

Technical drawings — Scales

The European Standard EN ISO 5455:1994 has the status of a British Standard

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee TDE/4, Engineering drawing practice, upon which the following bodies were represented:

Atomic Weapons Establishment
 British Gas plc
 British Standards Society
 Drawing Office Material Manufacturers' and Dealers' Association
 Electricity Association
 Gauge and Tool Makers' Association
 HEVAC Association
 Institution of Chemical Engineers
 Institution of Engineering Designers
 Power Generation Contractors' Association
 Society of British Aerospace Companies Ltd.
 University of Warwick

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 October 1995

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Amendments issued since publication

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National foreword

This British Standard has been prepared by Technical Committee TDE/4 and is the English language version of EN ISO 5455:1994 *Technical drawings — Scales*, published by the European Committee for Standardization (CEN). It is identical with ISO 5455:1979, published by the International Organization for Standardization (ISO).

This British Standard partially supersedes BS 308-1. It is envisaged that when the full range of European Standards on technical drawing is implemented BS 308 will be withdrawn.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN ISO title page, pages 2 and 3 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

ICS 01.100.10

Descriptors: Scale (ratio), designation, engineering drawings

English version

Technical drawings — Scales

(ISO 5455:1979)

Dessins techniques — Echelles
(ISO 5455:1979)

Technische Zeichnungen — Maßstäbe
(ISO 5455:1979)

This European Standard was approved by CEN on 1994-10-14. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

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

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Foreword

This European Standard was taken over by CEN from the work of ISO/TC 10, Technical drawings, product definition and related documentation, of the International Standards Organization (ISO).

The Technical Board had decided to submit the final draft for Formal Vote. The result was positive.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 1995, and conflicting national standards shall be withdrawn at the latest by April 1995.

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, United Kingdom.

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1 Scope and field of application

This International Standard specifies recommended scales and their designation for use on all technical drawings in any field of engineering.

2 Definitions

2.1 scale

ratio of the linear dimension of an element of an object as represented in the original drawing to the real linear dimension of the same element of the object itself

NOTE The scale of a print may be different from that of the original drawing.

2.2 full size

a scale with the ratio 1 : 1

2.3 enlargement scale

a scale where the ratio is larger than 1 : 1. It is said to be larger as its ratio increases

2.4 reduction scale

a scale where the ratio is smaller than 1 : 1. It is said to be smaller as its ratio decreases

3 Designation

The complete designation of a scale shall consist of the word "SCALE" (or its equivalent in the language used on the drawing) followed by the indication of its ratio, as follows:

- SCALE 1 : 1 for full size;
- SCALE X : 1 for enlargement scales;
- SCALE 1 : X for reduction scales.

If there is no likelihood of misunderstanding, the word "SCALE" may be omitted.

4 Inscription

4.1 The designation of the scale used on the drawing shall be inscribed in the title block of the drawing.

4.2 Where it is necessary to use more than one scale on a drawing, the main scale only shall be inscribed in the title block, and all other scales adjacent to the item reference number of the part concerned, or adjacent to the reference letter of a detail view (or section).

5 Scales

5.1 The recommended scales for use on technical drawings are specified in the following table.

Category	Recommended scales		
Enlargement scales	50 : 1	20 : 1	10 : 1
	5 : 1	2 : 1	
Full size	1 : 1		
Reduction scales	1 : 2	1 : 5	1 : 10
	1 : 20	1 : 50	1 : 100
	1 : 200	1 : 500	1 : 1 000
	1 : 2 000	1 : 5 000	1 : 10 000

NOTE If, for special applications, there is need for a larger enlargement scale or a smaller reduction scale than those shown in the table, the recommended range of scales may be extended in either direction, provided that the required scale be derived from a recommended scale by multiplying by whole number powers of 10. In exceptional cases where for functional reasons the recommended scales cannot be applied, intermediate scales may be chosen.

5.2 The scale to be chosen for a drawing will depend upon the complexity of the object to be depicted and the purpose of the representation.

In all cases, the selected scale shall be large enough to permit easy and clear interpretation of the information depicted.

The scale and the size of the object, in turn, will decide the size of the drawing.

5.3 Details that are too small for complete dimensioning in the main representation shall be shown adjacent to the main representation in a separate detail view (or section) which is drawn to a larger scale.

6 Large scale drawings

It is recommended that, for information, a full size view be added to the large scale representation of a small object.

In this case the full size view may be simplified by showing the outlines of the object only.

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