

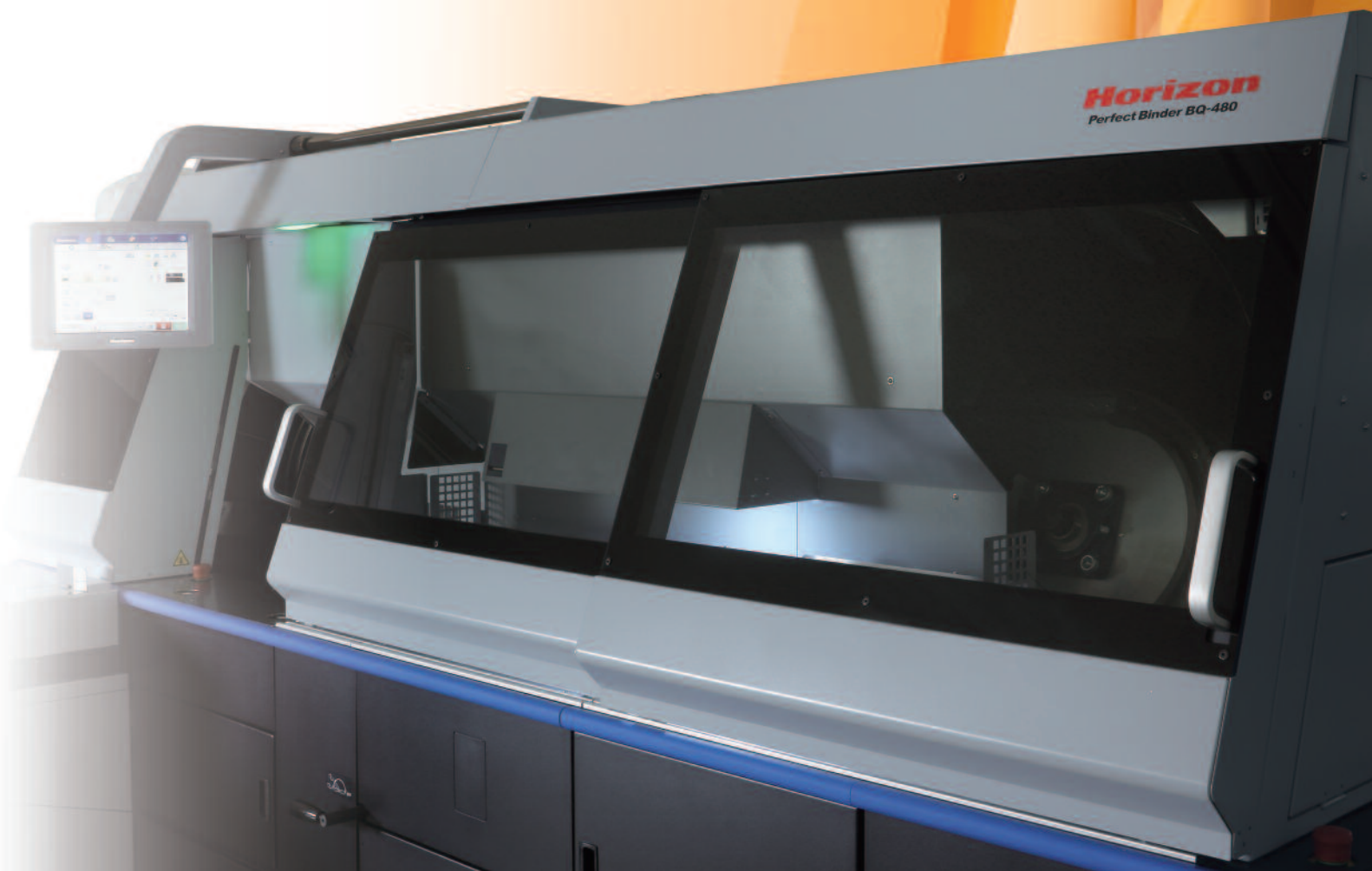
Horizon



BQ-480

Perfect Binder

**New level of automation brings efficient,
high quality production.**



New level of automation brings more efficient and higher quality production.

