How to Print Barcodes

IBIS Smart Binders – Since 1999

IBIS, founded in the United Kingdom in 1999, is a world-leading supplier of high-speed digital book finishing systems. The IBIS Smart Binder 'Plus HS' can produce personalized, variable page-count wire-stitched (SB-2) or cold-glued (SB-3). These systems are used around the world to produce personalized booklets for schools, health care, insurance, financial, government, and many other applications. Notable installations include RR Donnelley, O'Neil Digital Solutions, Pearson Educational, Broadridge, and Liturgical Publications.

When printing sheets for the Smart Binder to process there are a list of things to take into account. This includes sheet sequencing, sheet quality, codes, bar codes, and code positioning. The following information will help guide you in the process.

Sheet Sequencing

Sheet sequence for in-line operation:
The first sheet to be printed should be the center sheet of the booklet

Sheet sequence for near-line operation (self-cover):
The first sheet to be printed will be the last sheet to come off the roll when used to feed the Smart Binder. Therefore, the first sheet printed should be the outside cover sheet of the booklet.

Sheet Sequence of off-line operation:
The Sheet Feeder feeds off the top of the pile, so the top sheet must be the center sheet of the booklet.

Codes For Each Sheet

Every sheet requires a bar code or a 2D Datamatrix code. Each code will contain at least 8 digits. Digits 1 and 2 must show the number of the sheet in the booklet. Digits 3 and 4 must show the total number of sheets in the booklet. Digits 5-8 should be all zeros assuming that no further data needs to be contained in the code.

Additional digits may be used to automatically control certain special Smart Binder functions if needed. For example, digits may be added to show a job number or booklet ID number.

If feeding a personalized cover from the Cover Feeder, then the cover will also need a printed code with the same ID number as the printed sheets inside. The Smart Binder will stop automatically if the cover ID number does not match the sheet ID number.

2D Code Examples

Datamatrix – 2D code is a compact way of encoding alphanumeric data. It can contain hundreds of characters.

QR – Similar to Datamatrix, it is used to encode URL's that can scan with your phone.

Quiet Zone Requirement – 2D codes require a quiet zone of at least 1 cell width all round which is why they cannot print up to the edge of the sheet.

Other Barcode Options

ITF – Industrial 2of5, numeric characters only (0-9), encoded in pairs so there must be an even number.

CODE39 – Alphanumeric characters, however, it takes up more space because it codes more characters.

CODE128 – Has numeric only and alphanumeric forms, the reader automatically detects the correct type, the numeric form is compact like ITF.

Quiet Zone Requirement – Linear bar codes should have 0.19" of clear paper at either end of the code.

Code Positioning

Code position when feeding from a web cutter:
The bar code or 2D code on each sheet needs to start at least 6.7" from the leading edge of the sheet. This bar code should be very close to the right edge of the sheet and facing upwards as the sheet feeds into the Smart Binder.

Code position when running off-line:
Each sheet needs to have a bar code printed on it which is positioned at least 3.15" from the leading edge of the sheet. It should also be 0.08" from the right edge of the sheet and facing upwards as the sheets feed into the Smart Binder.

Image Creep on Thick Books

When producing saddle stitched or ISG-glued books, the thickness of the spine causes the outer sheets to appear shorter than the inner sheets when looking at the front edge of the untrimmed books. The Smart Binder trims this edge to create a square edge to the book. Unless this effect is taken into account when positioning the pages of the book, the print on the inner pages will not line up.