

Revised

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Transparent A6 size microfiche of variable division — Image arrangements A and B

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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.

International Standard ISO 2708 was drawn up by Technical Committee ISO/TC 46, *Documentation*, and circulated to the Member Bodies in April 1972.

It has been approved by the Member Bodies of the following countries :

Belgium	France	Sweden
Brazil	Hungary	Thailand
Canada	India	Turkey
Czechoslovakia	Israel	United Kingdom
Denmark	Netherlands	U.S.A.
Egypt, Arab Rep. of	Romania	
Finland	South Africa, Rep. of	

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

Austria
Italy
Poland
Switzerland

Transparent A6 size microfiche of variable division – Image arrangements A and B

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the characteristics of two image areas for a transparent A6 size microfiche, and their division into a variable number of image frames adapted to the different sizes and other characteristics of documents for reproduction.

Transparent microfiches of variable division are used for the reproduction of documents of any type and size not exceeding 4 A0, including large size documents such as posters, newspapers and engineering drawings.

These microfiches are intended for international interchange of information and for micropublishing.

2 REFERENCES

ISO/R 216, *Trimmed sizes of writing paper and certain classes of printed matter.*

ISO/R 446, *Microcopies, legibility test – Description of the ISO [No.1] mire (ISO test object) and its use in photographic document reproduction.*

ISO . . ., *Method for determining the resolution obtained in microcopying – ISO No.2 mire (ISO test object).*¹⁾

3 PRINCIPLES AND APPLICATION OF THE TWO TYPES OF MICROFICHE

3.1 Image area A

The first method of dividing the microfiche into image areas, defined in 4.2, allows documents of any type, and of any size between sizes 4 A0 and A6, to be reproduced.

Since documents for reproduction, such as plans, written works and surveys, have sizes mostly similar to the series A sizes of ISO/R 216, a value very close to that of $\sqrt{2}$ (common to all the ISO A sizes) has been adopted for the ratio between the larger and smaller dimension of the microfiche images of all the proposed sizes, or "aspect ratio".

The different image sizes proposed are generally obtained by successive divisions into two equal parts of the total surface of the image available, which corresponds to a single image recorded on each microfiche. This method of division adheres to the above-mentioned value of "aspect ratio".

One of the sizes thus obtained by subdivision is the nearest to the current size of 35 mm microfilm images, which allows contact printing of microfiches using microfilm of this size.

3.2 Image area B

The second method of dividing the microfiche into image areas, also defined in 4.2, allows the reproduction of documents of any type from A0 to A6 with the same series of reduction ratios as those used for microcopying engineering drawings and technical office documents. The heading area above the image area is deeper than that with image area A.

4 DIMENSIONS OF MICROFICHE AND IMAGE AREAS

4.1 Size of microfiche

The overall size of the microfiche shall be :

$$105 \begin{matrix} 0 \\ - \\ 0,25 \end{matrix}^* \text{ mm} \times 148 \begin{matrix} 0 \\ - \\ 0,5 \end{matrix}^* \text{ mm}$$

4.2 Size of image areas

Two image areas may be used :

- image area A : 95 mm × 133 mm;
- image area B : 82,5 mm × 141 mm.

The image areas thus defined do not include the heading area.

1) In preparation.

* Manufacturing tolerances for raw film.

4.3 Lower and lateral margins

4.3.1 Lower margins

The lower margins shall have the following nominal widths :

- image area A : 0,5 mm;
- image area B : 4 mm.

4.3.2 Lateral margins

For each of the two image areas A and B the lateral margins shall have equal nominal widths.

5 HEADING LEGIBLE WITHOUT MAGNIFICATION

5.1 Depth of the fixed area for the heading

5.1.1 Image area A

The fixed area for the heading above the image area shall have a nominal depth of 9,5 mm.

5.1.2 Image area B

The fixed area for the heading above the image area shall have a depth of 16,5 mm, to which the lower and upper margins must be added, the nominal widths of which are 1 mm.

5.2 Characters of the heading, legible without magnification

So that the heading is easily legible without magnification, the characters of the heading in the area fixed for it shall have a minimum height of 1,2 mm, whether they are small letters or capitals, and the line spacing shall be at least 2 mm.

