STANDARD PAPER SIZES

The A, B, C series of paper sizes (which include the well known A4 size: 210 x 297 mm) are the only international standards on paper sizes. Evolved in Germany in 1939, it has been accepted by most countries of the world, including India which accepted it in 1957.

It is a scientific standard and is based on the geometric principle that, if a rectangle has its ratio of sides as \( \sqrt{2} \), successive division of this rectangle at the middle of the length gives rectangles half the previous size (area) but retaining the side ratio of \( \sqrt{2} \) (Fig. 53.1).

As regards the actual rectangle, the size starts with taking one square metre and determining the sides satisfying the \( l/b \) ratio of \( \sqrt{2} \). These work out as 841 (b) x 1189 (l) mm, the corresponding rectangle being designated as the A0 size. Successive sizes from A0 to A10 (constituting the A-series) are obtained by successively halving the previous size at mid-length. These sizes are entered in Table 53.1 together with their areas and their common uses.

53.1 Supplementary sizes

The standard is not complete with the A sizes alone. Two supplementary sizes – under the B and C series – have been defined, mainly for supporting the A sizes, such as for envelopes, brief cases, etc. In fact the advantages of the A sizes are incomplete without the use of the corresponding B and C sizes in conjunction with them.

The B sizes are the mean (mean length and mean width – see Fig. 53.2) of the adjacent A sizes, while the C sizes are the mean of the B sizes and the following A sizes. Since they serve the lower A sizes, they are designated by the number of the lower A size. What is amazingly interesting is the fact that, like the A series, all the sizes in the C and B series also individually maintain the side ratio of \( \sqrt{2} \), besides the area ratio of 2. (The first of these results is proved by the common diagonal of Fig. 53.2.)

53.2 Use of the supplementary sizes

Between them the C size serves the lower A size, whereas the B size serves the lower A and C sizes. Some uses of these sizes are indicated in the following.

(1) C-Series (serving the lower A size) - envelopes, files, cartons

(2) B-Series (serving the lower A and C sizes) – book racks and shelves, drawing tables, notice boards, office desks, filing cabinet pockets, brief cases, school bags

Example: A4 paper in C4 file/envelope, in B4 filing cabinet pocket/brief case
Kurian (2005: App. H) explains the full details pertaining to these standards, and the great advantages one stands to gain in adhering, to which the reader’s keen attention is invited.

The Appendix cited also provides a Table (Table 1) which covers all sizes under the A, B and C Series, with the C and B sizes juxtaposed with the A sizes for the convenience of reference.

53.3 Concluding remarks

Most countries of the world have adopted SI Units and the International Standards on Paper Sizes, with the notable exception of U.S.A. who profess to be in the forefront of all advancements in science and technology!. It is indeed regrettable that they still continue to use 'inch', 'foot', 'mile', 'pound', etc. on the units side and the so called 'bond size' (8 ½ x 11 in.) for writing paper, when the rest of the world is completely won over to the A4 size and metric (SI) units!!

Units and Standards contribute to uniting people. USA’s claim to world leadership will continue to ring hollow until they fully switch over to these units and standards, like the rest of the world who have already done so, and are enjoying the benefits thereof.