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SIST EN 644:1996

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EUROPEAN STANDARD

EN 644:1993

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1993

UDC 676.2.017.22

Descriptors: Paper, sheets, designation, dimension, dimensional tolerances, making direction

English version

**Paper - Untrimmed sizes - Primary range and  
supplementary range designation and tolerances -  
Expression of direction of manufacture**

Papier - Formats bruts - Désignation et  
tolérance pour la série principale et la série  
complémentaire, et mode d'expression du sens de  
fabrication

Papier - Rohformate - Bestimmung der Grundreihe  
und der Ergänzungsreihe, Maschinenrichtung

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 172 "Pulp, paper and board", the secretariat of which is held by DIN.

This European Standard shall be given the status of National Standard, either by publication of an identical text or by endorsement, at the latest by april 1994, and conflicting National Standards shall be withdrawn at the latest by april 1994.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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## 1 Scope

This European Standard specifies a primary range and a supplementary range of untrimmed sizes for paper in sheets which are to be trimmed to the ISO-A Series of sizes as given in EN 20216:1990, and establishes a system of designation of untrimmed sizes.

This European Standard also specifies the method of expression of direction of manufacture of untrimmed sizes.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- EN 20187:1993 Paper, board and pulps - Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples
- ISO 478:1974 Paper - Untrimmed stock sizes for the ISO-A Series - ISO primary range
- ISO 593:1974 Paper - Untrimmed stock sizes for the ISO-A Series - ISO supplementary range
- EN 20216:1990 Writing paper and certain classes of printed matter - Trimmed sizes - A and B Series

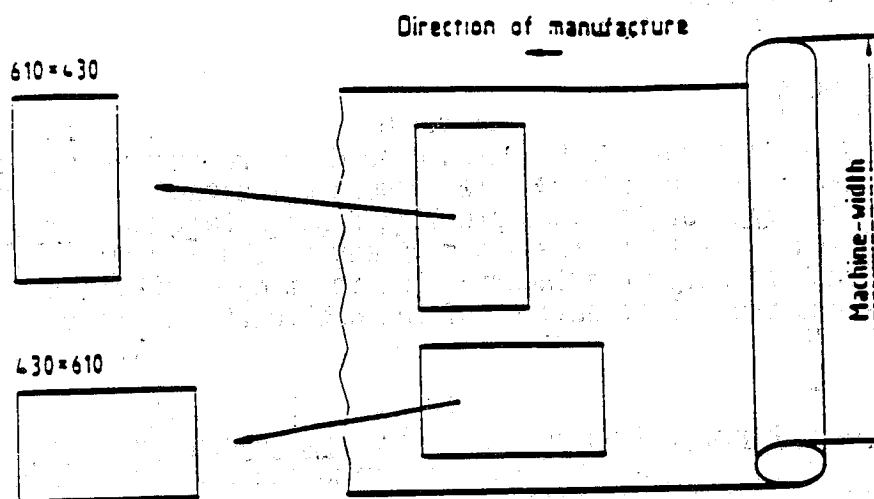
## 3 Definitions

For the purposes of this standard, the following definitions apply.

- 3.1 **untrimmed size:** Dimensions of a sheet of paper, sufficiently large to allow a trimmed size to be obtained from it as required.
- 3.2 **trimmed size:** The final dimensions of a sheet of paper according to the ISO-A Series as given in EN 20216:1990.
- 3.3 **primary range:** Untrimmed sizes which are intended to be trimmed to sizes of the ISO-A Series as given in EN 20216:1990 and which will be submitted only to simple conversion operations.
- 3.4 **supplementary range:** Untrimmed sizes which are intended to be trimmed to sizes of the ISO-A Series as given in EN 20216:1990 and which will be submitted to conversion operations requiring more trim than can be obtained from sizes of the primary range.

#### 4 Designation of size and direction of manufacture

The size shall be designated by its two dimensions, expressed in millimetres, e. g. 610 x 430, 430 x 610. The second dimension shall be that which is parallel to the direction of manufacture (grain direction), see figure 1.



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Figure 1: Designation of size and direction of manufacture

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#### 5 Size of sheets and direction of manufacture

##### 5.1 Primary Range (R) according to ISO 478:1974, clause 4

The size of sheets and direction of manufacture shall be as specified in table 1.

Table 1: Dimensions of primary range

Size of sheets		Dimensions in mm
Direction of manufacture parallel to the longer dimension	Direction of manufacture parallel to the smaller dimension	Corresponding ISO identification
860 x 1220	1220 x 860	RA0
610 x 860	860 x 610	RA1
430 x 610	610 x 430	RA2

## 5.2 Supplementary Range (SR) according to ISO 593:1974, clause 4

The size of sheets and direction of manufacture shall be as specified in table 2.

Table 2: Dimensions of supplementary range

Size of sheets		Dimensions in mm
Direction of manufacture parallel to the longer dimension	Direction of manufacture parallel to the smaller dimension	Corresponding ISO identification
900 x 1280	1280 x 900	SRA0
640 x 900	900 x 640	SRA1
450 x 640	640 x 450	SRA2

## 6 Tolerances

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The permissible deviations from the dimensions given in clauses 5.1 and 5.2 shall be in accordance with ISO 478:1974, clause 5:

$\pm 0,5\%$  rounded to the nearest millimetre;

nevertheless

- if  $0,5\%$  is greater than 5 mm, the maximum tolerance shall be limited to  $\pm 5$  mm;
- if  $0,5\%$  is less than 3 mm, a tolerance of  $\pm 3$  mm shall be accepted.

NOTE 1: The specified tolerances apply under the preferred atmosphere as specified in EN 20187:1993

NOTE 2: For the purpose of this European Standard, the tolerance for a given sheet size is the size range, outside of which, a sheet cannot be regarded as being of the given size.

NOTE 3: This tolerance is different to manufacturing or process tolerance. The process tolerance differs according to sheet usage and is likely to be more stringent than the range given within the standard. Manufacturing tolerances should be agreed individually between trading partners.