Features

- 1. Higher Level of Automation** – In addition to dimension based automation, the BQ-480 features customized automated setup accounting for paper type, signature vs. loose sheet, sewn book blocks, notch binding, and other key factors for higher quality with less effort.
- 2. Book of One Production** – Maximum production speed of 800 books per hour for book of one production. (Production speed changes depending on thickness change from book to book.)
- 3. Gentle Book Delivery System** – Uniquely designed book delivery mechanism delivers the book gently for high quality books, even with 65 mm (2.56”) thickness books or PUR bound books.
- 4. Selection of Glue Types** – The BQ-480 supports both EVA hotmelt glue and PUR hotmelt glue. Two different tanks are available for each glue type.



Advanced features

Exclusive new features for improved production and quality.

Wide Color Touch Panel

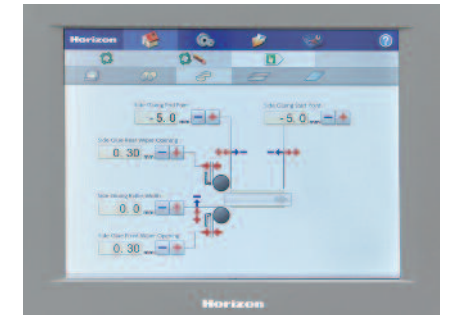


All setup and operation can be done through innovative color touch screen operation. New improve screen layout for easy operation.



Ergonomically designed slide operator console for operation efficiency, with loading and operation from either the left or right side.

Fully Automated Changeover



All sections including milling guide, spine glue, side glue, nipping station, cover feeder, scoring rollers and delivery are setup automatically. New automation adds to increased quality with increased spine and side glue control and auto nipper height adjustment.

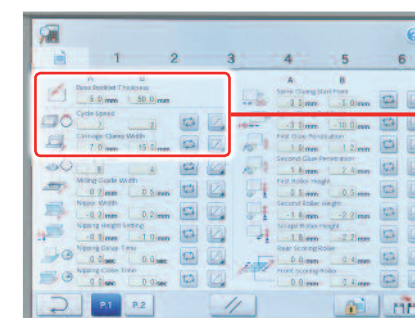
Weekly Timer

Weekly timer is equipped as a standard feature for convenient operation. Timer can be programmed from the touchscreen.

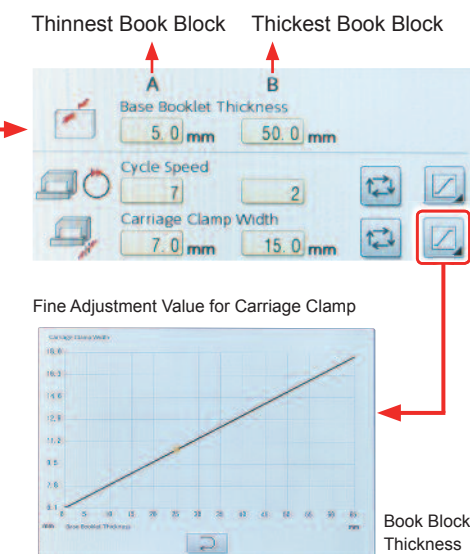
Increased Job Memory Capacity

999 jobs can be stored in memory, for easy job recall and set up.

Custom Automated Set-up



Customized templates can be created according to desired book quality, paper type and other factors. These customized templates can be created by a key operator or technician who controls the quality. Once a template is created, the operator just selects the desired template to setup the system. This enables any operator to produce consistent quality books with improved production efficiency and greater quality control.



To create a template, set-up for the thinnest book and thickest book and it automatically calculates the value in between.

The set values for the following items can be included in custom template.

- Cycle Speed
- Carriage Clamp Width
- Milling Speed
- Milling Guide Width
- Nipper Width
- Nipper Height
- Nipping Delay Time
- Nipping Time
- Spine Glue Cut Off
- Spine Glue Amount
- First Glue Roller Height
- Second Glue Roller Height
- Scrape Roller Height
- Side Glue Width
- Side Glue Amount
- Side Glue Cut Off
- Registering Scoring Roller
- Adjustable Scoring Roller
- Delivery Guides

System features various functions to improve production and quality.

