



PIGGOTT BLACK BEAR
MAGAZINE + PROMOTIONAL
PRINTERS

This document is a brief guide to the most commonly encountered paper sizes for print. It is intended to be relevant mainly for Britain and Europe.

'A' sizes

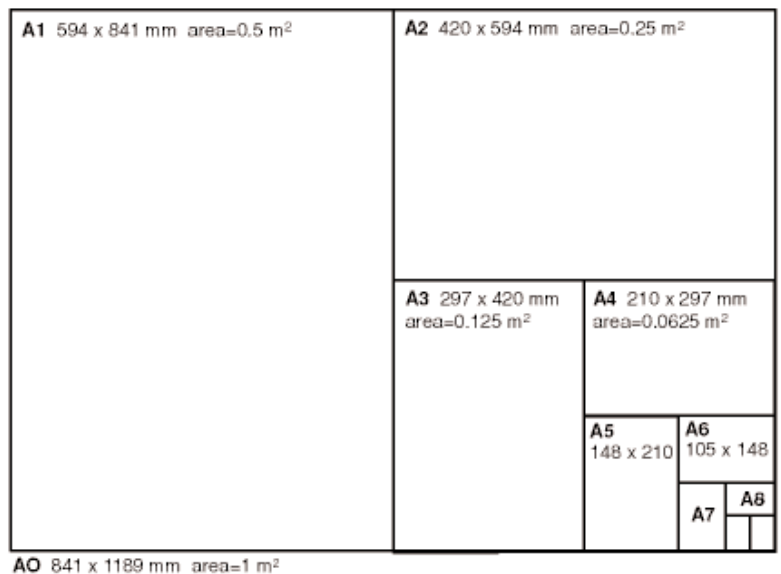
In Britain and Europe metric ISO 'A' sizes are the most common. The starting point is an 'A0' sheet with an area of one square metre. Folding this sheet in half results in an 'A1' sheet, folding an 'A1' sheet in half gives an 'A2' sheet, and so on. Because the height and width are in the ratio one to the square root of two the proportion of the sheets remains the same. This feature makes it very simple to adapt one design for several different purposes (for example a postcard, leaflet and poster).

Because 'A' sizes are so widely used 'A' size paper is relatively cheap and many machines are optimised for handling them, so 'A' sizes are often the most cost-effective option.

Size	Dimensions
A0	841 mm x 1189 mm
A1	594 mm x 841 mm
A2	420 mm x 594 mm
A3	297 mm x 420 mm
A4	210 mm x 297 mm
A5	148 mm* x 210 mm
A6	148 mm x 105 mm
A7	105 mm x 74 mm

(*often set to 148.5 mm wide)

Here is the same information as a diagram:



Another commonly used size based on the 'A' size system is one third of 'A4' (99 x 210 mm). Two thirds of 'A4' (198 x 210 mm) is also sometimes used as is the square size 210 x 210mm. There is also 'A00' (or '2A') at 1189 x 1682 mm.

Oversize 'RA' and 'SRA' sizes

Printing presses cannot print right to the edge of a sheet because the excess ink build up would cause problems. Most printers use oversized sheets which are later trimmed down to the finished size.

There are several reasons for having this extra space.

It is used for trim, register and colour control marks and where images print to the edge of a document they should continue off the trim area to form a 'bleed' (the standard is 3mm). Where several pages (e.g. of a book) are arranged together on one sheet 'gutters' may be required between pages to allow for folding and trimming. Additionally, about 6-12mm is generally required on one long edge for the 'grippers' which hold the paper as it passes through the machine; this area cannot be printed on at all.

The 'RA' sizes are slightly larger than 'A' sizes but do not generally allow enough space for bleed or colour control marks. Although 'RA' sizes are sometimes used for books, 'SRA' sizes, which allow even more extra space, are much more widely encountered. 'SRA2' (450 x 640 mm) is probably the most commonly used paper size in Britain (because of this it is usually relatively cheap), while 'SRA1' (640 x 900 mm) and 'SRA3' (320 x 450 mm) are also common.

Some speciality papers, particularly those from the US, may be supplied in slightly different large sheet sizes. For large orders it may be possible to have a custom sheet size made by the paper mill. Some long-run print jobs may be printed on 'web' presses; these do not print onto sheets of paper but onto rolls.

'B' sizes

The 'B' sizes are designed to be intermediate between the 'A' sizes; their sides are in the same ratio and they are scaled in the same way. They are less frequently used, but can be very useful.

