
INTERNATIONAL STANDARD



216

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Writing paper and certain classes of printed matter — Trimmed sizes — A and B series

Papiers d'écriture et certaines catégories d'imprimés — Formats finis — Séries A et B

iTeh STANDARD PREVIEW

First edition — 1975-05-15

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[ISO 216:1975](#)

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UDC 676.232-416 (ISO)

Ref. No. ISO 216-1975 (E)

Descriptors : papers, writing papers, printed forms, dimensions.

Price based on 3 pages

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 6 has reviewed ISO Recommendation R 216 and found it suitable for transformation. International Standard ISO 216 therefore replaces ISO Recommendation R 216-1961 to which it is technically identical.

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ISO Recommendation R 216 was approved by the Member Bodies of the following countries :

Austria	India	Sweden
Belgium	Israel	Switzerland
Burma	Japan	Turkey
Chile	New Zealand	United Kingdom
Czechoslovakia	Norway	U.S.S.R.
Denmark	Poland	Yugoslavia
Germany	Portugal	
Greece	Romania	

The Member Bodies of the following countries expressed disapproval of the Recommendation on technical grounds :

France*
Ireland*

The Member Bodies of the following countries disapproved the transformation of ISO/R 216 into an International Standard :

Canada	Norway
Finland	U.S.A.
New Zealand	

* Subsequently, these Member Bodies approved the Recommendation.

Writing paper and certain classes of printed matter — Trimmed sizes — A and B series

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the trimmed sizes of writing paper and certain classes of printed matter.

It applies to trimmed sizes of paper for administrative, commercial and technical use, and also to certain classes of printed matter, such as forms, catalogues, etc.

It does not necessarily apply to newspapers, published books, posters or other special items which may be the subject of separate International Standards.

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2 REFERENCE

ISO/R 187, *Method for the conditioning of paper and board test samples.*

3 UNDERLYING PRINCIPLES

3.1 Basic principles (regularly derived sizes)

The system of paper sizes is built on the following basis : each normal series (regularly derived sizes) consists of a range of sizes formed in such a manner that each size is achieved by dividing the size immediately above it into two equal parts, the division being parallel to the shorter side (the halving principle). Consequently the areas of two successive sizes are in the ratio 2 : 1 (see figure 1).

All the sizes in each series are geometrically similar to one another (the principle of similarity) (see figure 2). This requirement, combined with that explained in the preceding paragraph, gives the following equation for the sides x and y of a given size (see figure 3) :

$$y : x = \sqrt{2} : 1 = 1,414 \quad \dots (1)$$

In other words, the ratio between the sides x and y is equal to the ratio between the side and the diagonal of a square.

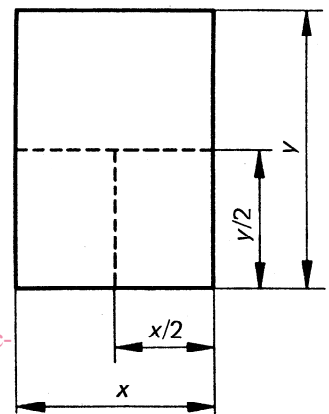


FIGURE 1

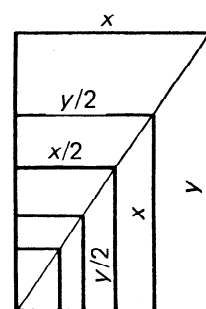


FIGURE 2

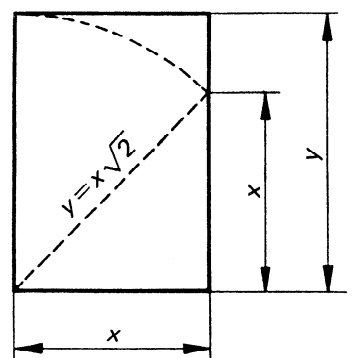


FIGURE 3

3.2 System of measurement

These sizes are based on the metric system of measurement.

3.3 Main series (ISO-A series)

The basic size of the A series (A0) has an area of 1 m²; the following equation therefore applies :

$$x \times y = 1 \text{ m}^2 \quad \dots (2)$$

The equations (1) and (2) give the following lengths of the sides for the basic size of the A series :

$$x = 0,841 \text{ m}$$

$$y = 1,189 \text{ m}$$

The main series of sizes is arrived at by taking the basic size described above and applying the principles explained in 3.1.

