402.5" x 48.6" x 66.6")	(507.5" x 48.6" x 66.6")	(612.5" x 48.6" x 66.6")	(717.5" x 48.6" x 66.6")
	48.6" x 66.6"	48.6" x 66.6"	48.6" x 66.6"	48.6" x 66.6"	48.6" x 66.6"	48.6" x 66.6"
Machine Weight	1,500 kg (3,308 lbs.)	2,750 kg (6,064 lbs.)	4,000 kg (8,820 lbs.)	5,300 kg (11,687 lbs.)	6,550 kg (14,443 lbs.)	7,800 kg (17,199 lbs.)

SB-09 Major Specifications

Number of Clamps		9				
Book Size	Portrait		Max.	①	②	In-line
				400 mm (15.74")	280 mm (11.02")	Off-line
	Landscape		Max.	148 mm (5.83")	105 mm (4.14")	Off-line
				Min.	330 mm (12.99")	
Book Thickness		1 to 45 mm (0.04" to 1.77")				
Cover Size (Top-Bottom x Fore-edge)		Max. 400 x 660 mm (15.74" x 25.98")				
		Min. 135 x 220 mm (5.32" x 8.67")				
Cover Weight Range		82 to 302 gsm Normal Paper, 105 to 348 gsm Coated Paper				
Cover Pile Height		Max. 130 mm (5.1")				
Warm up Time		70 min.				
Tank Temperature		160 to 200 °C				
Milling Blade Maximum Depth		4 mm (0.15") (Depends on the sheet weight)				
Production Speed		Max. 4,000 books/hr.				
Voltage / Frequency		3-Phase 200-230 V, 50 / 60 Hz				
		3-Phase 380-415 V, 50 Hz				
Rated Current		3-Phase 200 V, 50 Hz, 23 A, 23 A / 60 Hz, 25 A				
		3-Phase 220 V, 60 Hz, 23 A		3-Phase 400 V, 50 Hz, 12 A		
Power Consumption		3-Phase 200 V, 50 Hz, 7.6 kW / 60 Hz, 8.5 kW				
		3-Phase 220 V, 60 Hz, 8.5 kW		3-Phase 400 V, 50 Hz, 7.6 kW		
Heat Output		18,310 kJ (4,380 kcal)				
Motors		3.7 kW x 1 / 2.2 kW x 2 / 1.5 kW x 2 / 40 W x 1 / 25 W x 1				
Heaters		3.0 kW x 1 / 0.75 kW x 1 / 80 W x 1 / 45 W x 1				
Machine Dimensions		Stand Alone (with U-09, AC-08) : 4,520(W) x 2,425(D) x 1,660(H) mm (178.0" x 95.5" x 65.4")				
		System (with S-09) : 4,900(W) x 1,570(D) x 1,660(H) mm (193.0" x 61.9" x 65.4")				
Machine Weight		Stand Alone (with U-09) : 2,780 kg (6,130 lbs.) (without Delivery) System (with S-09) : 2,860 kg (6,306 lbs.) (without Delivery)				

HT-101 Major Specifications

Untrimmed Book Size		①	②
Trimmed Book Size		Max. 410 mm (16.14") Min. 148 mm (5.83")	Max. 320 mm (12.59") Min. 105 mm (4.14")
Trim Thickness	Fore-edge : 45 mm (1.77") (Maximum trim width for fore-edge is 23 mm / 0.90" when the finishing size is A4E.) Top-Bottom : 30 mm (1.18")		
Trim Width	Max. 100 mm (3.93") (Except for conditions below) a. Max. 50 mm (1.96") for the books of which length between spine and fore-edge is 145 mm (5.71") or shorter. b. Max. 60 mm (2.36") for the books of which length between top and bottom is 297 mm (11.69") or longer. c. Max. 50 mm (1.96") for the books of which length between spine and fore-edge is 275 mm (10.82") or longer. Min. 5 mm (0.20") (Book thickness is 2 mm / 0.08" at minimum)		
Standard Size Trimmed by Standard Accessory	A4 / A5 (+/- 3 mm)		
Clamp and Pressure	Operated by Servo Motor 5 kN to 18 kN (Adjustable in 14 steps)		
Production Speed	400 to 1,600 cycles/hr. (Adjustable in 7 steps)		
Table Height	911 mm (35.9")		
Voltage / Frequency	3-Phase 200-230 V, 50 / 60 Hz 3-Phase 380-415 V, 50 Hz		
Rated Current	3-Phase 200 V, 50 / 60 Hz, 13.4 A		
Heat Output	11,160 kJ (2,670 kcal)		
Motors	3.7 kW x 1 / 2.2 kW x 1 / 2.0 kW x 1 / 0.75 kW x 2 / 40 W x 3		
Machine Dimensions	Main Body : 1,950(W) x 1,900(D) x 1,950(H) mm (76.8" x 74.9" x 76.8") Power Box : 508(W) x 1,000(D) x 1,505(H) mm (20.0" x 39.4" x 59.3")		
Machine Weight	Main Body : 2,650 kg (5,843 lbs.) Transformer : 43 kg (95 lbs.)		

CABS4000 Options

Perfect Binder	Connecting Belt Unit	R-15
	Alternative Automatic Feed Unit	S-09
	Manual Feed Unit	U-09
	Alternative Chute Delivery Conveyor	LD-09S
	In-line Delivery Conveyor	LD-09L
	Alternative Slope Conveyor	AC-08 AC-09
	Faulty Book Eject Unit	DU-15
	Delivery Stacker	SCH-15
	Pre-Melt Tank	PM-20II
	Book Size Input Caliper	SI-15
Gatherer	Cover Sheet Side-lay Adjustment Handset	RA-15
	Alternative Milling Blower Unit : Single	DB-15
	Milling Blower Unit : Twin	DB-15W
	Smoke Extractor	VS-09
	Book Thickness Detector	MG-TD
	Compressor (must be arranged locally when the HT-101 is not connected)	-
	Image Checking System	CCD-MG
	MG Extension Unit	MG-60HL
	Book Block Sensor	MG-CH
	Stack Orientator	PP-100
Conveyor Unit	Cooling Belt Conveyor (Straight and Curved)	-
	Bridge	KB-15
	Power Box	BP-100
	Curved Conveyor Guide	CCG-100
	Hand Feed Conveyor	HC-100
	Hand Feed Guide	HCG-100
	Curved Conveyor	CVC-100
	Delivery Extension Conveyor	CVA-100
	Delivery Roller Conveyor	CV-101
	Chip Extractor	TB-100
Three-knife Trimmer	Automatic Silicon Spraying System	SSP-100
	Compressor (must be arranged locally)	-

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

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