Size	Dimensions
B0	1000 mm x 1414 mm
B1	707 mm x 1000 mm
B2	500 mm x 707 mm
B3	353 mm x 500 mm
B4	250 mm x 353 mm
B5	176 mm x 250 mm
B6	125 mm x 176 mm

'B1' or 'B2' presses are fairly widely installed and 'B5' is a particularly useful book size. The size specification of a notionally 'B5' book is often not strictly observed. Most 'B2' presses will print a maximum sheet size of 520 x 720 mm which is not really large enough to print eight full 'B5' pages with bleed and gutters. Slightly smaller page sizes such as 173 x 244 mm or 170 x 240 mm are often encountered.

'C' sizes and envelopes

The main use of the intermediate 'C' size is for envelopes: an 'A4' sheet will fit into a 'C4' envelope, an 'A6' sheet into a 'C6' envelope and so on.

Size	Dimensions
C0	917 mm x 1297 mm
C1	648 mm x 917 mm
C2	458 mm x 648 mm
C3	324 mm x 458 mm
C4	229 mm x 324 mm
C5	162 mm x 229 mm
C6	114 mm x 162 mm

Perhaps the most commonly encountered envelope size is 'DL' (220x110mm) which neatly fits a sheet of A4 stationery folded into three, or a one third A4 size leaflet.

Envelopes are available in a bewildering array of specifications. Those described as 'wallet' will open on the long edge, while 'banker' or 'pocket' envelopes open on the short edge. Envelopes are also available with address windows and with various self sealing systems.

It is sensible to check the availability of envelopes before using non-standard paper sizes. Many unusual sizes are produced but there is no guarantee that an envelope is available off-the-shelf to fit a particular size. Some sizes are only manufactured in manilla, with windows, or in banker format. For speciality papers off-the-shelf envelopes sizes are usually restricted or non-existent. It is usually possible to have an envelope made to any size by the paper manufacturer or a specialist, but the minimum order/charge can prove prohibitive for some projects.

British and US sizes

There are many British Standard paper sizes, whose dimensions are defined in inches, with evocative but puzzling names such as 'foolscap', 'post', 'pinched post', 'medium', 'royal', 'crown', 'quad crown' or 'double imperial'. Although these sizes do not preserve their proportions when folded down as 'A' or 'B' sizes do, they do conform to a system of sorts based on folding in half. When a book is printed on a large sheet of paper folded once it is described as a 'folio', when the sheet is folded again it becomes a 'quarto' with four leaves, then an 'octavo', then a '16mo' and so on.

'Foolscap' is one of the more common British sizes. This size is based on a large sheet of 13.5 x 17 inches, which as a folio becomes 13.5 x 8.5 inches, as a quarto 6.75 x 8.5 inches and as an octavo 6.75 x 4.25 inches. There is also 'double foolscap' at 17 x 27 inches.

Other British Standard sheets include 'large post' at 16.5 x 21 inches, 'demy' at 17.5 x 22.5 inches, 'royal' at 20 x 25 inches and 'double crown' at 20 x 30 inches to name but a few. With all the folio, quarto and octavo variants of these there are almost endless possibilities. To confuse matters further terms like 'foolscap' and 'quarto' are also used loosely to describe standard stationery sizes, now largely obsolete, while 'imperial' describes not only a paper size, but the system it is measured in.

Americans have a whole range of similar but, needless to say, different paper sizes measured in inches. Metric sizes and the metric system as a whole are much less commonly used in the US. However, because most publishing software is written by Americans it tends to use US paper sizes as defaults, so the rest of the world will be familiar with 'US letter' (8.5 x 11 inches), 'US legal' (8.5 x 14 inches) and 'tabloid' (11 x 17 inches).

Although for general printing these sizes have now largely been replaced by the standard metric sizes, they do survive in niche areas and are still used in book production. In part this is because large book presses and long-running series of books originated before metrication, but it is also because the dimensions and proportions of the 'A' size range are by no means ideal for book production. For example, 'A5' is often considered rather too wide in relation to its height to be visually pleasing and is slightly too wide to fit easily into the average pocket. The next size down is 'A6', which is too small for most books.

The quick application of a the ruler to your bookshelves will reveal a host of sizes, some obviously of British or US origin. Some of these common sizes are close enough to metric sizes to be easily printed on metric paper and presses; a size of about 138 x 213 mm is close enough to 'A5' for eight pages (even with bleeds at a pinch) to fit on an 'SRA2' sheet but is of more pleasing proportions, while 'US letter' and 'US quarto' can usually be printed four-up on 'SRA2'.

Calculating weights

A convenient feature of the 'A' size range is that the area of an 'A0' sheet is one square metre. Since the weight of paper is specified in grammes per square metre it is relatively easy to calculate the weight of an 'A' size document. For instance, 16 'A4' sheets make up one 'A0' sheet so 16 'A4' sheets (32 pages) printed on 100 gsm paper will weigh about 100 g (don't forget to divide the number of pages in half to get the number of sheets and to allow for binding materials). This is very useful when calculating potential weights for postage purposes.