The reduction scale used for the heading shall be determined in such a way as to provide these minimum

dimensions, taking into account the corresponding dimensions of the characters of the machine used for printing the heading to be photographed.

6 REDUCTION SCALES AND FRAMES

6.1 Reduction scales

The reduction scales applicable to the two image areas A and B shall have the following nominal values, with a tolerance of $\begin{matrix} 0 \\ - 4\% \end{matrix}$.

These reduction ratios correspond to the standard sizes; in the cases of other sizes any other reduction ratios between 9 and 30 may be selected :

- image area A : 1 : 9 1 : 12,75 1 : 18 1 : 25,5
- image area B : 1 : 10,6 1 : 15 1 : 21,2 1 : 30

6.2 Division of image areas

Image areas A and B shall be sub-divided into frames in accordance with the specifications given in Tables 2 and 3.

7 AREAS FOR SUPPLEMENTARY HEADINGS

In a case where image area A is divided into at least four rows, the top row of image frames may be used completely to enlarge the area of the heading legible without magnification.

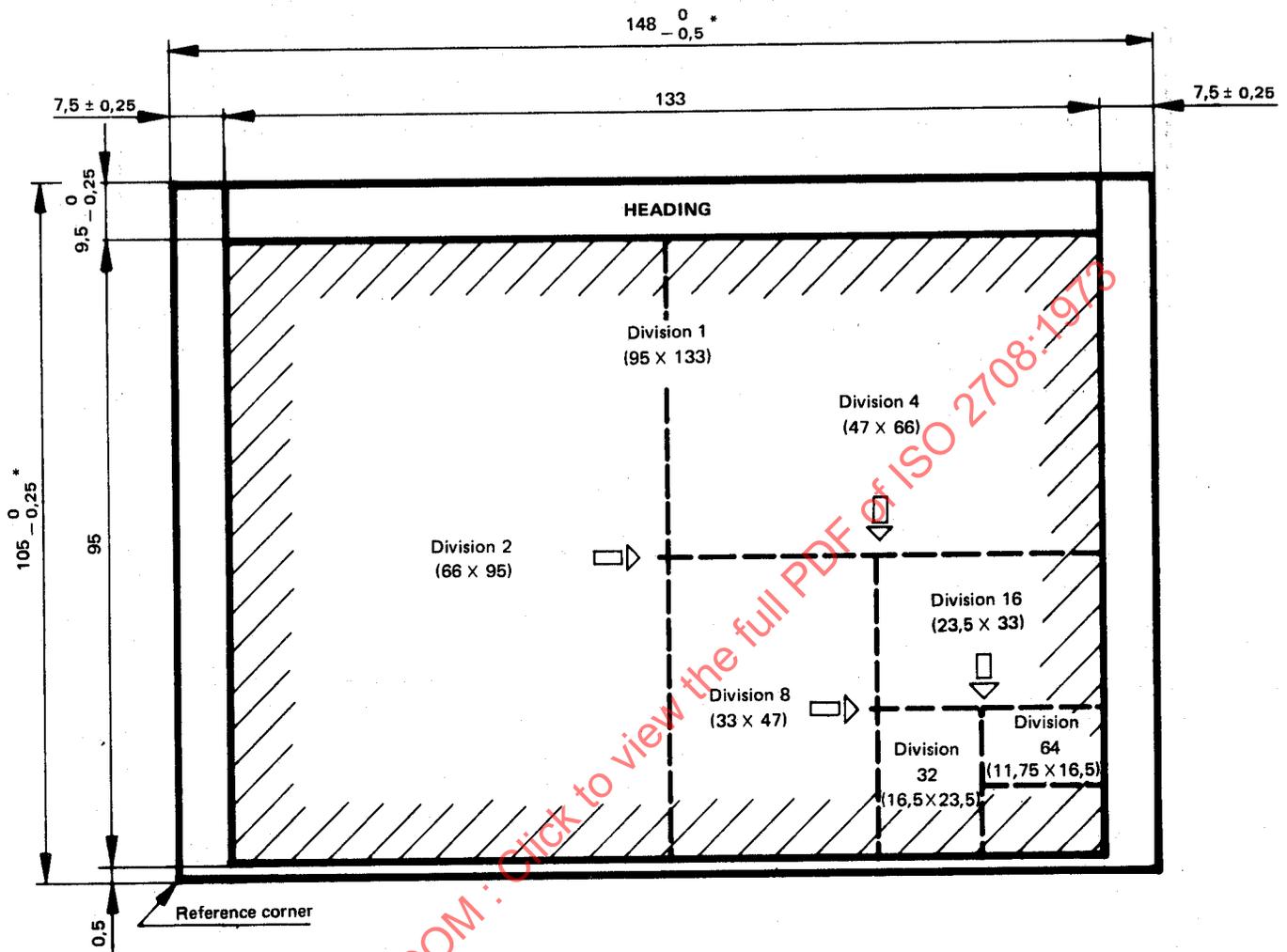
8 LEGIBILITY OR QUALITY OF MICROCOPIES

When a microcopy is examined as described in ISO/R 446 or ISO . . . , the characters or the patterns from a mire are to be legible on the microcopy if they have the sizes or the pattern numbers indicated in Table 1 for first and second generation or distribution microcopies; the latter is a microcopy from which a copy satisfying the quality requirements can be obtained.

TABLE 1 - Legibility or quality of microcopies

Reduction scale	ISO No. 1 Character size			ISO No. 2 Pattern number		
	1st generation	2nd generation	Distribution	1st generation	2nd generation	Distribution
1:30	90	100	112	4,5	4,0	3,6
1:25,5	80	90	100	5,0	4,5	4,0
1:21,2	70	80	90	5,6	5,0	4,5
1:18	63	70	80	6,3	5,6	5,0
1:15	56	63	70	7,1	6,3	5,6
1:12,75; 1:10,6; 1:9	45	50	56	9,0	8,0	7,1

Dimensions in millimetres



* Manufacturing tolerances for raw film

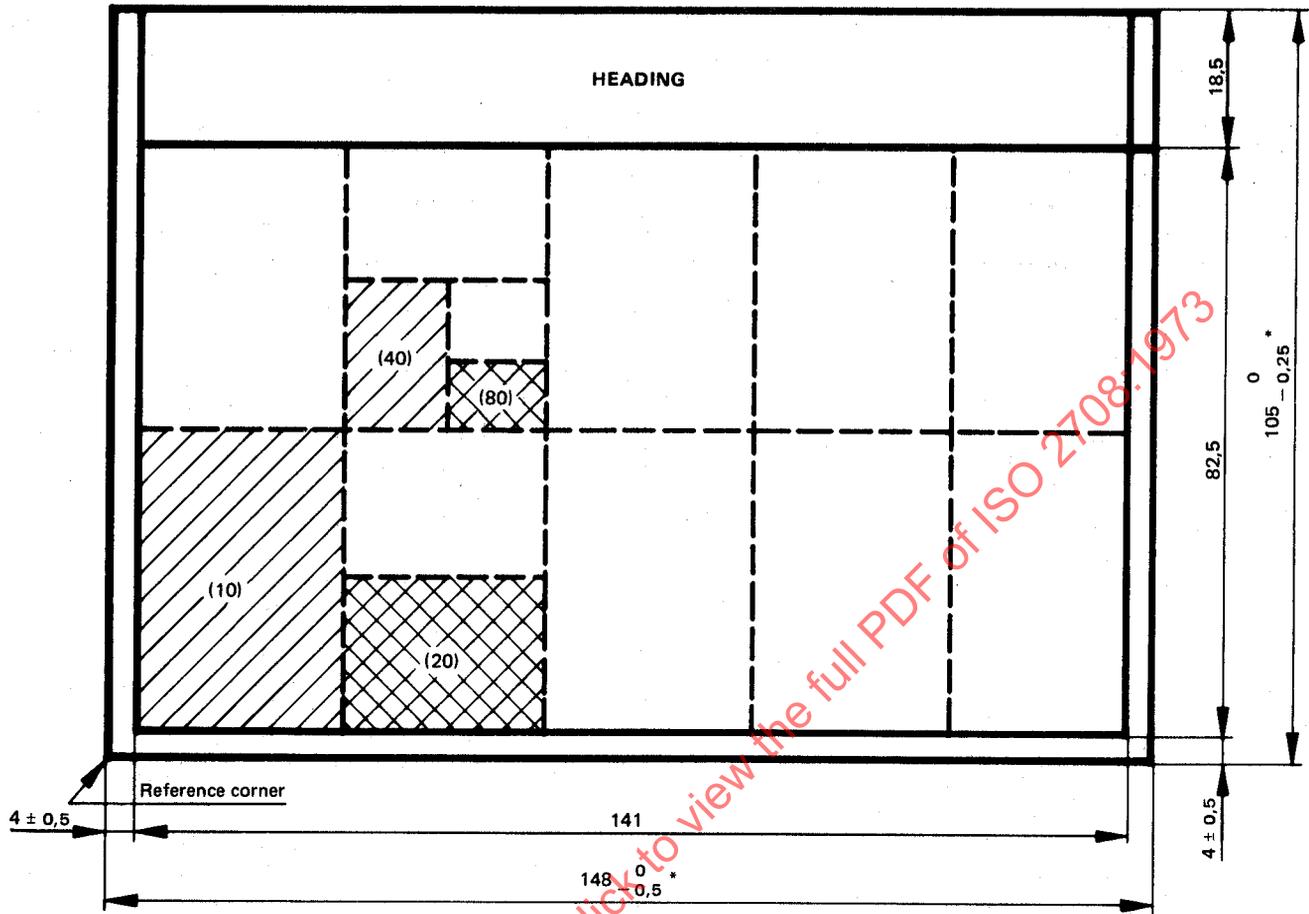
FIGURE 1 – Transparent A6 size microfiche of variable division, image arrangement A

