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**INTERNATIONAL STANDARD**



**2784**

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

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## **Continuous forms used for information processing — Sizes and sprocket feed holes**

*Imprimés en continu employés en traitement de l'information — Dimensions et perforations d'entraînement*

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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 2784 was drawn up by Technical Committee ISO/TC 95, *Office machines*, and circulated to the Member Bodies in April 1972.

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

Czechoslovakia	Romania	United Kingdom
Egypt, Arab Rep. of	South Africa, Rep. of	U.S.A.
Finland	Spain	U.S.S.R.
France	Sweden	
Italy	Switzerland	

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

Canada  
Japan  
New Zealand

# Continuous forms used for information processing – Sizes and sprocket feed holes

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the sizes of continuous forms and the diameter and location of the sprocket feed holes. It applies to paper in continuous lengths intended for use with automatic data processing (ADP) equipment for print-out of documents for administrative, commercial and technical use.

The width sizes given in this International Standard are not applicable to paper intended for use on machines with non-adjustable pin-feed platens.

## 2 REFERENCES

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

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

## 3 BASIS FOR THE STANDARD

3.1 ISO/R 216 is adopted by many countries for general application. It is desirable that it should be taken into account also regarding continuous forms.

3.2 It is recognized that the predominant line spacing for high-speed printers used with ADP machines is 4,233 mm (1/6 in), the width-spacing is 2,54 mm (1/10 in), and the sprocket hole distances are 12,7 mm (1/2 in). These measurements are widely used also in other types of office machines.

3.3 Checking of dimensions specified in this International Standard shall be carried out after conditioning in accordance with ISO/R 187.

## 4 DEPTH SIZES

4.1 The depth of A4 (upright 297 mm) shall be the guideline for the depth of separated forms.

4.2 The depths given in table 1 shall be accepted as equivalent to the corresponding A-sizes as given in ISO/R 216.<sup>1)</sup>

TABLE 1

Depth		Corresponding ISO A-sizes	
mm	in	longer side of	shorter side of
76,2	3	A8	A7
101,6	4	A7	A6
152,4	6	A6	A5
203,2	8	A5	A4
304,8	12	A4	A3

4.3 The depth of 304,8 mm (12 in) shall be accepted in lieu of the depth of A4 in all cases where continuous forms are not to be separated. In other cases the depth of 304,8 mm shall be regarded as an untrimmed size which could, if so desired, be trimmed to the depth of A4.

4.4 In order to achieve directly sizes equivalent to those of the A-series given in ISO/R 216, the measurements given in table 2 may be used.

TABLE 2

Depth		Corresponding ISO A-sizes	
mm	in	longer side of	shorter side of
105,8	4 <sup>1</sup> / <sub>6</sub>	A7	A6
148,2	5 <sup>5</sup> / <sub>6</sub>	A6	A5
211,7	8 <sup>1</sup> / <sub>3</sub>	A5	A4
296,3	11 <sup>2</sup> / <sub>3</sub>	A4	A3

1) It is recognized that other depths are widely used in certain countries and that their use will continue during a transitional period.

5 WIDTH SIZES

5.1 The width sizes as set out in ISO/R 216 shall be regarded as width sizes for continuous forms after removal of sprocket hole margins.

5.2 The values given in table 3 are recommended for gross width sizes, i.e. sizes including sprocket hole margins.

TABLE 3

Gross width sizes	
mm	in
180	≈ 7.1
250	≈ 9.8
340	≈ 13.4
375	≈ 14.8
400	≈ 15.7
450	≈ 17.8

For special applications other gross widths may be required.

6 SPROCKET FEED HOLES

In this context a "centre line" shall be regarded as a vertical straight line between any two holes 254 mm (10 in) apart.

6.1 Continuous forms shall have sprocket feed holes in both the left-hand and the right-hand margins.

6.2 The "centre line" of the holes shall be parallel to the paper edges at a distance

$$A = 6,0 \pm 0,7 \text{ mm } (0.236 \pm 0.028 \text{ in}).$$

6.3 The diameter of the holes shall be

$$D = 4,0 \pm 0,1 \text{ mm } (0.156 \pm 0.004 \text{ in}).^{1)}$$

For holes with serrated or scalloped edges, the smallest diameter shall be  $D$  as above, and the largest diameter shall not exceed 4,5 mm (0.177 in).<sup>2)</sup>

6.4 The distance between the centres of two consecutive holes shall be

$$B = 12,7 \pm 0,05 \text{ mm } (0.500 \pm 0.002 \text{ in}).$$

1) Occasional larger sprocket holes not greater in diameter than 6,35 mm (0.25 in) are permitted provided they have a minimum vertical separation of 200 mm (7.98 in) within a single form.

