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**Paper — Untrimmed sizes —  
Designation and tolerances for  
primary and supplementary ranges,  
and indication of machine direction**

*Papier — Formats bruts — Désignation et tolérances pour la série principale et la série auxiliaire, et désignation du sens machine*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 217 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*.

This fourth edition cancels and replaces the third edition (ISO 217:2008), of which it constitutes a minor revision with the following changes:

in Clause 1, deletion of the references to ISO-A series and retention of references to ISO 216.

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# Paper — Untrimmed sizes — Designation and tolerances for primary and supplementary ranges, and indication of machine direction

## 1 Scope

This International Standard specifies a primary range and a supplementary range of untrimmed sizes of paper in sheets which are to be trimmed to sizes as given in ISO 216 and establishes a system of designation of untrimmed sizes.

This International Standard also specifies the method for the indication of machine direction of untrimmed sizes.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 187, *Paper, board and pulps — Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples*

ISO 216, *Writing paper and certain classes of printed matter — Trimmed sizes — A and B series, and indication of machine direction*

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## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### cross direction

##### CD

direction in the plane of a paper perpendicular to the machine direction

### 3.2

#### machine direction

##### MD

direction in the plane of a paper parallel to the machine direction

### 3.3

#### trimmed size

final dimensions of a sheet of paper in accordance with those given in ISO 216

### 3.4

#### untrimmed size

dimensions of a sheet of paper, sufficiently large to allow a trimmed size to be obtained from it as required

### 3.5

#### primary range

untrimmed sheets which are intended to be trimmed to sizes given in ISO 216 and which will be submitted only to simple conversion operations

**3.6  
supplementary range**

untrimmed sheets which are intended to be trimmed to sizes given in ISO 216 and which will be submitted to conversion operations requiring more trim than can be obtained from sizes of the primary range

**3.7  
long grain  
LG**

sheet having its longest sides parallel to the machine direction

**3.8  
short grain  
SG**

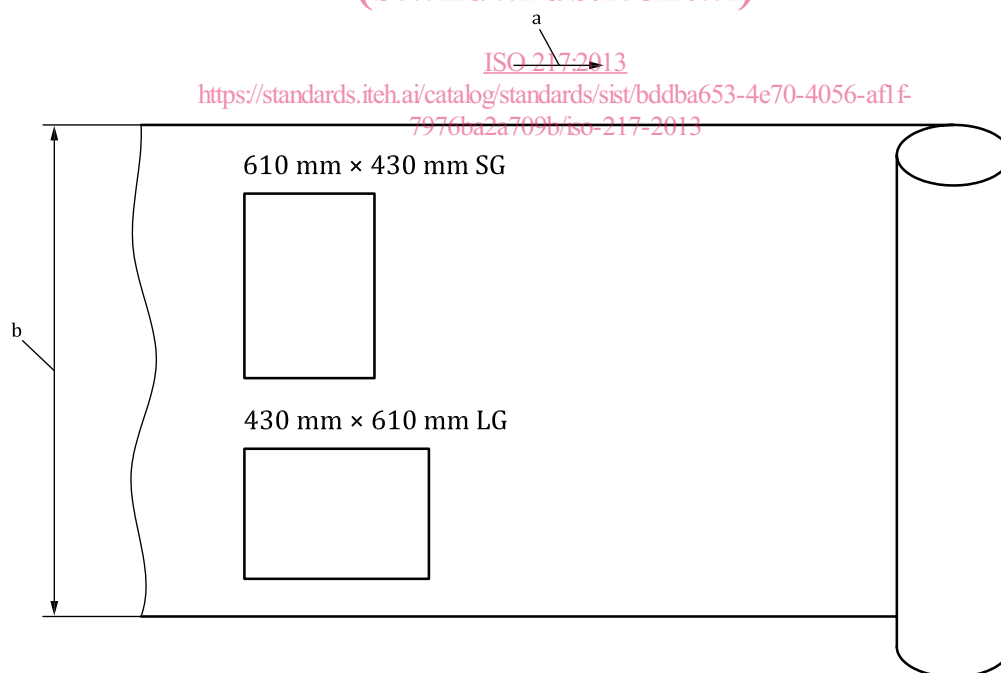
sheet having its shortest sides parallel to the machine direction

## 4 Designation of size and machine direction

The size of a sheet shall be designated by its two dimensions in millimetres. It may be followed by the letters LG (for long grain) or SG (for short grain).

The first dimension shall be the format side which is perpendicular to the machine direction, and the second dimension shall be the format side which is parallel to the machine direction. As a result, a long-grain sheet measuring 430 mm × 610 mm may be identified as 430 mm × 610 mm LG (see example in Figure 1).

Alternatively, the sheet may be described by its ISO size identification, followed by the letters SG or LG, as appropriate. For example, with reference to Table 1, a long-grain sheet measuring 430 mm × 610 mm shall be identified as RA2 LG.



**Key**

- a machine direction
- b cross direction

**Figure 1 — Example of designation of size and machine direction**

## 5 Size of standard untrimmed sheets and identification of machine direction

### 5.1 Primary range (R)

The size of sheets and machine direction shall be as specified in Table 1 for sheet sizes in the primary range. The machine direction for long-grain sheets is parallel to the longest sheet edge. For short-grain sheets, the machine direction is parallel to the shorter side.

**Table 1 — Specifications for primary range**

Designation of size and machine direction <sup>a</sup>	ISO 217 identification	Machine direction
860 mm × 1 220 mm LG	RA0 LG	Parallel to longer dimension
610 mm × 860 mm LG	RA1 LG	
430 mm × 610 mm LG	RA2 LG	
1 220 mm × 860 mm SG	RA0 SG	Parallel to shorter dimension
860 mm × 610 mm SG	RA1 SG	
610 mm × 430 mm SG	RA2 SG	

<sup>a</sup> Indicating LG and SG is optional.

### 5.2 Supplementary range (SR)

The size of sheets and machine direction shall be as specified in Table 2.

**Table 2 — Specifications for supplementary range**

Designation of size and machine direction <sup>a</sup>	ISO 217 identification	Machine direction
900 mm × 1 280 mm LG	SRA0 LG	Parallel to longer dimension
640 mm × 900 mm LG	SRA1 LG	
450 mm × 640 mm LG	SRA2 LG	
1 280 mm × 900 mm SG	SRA0 SG	Parallel to shorter dimension
900 mm × 640 mm SG	SRA1 SG	
640 mm × 450 mm SG	SRA2 SG	

<sup>a</sup> Indicating LG and SG is optional.

## 6 Tolerances

### 6.1 Permissible tolerances

For the purposes of this International Standard, the tolerance for a given sheet size is the range outside of which a sheet cannot be regarded as being of a given size. This tolerance differs from a manufacturing or process tolerance. The process tolerance depends on the sheet usage and is likely to be more stringent than the range given within this International Standard; manufacturing tolerances should be agreed individually between trading partners.

Unless closer tolerances are specified at the time of ordering, the permissible deviations from the dimensions given in 5.1 and 5.2 shall be  $\pm 0,5$  % rounded to the nearest millimetre; nevertheless,

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

## 6.2 Measurement conditions

The dimensions shall be measured under the standard atmosphere for testing, as specified in ISO 187.

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