

AS 1984—1977

Australian Standard[®]

**Vernier callipers
(metric series)**

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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 Industry and Commerce
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 specifications for measuring equipment in metric units.

The present Australian standard for vernier callipers, AS B82—1952, covers both inch and metric units and is the endorsement of BS 887:1950. However, the design of vernier callipers specified in that standard was essentially based on imperial units, and the corresponding metric units were given as supplementary information only. This new standard, therefore, supersedes the metric information given in AS B82.

The International Organization for Standardization (ISO) has published International Standard ISO 3599, Vernier Callipers Reading to 0,1 and 0,05 mm, and is currently finalizing draft proposal for vernier callipers reading to 0,02 mm. However, it is generally considered that greater accuracy will not be obtained by using vernier callipers reading to 0,02 mm unless they are frequently checked and readings are taken with great care.

This standard is in complete technical agreement with the ISO documents referred to above although the following requirements are additional to those of the ISO documents:

- (a) Mandatory provision for the fine adjustment of the sliding jaw for callipers reading to 0,02 mm.
- (b) Limitations on the departure from straightness of the principal guiding face of the beam.
- (c) Limitations on the departure from flatness of the beam.
- (d) Minimum hardness requirements for the beam.
- (e) The restriction to 0-300 mm of the range of measurement for callipers reading to 0,02 mm.

During the preparation of this standard the committee considered the inclusion of dial callipers which have become popular in recent years. It was noted, however, that although these instruments may have some uses in certain applications, they were prone to random errors, largely owing to the entry of dirt and other foreign bodies, and for this reason were considered unsuitable for inclusion in the Australian standard.

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 AS Z23, Glossary of Terms Relating to the Performance of Measuring Instruments.

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CONTENTS

	<i>Page</i>
SECTION 1. SCOPE AND GENERAL REQUIREMENTS	
1.1 Scope	4
1.2 Nomenclature	4
1.3 Definitions	4
1.4 Standard Sizes	4
1.5 Materials and Properties	7
1.6 Finish	8
1.7 Reference Temperature	8
1.8 Marking	8
1.9 Protection	8
SECTION 2. DESIGN AND DIMENSIONS	
2.1 General Design Requirements	9
2.2 General Dimensions	9
2.3 Measuring Faces	9
2.4 Scales	11
SECTION 3. ACCURACY	
3.1 Scope of Section	16
3.2 Beam	16
3.3 Faces for External Measurement	16
3.4 Faces for Internal Measurement	17
3.5 Indication Error (Overall Accuracy)	18
APPENDIX A. METHODS OF TEST	19

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