1 Book Feeding Section



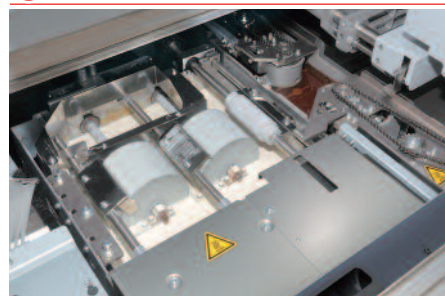
A rigid clamping system holds the book block firmly in position during the milling and nipping process to produce a quality finished book. The safety beam ensures risk-free operation.

2 Milling Section



Powerful servo motor driven milling and notching mechanism mills the spine of a book block or signature for optimum glue penetration and adhesion. Milling rotation speed can be adjusted automatically according to book thickness and custom template. Milling depth can be adjusted from 0 to 4 mm or 0" to 0.157".

3 Glue Tank Section



Dual application rollers and side gluing rollers ensure superior glue application to the spine and excellent adhesion of the cover for consistent quality binding. Glue roller height, wiper opening and cut-off timing, scraper roller height, and side glue roller width are automated.



4 Nipping Section



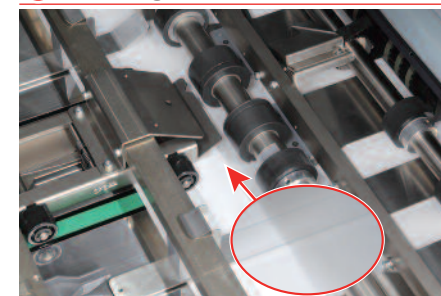
A strong rigid nipping mechanism and positive jogging guarantees precise alignment of the cover to the book block and square spines. Nipping width, height, operating time and delay time are adjusted automatically according to book thickness.

5 Cover Registration Section



After transport to the nipping section, the cover is registered precisely with the fore-edge guide and tail edge positioner.

6 Scoring Section



The scoring width and position are automatically set-up according to book block thickness and cover registration. Scoring is performed on thick covers for professional binding with sharp, square spines and hinge scores.

7 Cover Feeding Section



The high capacity cover feed station has a maximum pile height of 150 mm or 5.9" for continuous binding operation. The cover feeder can handle a wide range of covers: Bond Paper 81.4 to 302.4 gsm Coated Paper 104.7 to 348.9 gsm

8 Book Delivery Section



Uniquely designed delivery eliminate damage to the spine. Even 65 mm or 2.56" thickness books or PUR bound books can be delivered without damage or marking.

■ Delivery Conveyor Section



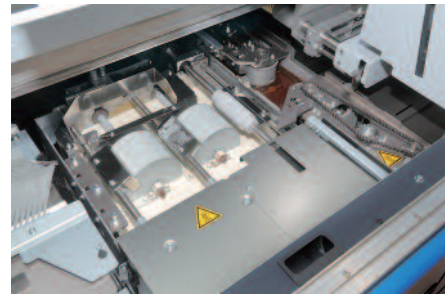
Delivery conveyor to lift the books to a comfortable height for easy off-loading and handling.

PUR Tank and EVA Tank

The BQ-480 incorporates a precision PUR binding station and features an interchangeable glue tank, for both EVA and PUR adhesives.

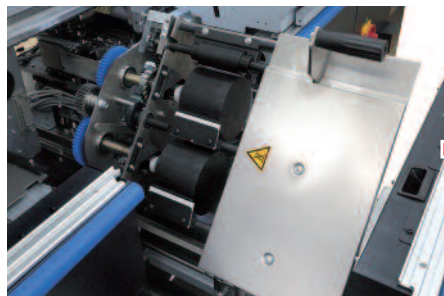


PUR
MU-480PUR
Polyurethane reactive adhesive suitable for coated stock. Lay-flat binding can be performed.



EVA
MU-480EVA
Commonly used for many types of binding. The melted glue can be used repeatedly so there's no need to clean the tank after operation.

Cleaning and Replacement of MU-480PUR



The application drums and back spinner lift and latch to provide easy access for cleaning of the tank.



Install the special drain for glue run-off. The PUR tank and drums are teflon coated so that the remaining glue can be easily peeled off after cooling.



Sliding rail glue tank for easy replacement. Pull out the tank and remove it with the optional lifting trolley.