2) For certain high-speed line printers, serrated sprocket holes may cause unsatisfactory performance when large width and low strength paper is used.

6.5 The cumulative tolerance of the distance between the centres of any two holes along a "centre line" within a distance of 254 mm (10 in) shall not exceed  $\pm 0,3 \text{ mm}$  (0.012 in).

6.6 The maximum permissible deviation of the holes from their "centre line" shall be

$$C = \text{max. } 0,1 \text{ mm } (0.004 \text{ in}).$$

6.7 The maximum permissible deviation of the corresponding left-hand and right-hand holes from a line drawn perpendicular to the left-hand "centre line" shall be

$$E = \text{max. } 0,15 \text{ mm } (0.006 \text{ in}).$$

6.8 The right-hand "centre line" shall be parallel to the left-hand "centre line" within 0,15 mm (0.006 in).

6.9 When carbon paper with sprocket holes is used, the sprocket holes of the carbon paper may have a diameter of more than 4,1 mm (0.161 in).

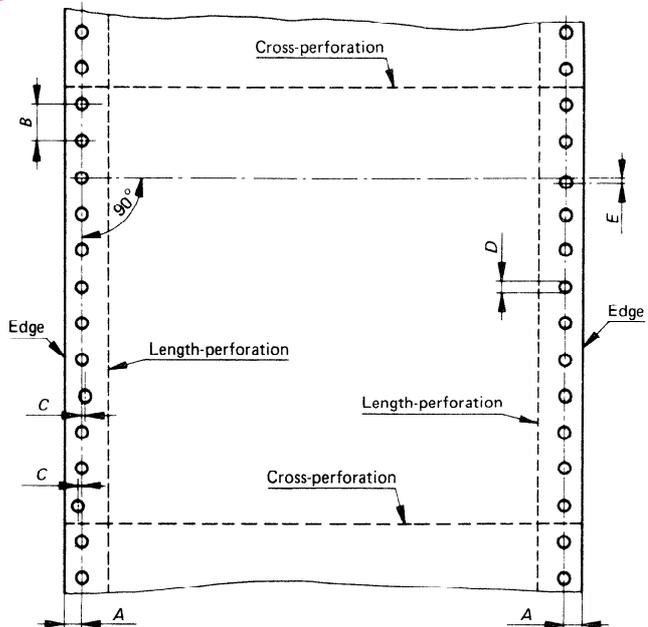


FIGURE – Sprocket feed holes

## ANNEX

## CHOICE OF THE RECOMMENDED WIDTHS

**A.1** During the investigations into this subject it was necessary to consider two factors in arriving at a practical solution for a range of preferred form widths :

- 1) ISO/R 216;
- 2) printer capacity (number of characters per line) of certain data processing line printers.

**A.2** It was also considered that as a general principle the overall widths should be rounded off to the nearest 5 mm. Furthermore account was taken of multilayer continuous forms requiring a larger margin for fastening.

For example :

- 1) The untrimmed form width of 250 mm has a total margin of 40 mm over the A4 trimmed width of

210 mm. A 20 mm margin on each side provides space to join the large number of copies frequently used in this form width.

- 2) The untrimmed form width of 450 mm has a total margin of 30 mm over the A3 trimmed width of 420 mm. A 15 mm margin on each side is sufficient for the smaller number of copies usually used for this form width.

**A.3** It should be observed that there is an interrelation between the various considerations shown in the table. The recommended widths in this International Standard take into account, as far as possible, considerations to arrive at a practical solution which inevitably does not reflect any true mathematical progression.

Gross width sizes	A-sizes in ISO/R 216				Printer capacity	
	Trimmed width	Longer side	Shorter side	Total width of sprocket margins	Number of characters spaced 2,54 mm (0.1 in)	Width
mm	mm			mm		mm
180	148	A6	A5	32	—	—
250	210	A5	A4	40	—	—
340	297	A4	A3	43	120	304,8
375	—	—	—	—	132	335,3
400	—	—	—	—	144	365,8
450	420	A3	—	30	160	406,4