

SMART-BINDER 'PLUS HS' FEATURES AND ADVANTAGES 200821



1) A True 24/7 Production System to give you maximum 'up-time':

With nearly **200 systems installed world-wide**, the Smart-binder has repeatedly proven itself to be a true 24/7 reliable, heavy-duty production system and is the most commonly used finishing system for high-speed digital web printers.

Many SB systems run continuously in 3-shift operation over many years and produce millions of booklets every month. No other digital saddle-stitcher has a comparable record of accomplishment.

2) Integrated Sheet and Book Tracking to ensure your book integrity:

The Smart-binder includes sophisticated **data tracking** for personalized booklets. The Smart-binder's integrated system of sensors and software permits accurate tracking of each sheet and booklet (competitive systems use 3rd-party tracking systems). Incomplete booklets are automatically rejected. Separately fed covers may be checked to ensure matching with inside sheets.

A detailed log file is created as the machine runs from which individual booklet data can be extracted. This is critical in production environments where each document must be tracked and accounted for.

The additional SDA-100 Smart-Data Analysis system provides machine performance data and assists reprinting of any rejected booklets. This is now supplied as standard with in-line version Smart-binders and is optional with near-line and off-line Smart-binders.

3) Guaranteed Book Quality:

The Smart-binder processes and **folds each sheet individually** (instead of in batches as with competitive systems) which ensures optimum possible book fold quality and lay-flat even when making books up to 8-10mm thick. The Smart-binder trimmer cuts all three edges for an optimum finish and a unique, patented device minimizes book corner tearing when trimming maximum thickness.

4) Bind-on-demand for book-by-book personalization, or short job runs:

Because the Smart-binder was designed to finish digitally-printed sheets, it can **vary book thickness on-the-run** without requiring any adjustment. The trimmer uses gravity-registration to allow it to process books with a constantly changing thickness. .

5) **Cover-To-Text Matching:**

The Smart-binder's integrated software provides the option for personalized cover-to-book text matching via barcode (or 2D Datamatrix) scanners mounted on the cover feeder and sheet infeed register table. The system may be set to stop automatically if an incorrect cover is fed.

6) **Multiple Configurations:**

The Smart-binder offers the greatest variety of possible **system configurations**. The SB-2 produces wire stitched booklets only. The SB-3 provides wire stitching and also ISG cold gluing. The SB-4 and SB-5 systems offer both saddle-binding (stitching and/or ISG gluing) and fully automated in-line perfect binding.

Every Smart-binder system may be configured to operate either in-line with the printer, near-line from a roll unwinder/sheeter or off-line from a sheet pile feeder. It is also possible to configure an SB system to be fed from a web cutter (in-line or near-line) and include a sheet feeder (SB-097) to allow off-line sheet feed.

7) **Enhanced Production Speeds give more booklets each shift:**

The new Smart-binder 'Plus' operates at up to **7,000 cycles per hour** making it the fastest such machine in its class. It can handle printer and unwinder web speeds up to **200 meters/min** (650 feet/minute).

8) **Unique ISG cold-glue binding for enhanced book quality:**

The Smart-binder's unique and patented ISG cold glue binding option applies a line of cold glue dots to the fold on each sheet. Cold-glued books are stronger and lay flatter compared with wire-stapled books. Quick changeover is available between stapling and gluing. See ISG data sheet attached for more details and full list of ISG benefits.

9) **Extended model Smart-binder -X and -W:**

The extended version SB-X is available to increase the maximum spine length from 320 mm (12.6") up to 457mm (18"). This enables **A5 portrait booklets to be produced in 2-up mode**.

The wider version SB-W is available to increase maximum book width from **230mm (9") up to 273mm (10.75")** 'spine to foredge' dimension (less front trim-off).

The extended SB-XW is available to give both the length and width format increases outlined above.

10) **Unique sheet buffer system:**

IBIS's sheet buffer system SBS-100 (for in-line connection to a web printer) allows sheet rate into the Smart-binder to be varied (or stopped for a short while) without changing the printer web speed, hence **increasing system running efficiency**.

11) **Customization to give you competitive advantage:**

The SB can be customized for a large **variety of applications**. We have connected to envelope inserters, stackers, folders, in-line booklet drills, knife folders, amongst many other optional modules. Additional modules can be added to the Smart-binder, including sheet pile feeders, cover and insert feeders, pile loading trolleys, trimmer center-knife, card and reply envelope tipping, dynamic sheet perforation, hole punching and much more. IBIS specialize in creating **customized systems** to meet each individual customer's needs by adapting and interfacing modules from other vendors and/or designing unique equipment solutions. We have many hundreds of man-years experience in putting together 'tailored' finishing systems.

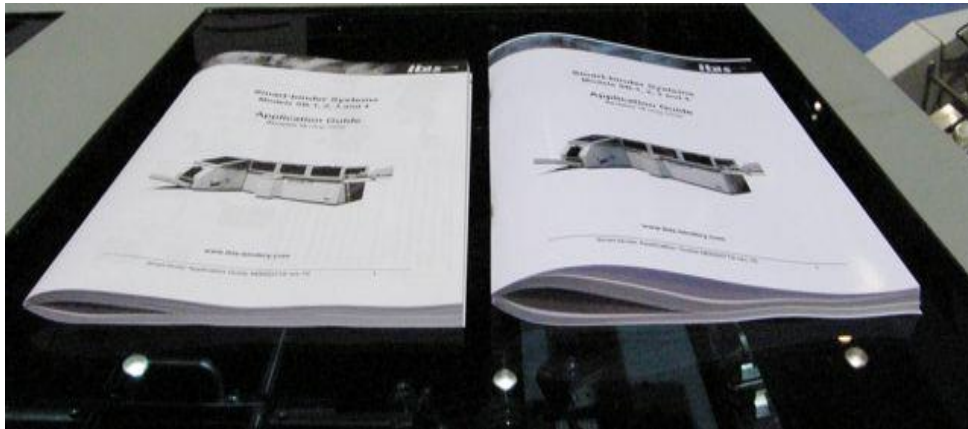
12) Ease of use and maintenance:

The machine is **easy to operate**, has good access and visibility of the paper path, and is easy and economical to maintain.