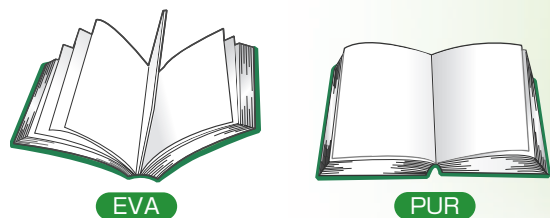
Strong, Environmentally Friendly PUR Solution

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

Strong and Flexible Binding

As printing methods become more varied, there is growing demand for binding with coated and digitally printed sheets. EVA hotmelt glue has difficulty binding coated stock firmly, and does not currently provide good spine flexibility and lay-back qualities. However, PUR hotmelt glue can provide adequate binding strength and a lay-flat quality for both offset and digital print on a wide range of paper stocks.*1

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 flatter when the book is opened.*1



(*1: Depends on the binding conditions.)

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 45 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.

Book of one production.

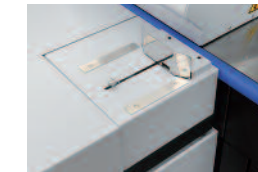
Book of one, variable thickness book production capability is a standard feature of the BQ-480. The system maintains a high production speed even with book of one production.

Variable production speed :

5 mm changeover	800 cycle per hour
30 mm changeover	660 cycles per hour
65 mm changeover	500 cycles per hour

Book Thickness Input Caliper SI-470A

The SI-470A is used to measure the book block thickness and transfer the thickness information for auto setting of all critical binding steps.



JDF Workflow Binding System for Digital Print Environments

pXnet System Options

Smart Binding System 

Book Binding System for Digital Print Environments

Since this system provides an efficient folding imposition for each finished size, you can utilize the sheets more effectively. The quick and accurate changeover is performed not only with the various thicknesses but also the various finished sizes. System can be enhanced with Horizon's workflow system pXnet for more efficient production.

Folder / Buckle Unit + Book Block Stacker

AFV-56/TV-56 + BBS-40

First, the printed sheet are folded by the AFV-56/TV-56. Then, the top and bottom of the signatures are spot glued by the BBS-40. The signature is efficiently transported to the next process by this configuration.

Perfect Binder

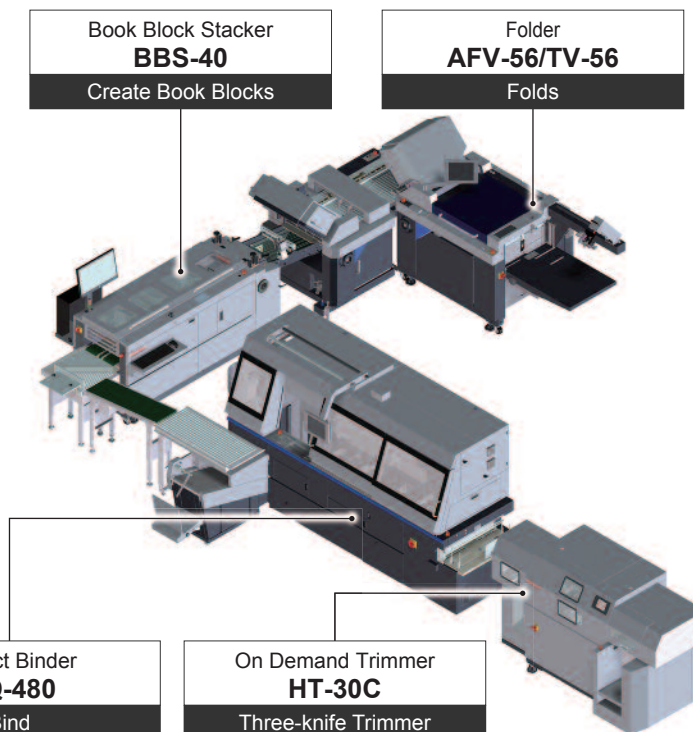
BQ-480

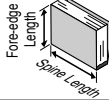
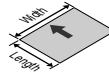
The signature which is spot-glued by the BBS-40 is inserted to the BQ-480 to bind it perfectly.

