AS 1100.101—1992

Australian Standard®

Technical drawing

Part 101: General principles

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This Australian Standard was prepared by Committee ME/72, Technical Drawing. It was approved on behalf of the Council of Standards Australia on 25 August 1992 and published on 16 November 1992.

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Australian Chamber of Commerce

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Department of Administrative Services

Department of Defence

Department of Employment and Technical and Further Education, South Australia

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Institution of Engineers, Australia

Master Builders — Construction and Housing Association, Australia

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Australian Institute of Steel Construction

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This Standard was issued in draft form for comment as DR 90110.

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For history before 1992, see Preface.
Second edition AS 1100.101—1992.
Incorporating Amdt 1-1994

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 7806 8

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PREFACE

This Standard was prepared by the Standards Australia Committee on Technical Drawing to supersede AS 1101.101–1984. AS 1100.101–1984 was a revision and amalgamation of AS 1100 Part 1–1977; Part 2–1975; Part 3–1971; Part 4–1972; Part 5–1973; Part 6 first published 1973 and revised in 1980; Part 7 first published 1972 and revised in 1978; and Part 8–1975.

AS 1100 Parts 1 to 8 ran concurrently with AS CZ1.1 of 1976 which was withdrawn in 1982. AS CZ1.1 was a revision of AS CZ1 which was first published in 1941, with further editions published in 1944, 1946, 1951, 1966 and 1973. The 1966 edition also superseded AS Z8 of 1956 (endorsement of BS 308.2–1953 without amendment).

The AS CZ1 Standards were endorsements of The Institution of Engineers, Australia publications entitled, *Engineering Drawing Practice*. The document from which these publications originated, was published by the Institution under the title, *Recommended Engineering Drawing Practice*, but this was not endorsed by this Association.

This Standard is one of a series dealing with technical drawing, the other Standards in the series being as follows:

Part 201: *Mechanical drawing*
Part 301: *Architectural drawing*
Part 401: *Engineering survey and engineering survey design drawing*
Part 501: *Structural engineering drawing*

In the preparation of this Standard, the committee took account of changes in Australian technical drawing practice and recommendations of the International Organization for Standardization. Also considered were the equivalent British, American, and Canadian Standards.

In its preparation many minor changes in the layout of the text and figures have taken place resulting in greater consistency and improved ease of use of the document.

The committee considers it important that this document will be applicable to all sectors of the technical field. For instance, although many of the examples are of a mechanical nature, the principles are applicable to all fields of technical drawing. Accordingly, wherever necessary, examples have been expanded to show other applications of the principles.

Clarity of expression in defining the designer's requirements and in the interpretation of these requirements has been considered at all times. The introduction of symbols now plays an important part in drawing practice so that language barriers in reading drawings are reduced to a minimum and the valuable drafting time spent inserting notes is minimized.

The section on dimensioning, which was formerly in AS 1101.201, has been rearranged to make it easier to read and updated to Australian and International practice.

The use of computer–aided drafting (CAD) to produce technical drawings is acknowledged. In line with the practice of international Standards committees dealing with areas related to technical drawings, the requirements and principles of this Standard shall apply to users of CAD systems.

This Standard is in agreement with the following International Standards:

ISO 128 *Technical drawings — General principles of presentation*

ISO 129 *Technical drawings — Dimensioning — General principles, definitions, methods of execution and special indications*

ISO 406 *Technical drawing — Tolerancing of linear and angular dimensions*

ISO 1101 *Technical drawings — Geometrical tolerancing — Tolerancing of form orientation, location and run–out — Generalities, definitions, symbols, indications on drawings*

ISO 1660 *Technical drawings — Dimensioning and tolerancing of profiles*

ISO 3040 *Technical drawings — Dimensioning and tolerancing — Cones*

ISO 3098/1 *Technical drawings — Lettering*, Part 1: *Currently used characters*

ISO 5455 *Technical drawings — Scales*

ISO 5459 *Technical drawings — Geometrical tolerancing — Datums and datum–systems for geometrical tolerances*

ISO 6410 *Technical drawings — Conventional representation of threaded parts*

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STANDARDS AUSTRALIA

Australian Standard

Technical drawing

Part 101: General principles

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out the basic principles of technical drawing practice.

Section 1 sets out abbreviations.

Section 2 specifies materials, sizes, and layout of drawing sheets.

Section 3 specifies the types and minimum thicknesses of lines to be used and shows typical examples of their application.

Section 4 sets out the requirements for distinct uniform letters, numerals, and symbols.

Section 5 sets out recommended scales and their application.

Section 6 sets out methods of projection and of indication of the various views of an object.

Section 7 sets out methods of indicating section and provides information on conventions used in sectioning.

Section 8 sets out recommendations for dimensioning including size and geometry tolerancing.

Section 9 specifies conventions used for the representation of components and repetitive features of components.

Appendices provide information on the various projection methods, geometry tolerancing and comparison with other Standards.

NOTE: All drawings in this Standard are drawn in third angle projection unless otherwise stated. See Clause 6.3.3.

1.2 APPLICATION The basic principles given in this Standard are intended for adoption in the fields of engineering, architecture, surveying, drafting technology, and education in the preparation and interpretation of technical drawings, diagrams, charts, and tables for the purpose of conveying technical information.

Technical drawings include such things as:

(a) Detail drawings.

(b) Assembly drawings.

(c) Plans.

(d) Illustrations.

(e) Schematic diagrams.

(f) Pictorial drawings.

(g) Installation drawings.

1.3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
1000	The International System of Units (SI) and its application
1100	Technical drawing
1100.201	Part 201: Mechanical drawing
1100.301	Part 301: Architectural drawing
1100.401	Part 401: Engineering survey and engineering survey design drawing
1100.501	Part 501: Structural engineering drawing
1103	Diagrams, charts and tables for electrotechnology
1103.1	Part 1: Definitions and classifications
1203	Microfilming of engineering documents (35 mm)
1654	Limits and fits for engineering (Metric units)
2536	Surface texture

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