This series is designated : ISO-A series.

3.4 Subsidiary series (ISO-B series)

A subsidiary series of sizes is obtained by placing the geometrical means between adjacent sizes of the A series in sequence.

This series is designated : ISO-B series.

3.5 Long sizes (specially derived)

Long sizes are obtained by dividing any appropriate regularly derived sizes from the two series previously mentioned into 3, 4 or 8 equal parts, parallel with the shorter side, in such a manner that the ratio between the longer and the shorter side is greater than $\sqrt{2}$.

4 DESIGNATION OF TRIMMED SIZES

4.1 Each trimmed size in the main and the subsidiary series is designated by a letter followed by a number.

The letter (A or B) indicates the series of sizes, and the number indicates the number of divisions that have been made (according to the rules of 3.1) starting from the basic size, which has been given the number 0.

For example, size A4 corresponds to size A0 divided four times.

4.2 Trimmed long sizes are designated by the original size preceded by the fraction into which this has been divided.

For example, 1/4 A4 corresponds to the size A4 (210 mm X 297 mm), divided into four equal parts, parallel to the 210 mm side.

5 TRIMMED SIZES

5.1 Main series of trimmed sizes (ISO-A series)

The trimmed sizes of the A series are intended for all kinds of stationery and printed matter as specified in clause 1. These sizes are as follows* :

Designation	millimetres
A0	841 × 1 189
A1	594 × 841
A2	420 × 594
A3	297 × 420
A4	210 × 297
A5	148 × 210
A6	105 × 148
A7	74 × 105
A8	52 × 74
A9	37 × 52
A10	26 × 37

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* The rarely used sizes which follow also belong to this series :

4A0 : 1 682 mm × 2 378 mm
2A0 : 1 189 mm × 1 682 mm

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5.2 Subsidiary series of trimmed sizes (ISO-B series)

The trimmed sizes of the B series are intended for use only in exceptional circumstances, when sizes are needed intermediate between any two adjacent sizes of the A series.

These sizes are as follows :

Designation	millimetres
B0	1 000 × 1 414
B1	707 × 1 000
B2	500 × 707
B3	353 × 500
B4	250 × 353
B5	176 × 250
B6	125 × 176
B7	88 × 125
B8	62 × 88
B9	44 × 62
B10	31 × 44

5.3 ISO trimmed long sizes

As far as possible, trimmed long sizes shall be produced from the regularly derived sizes of the A series.

They are used for labels, tickets and certain other purposes.

Examples :

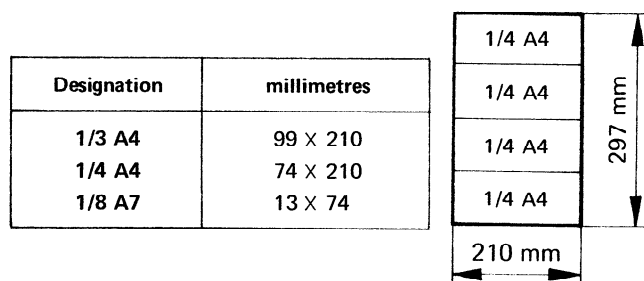


FIGURE 4

6 TOLERANCES

6.1 Unless closer tolerances are specified at the time of ordering, the permissible tolerances on the above dimensions are as follows :

a) for dimensions up to and including 150 mm :

upper deviation + 1,5 mm
lower deviation - 1,5 mm

b) for dimensions greater than 150 mm and up to and including 600 mm :

upper deviation + 2 mm
lower deviation - 2 mm

c) for dimensions greater than 600 mm :

upper deviation + 3 mm
lower deviation - 3 mm

6.2 The dimensions shall be measured under standard testing conditions, as specified in ISO/R 187.

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ANNEX

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EXAMPLES OF USE OF ISO SIZES

Size A3

This size, flat or folded to size A4, is intended for large tables, charts or diagrams for official or commercial use, when size A4 is found to be too small.

Size A4

This size is primarily intended for use as the standard size for paper for correspondence and for printed matter for official or commercial use.

It is further intended as the principal standard size for forms, catalogues, etc.

Size A5

This size is intended for similar purposes to the A4 size, when this is found to be too large.

Size A6

This size is intended for picture postcards and letter-cards.

It may also be suitable for similar purposes to those described under A4 and A5, when these sizes are found to be too large.

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