

Australian Standard[®]

**SPIRIT LEVELS
FOR USE IN
PRECISION ENGINEERING**

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The following scientific, industrial and governmental organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Associated Chambers of Manufactures of Australia
Department of Defence
Department of Productivity
Federal Chamber of Automotive Industries
Institution of Engineers, Australia
Institution of Production Engineers
Metal Trades Industry Association of Australia
National Measurement Laboratory
Queensland Institute of Technology
Railways of Australia Committee
Society of Manufacturing Engineers
University of New South Wales
Weapons Research Establishment

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PREFACE

This standard was prepared by the Association's Committee on Metrology as part of its program of providing a rational range of specifications for measuring instruments in metric units. It supersedes AS B135—1955. Precision Levels for Engineering Workshops, which was the endorsement of BS 958: 1941.

Currently there is no international agreement on this subject within ISO/TC 3, Dimensional Metrology, nor does any appear likely in the foreseeable future. With this in mind, the committee took into account practices specified in BS 958:1968, Spirit Levels for Use in Precision Engineering.

Spirit levels have become generally accepted as tools for use in precision engineering, and recognition of the fact that they provide a quick and accurate means of checking surfaces for flatness, alignment, etc is reflected in Australian standards dealing with precision measuring equipment such as surface plates and straightedges. This fact has also been recognized in the ISO international standards dealing with methods of testing the accuracy of machine tools.

One of the main purposes in preparing this standard is to take into account the publication of AS 1983, Spirit Level Vials. The requirements for accuracy of performance are based on that standard and relevant definitions are also included to help ensure that these requirements are correctly interpreted.

Attention is drawn to the fact that levels may be tested for compliance with this standard by laboratories registered with the National Association of Testing Authorities (NATA) for the class and field of testing.

In accordance with the practice adopted in AS 1100, Drawing Practice, the decimal comma has been used in this standard.

This standard may require reference to the following Australian and British standards:

AS 1983	Spirit Level Vials
AS B140	Micrometer Heads
AS Z33	Glossary of Terms Relating to the Performance of Measuring Instruments
BS 1133	Packaging Code: Section 6: Temporary Protection of Metal Surfaces against Corrosion (during transport and storage)

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