On Demand Trimmer

HT-30C

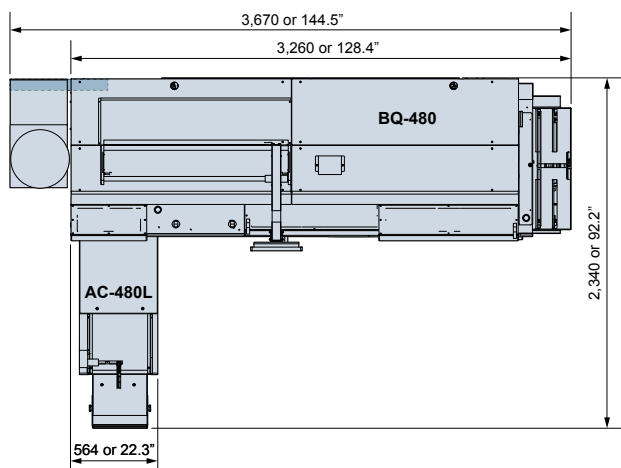
The bound book is trimmed by the HT-30C for the perfect finish.



BQ-480 Major Specifications	
Binding Type	Binding with milling, Binding without milling and Pad binding
Glue Type	EVA Glue or PUR Glue (Tank is optional)
Number of Carriage Clamps	4
Book Block Size	 Spine Length x Fore-edge Length Max. 320 x 320 mm or 12.59" x 12.59" Min. 145 x 105 mm or 5.71" x 4.14"
Book Block Thickness	Min. 1 mm or 0.04" Max. 65 mm or 2.56"
Cover Size	 Length x Width Max. 320 x 670 mm or 12.59" x 26.37" Min. 135 x 225 mm or 5.32" x 8.86"
Cover Weight Range	Bond Paper 81.4 to 302.4 gsm Coated Paper 104.7 to 348.9 gsm
Cover Stack Height	Max. 150 mm or 5.9"
Glue Temperature	Spine Glue Tank : EVA 150 to 200 °C or 302 to 392 °F Side Glue Tank : EVA 150 to 200 °C or 302 to 392 °F Spine Glue Tank : PUR 90 to 140 °C or 194 to 284 °F
Cycle Speed	Max. 1,350 cycles per hour (EVA) Max. 1,000 cycles per hour (PUR)
Voltage/Frequency	3-phase 200-208 V, 50 or 60 Hz 3-phase 400 V, 50 or 60 Hz The external transformer is necessary for 220 V or 400 V .
Machine Dimensions	Delivery Conveyor (long type), and milling blower duct: W3,620 x D2,340 x H2,000 mm or W144.5" x D92.2" x H78.8" Without delivery stacker and milling blower duct: W3,620 x D1,130 x H2,000 mm or W128.4 x D44.5" x H78.8"


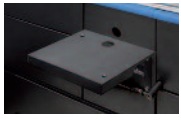


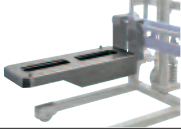




Machine Dimensions (Unit : mm or inch)

Height : 2,000 or 78.8"



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

Options

Support Table EBT-480	This extends the table on the book block feed section 90 mm or 3.54" to the front.	
Extra Table ET-480	This table is required to install the SI-470A. You can also use this table as a work table.	
PM-470 Premelt Tank (18 liter)	The PM-470 is the premelt tank for EVA hotmelt glue.	
Pre-melt Tank Connection Kit CN-480	This is required to connect the PM-470 with the BQ-480.	
L-470 Manual Simple Lifter	The L-470 is a hand lifter for easy and safe tank replacement.	
F-470 Fork for Lifter	The F-470 fork is a custom-fit attachment to the lifter that holds the glue tank firmly in position for easy and safe tank replacement.	
S-470 Stand for Melt Tank Unit	The S-470 stand is designed to receive and hold the glue tank unit after replacement.	
M-470 Glue Melting Heater	The M-470 is a laboratory oven used to premelt the PUR hotmelt glue.	
B-470 Teflon Coated Beaker	The B-470 teflon coated beaker can be used to premelt the PUR hotmelt glue to refill the glue tank.	
SI-470A Book Thickness Input Caliper	The SI-470A is a book thickness measuring and input device for further operation efficiency.	
Smoke Extractor VS-280	This deodorizes the smell of hotmelt glue.	
1D Code Reader BC-480-1D	This supports both 1D and 2D codes on the book block. But this supports 1D code only on the cover sheet.	
2D Code Reader BC-480-2D	This supports both 1D and 2D codes on both book block and cover sheet.	