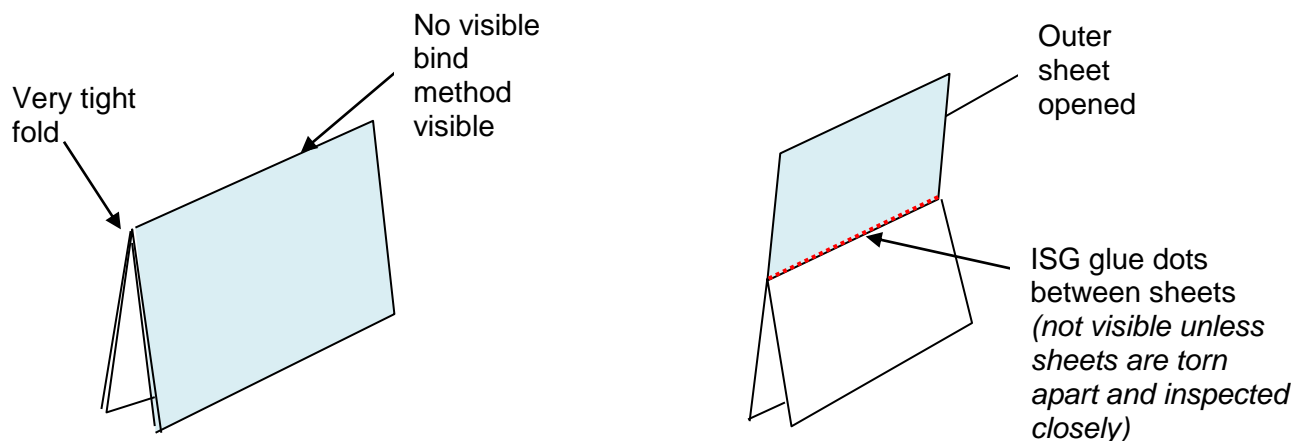
13) Compact Footprint: The IBIS Smart-binder's compact overall system footprint permits easy installation and operation in small digital printing areas.

Data sheet: ISG-100 cold gluing

IBIS's unique 'ISG cold-gluing' produces a "stitchless" book which has better lay-flat qualities than a wire-stitched booklet. The photo below illustrates the difference in appearance between a booklet made with ISG cold-glue (on the left) and a conventionally stitched booklet.

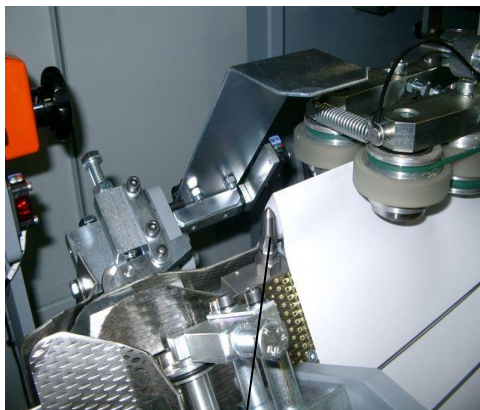


The ISG cold-glue 'nozzle' applies a row of cold-glue 'dots' (or a continuous glue line) to the inside of each folded sheet as it passes through the Smart-binder folder. Sheets are then collected on top of each other (on the saddle) and pressed together tightly when they reach the stitching station (the stitching heads are inhibited when cold gluing, or replaced with a pressing 'anvil').



The many advantages of ISG cold gluing over conventional wire stapling include: -

- ISG glue gives **higher page pull strength** on the outer and inner sheets
- *Note that the paper bond strength when using ISG gluing is linked to the integrity of the paper surface. Higher strength results from more absorbent papers. Certain toners may weaken the bond strength if applied to the same area as the ISG glue (the sheet fold).*
- **ISG gluing results in a tighter fold**, particularly on thicker books. This is because wire stapling tends to 'open up' the book and the moisture in the cold glue softens the paper fibers and helps give a tighter 'set' to the fold.
- ISG gluing allows the **number of pages in the book to be changed** between minimum and maximum on-the-run without any adjustment (wire stitching requires stitch head pressure adjustments)
- ISG gluing allows the **book format size to be changed** without adjustment (wire stitch heads may have to be moved to a different position when changing book lengths).
- The ISG cold-glue is a "**maintenance-free**" system, which is easy to operate than wire stitch heads.
- Cold-glued books can be **recycled** more easily than books containing wire staples.
- Glue binding avoids any **child safety** (finger damage) issues relating to the edges of wire staples.
- Glued books can sometimes be **mailed directly**, unlike wire-stapled books.
- ISG cold glue costs approximately the same in consumable **material costs** (on a 'per book' basis) as wire stitches (and much less than hot-melt EVA adhesives used for conventional 'perfect-binding').



ISG Cold-Glue application nozzle on the Smart-binder

**Thick-book cross-section comparisons:
Wire-stitching vs. ISG cold-gluing**