TABLE 2 – Division of image area A (95 mm x 133 mm)

Dimensions in millimetres

Number of		Frame		Document sizes reproducible at different reduction scales				Corresponding A sizes
rows	columns	size	number	1:9	1:12,75	1:18	1:25,5	
1	1	95 x 133	1	855 x 1 188	1 211 x 1 684	1 710 x 2 376		A0 2A0 4A0
1	2	66 x 95	2	594 x 855	842 x 1 211	1 188 x 1 710	1 696 x 2 422	A1 A0 2A0 4A0
2	2	47 x 66	4	423 x 594	599 x 842	846 x 1 188	1 198 x 1 696	A2 A1 A0 2A0
2	4	33 x 47	8	297 x 423	421 x 599	594 x 846	842 x 1 198	A3 A2 A1 A0
4	4	23,5 x 33	16	212 x 297	300 x 421	423 x 594	599 x 842	A4 A3 A2 A1
4	8	16,5 x 23,5	32	148,5 x 212	210 x 300	297 x 423	421 x 599	A5 A4 A3 A2
8	8	11,75 x 16,5	64	106 x 148,5	150 x 210	212 x 297	297 x 421	A6 A5 A4 A3

Dimensions in millimetres



* Manufacturing tolerances for raw film

FIGURE 2 – Transparent A6 size microfiche of variable division, image arrangement B

TABLE 3 – Division of image area B (82,5 mm × 141 mm)

Dimensions in millimetres

Number of		Frame		Document sizes reproducible at different reduction scales				Corresponding A sizes
rows	columns	sizes	number	1:10,6	1:15	1:21,2	1:30	
2	5	28,2 × 41,25	10	298 × 437	423 × 619	597 × 874	846 × 1 236	A3 A2 A1 A0
4	5	20,6 × 28,2	20	218 × 298	309 × 423	436 × 597	618 × 846	A4 A3 A2 A1
5	6	16,5 × 23,5	30	174 × 249	247 × 352	349 × 498	495 × 705	A5 A4 A3 A2
4	10	14,1 × 20,6	40	149 × 218	211 × 309	298 × 436	423 × 618	A5 A4 A3 A2
5	12	11,75 × 16,5	60	124 × 174	176 × 247	249 × 349	352 × 495	A6 A5 A4 A3
8	10	10,3 × 14,1	80	109 × 149	154 × 211	218 × 298	309 × 423	A6 A5 A4 A3