
**Rubber — Guide to the calibration of
test equipment**

Caoutchouc — Guide pour l'étalonnage du matériel d'essai

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Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principles of calibration	2
5 Calibration systems	2
6 Traceability	2
7 Calibration intervals	2
8 Records	3
9 Guide to the expression of uncertainty	3
10 Conditioning	3
11 Procedures	3
12 Expression of results	4
13 Calibration records	4
14 Electrical measurements	4
14.1 Current	4
14.2 Voltage	5
14.3 Frequency and bandwidth	5
14.4 Resistance	5
14.5 Wattage	5
14.6 Chart recorders	5
15 Dimensional measurements	6
15.1 Length-measuring instruments	6
15.2 Linear dimensions	6
15.3 Profiles	6
15.4 Extension, compression, and deflection	6
15.5 Finish, roughness, and flatness	6
15.6 Sieves, mesh, and pore size	7
15.7 Area	7
15.8 Volume	7
15.9 Angle	7
15.10 Levelling	7
15.11 Centre of percussion	7
16 Fluids: flow, pressure, viscosity, and density measurements	7
16.1 Flow meters	7
16.2 Devices producing a specified flow rate	7
16.3 Air exchange rate	8
16.4 Pressure transducers	8
16.5 Manometers	8
16.6 Devices producing a specified pressure	8
16.7 Density	8
17 Optical measurements	8
17.1 Irradiance	8
17.2 Refractometers	8
17.3 Colour-measuring instruments	9
18 Temperature measurements	9

19	Chemical analysis and reference materials	9
19.1	Glassware	9
19.2	pH-meters	9
19.3	Reference materials	9
20	Relative-humidity measurements	9
21	Force measurements	10
21.1	Tensile-, flexural-, and compression-testing machines	10
21.2	Force transducers	10
21.3	Devices producing a specified force	10
21.4	Torque	10
21.5	Energy	10
21.6	Inertia	10
22	Mass measurements	10
22.1	Balances	10
22.2	Weights	11
23	Miscellaneous measurements	11
23.1	Timers, clocks, etc.	11
23.2	Time intervals	11
23.3	Frequency and counters	11
23.4	Velocity	11
23.5	Tachometers	11
23.6	Rate of heating or cooling	12
24	Calibration schedules	12
Annex A (informative)	Calibration intervals	13
Bibliography		15

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

This second edition cancels and replaces the first edition (ISO 18899:2004), of which it constitutes a minor revision with the following change:

- inclusion of a code-letter for the classes of calibration interval.

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Rubber — Guide to the calibration of test equipment

1 Scope

This International Standard outlines the principles of calibration of rubber test equipment and gives guidance on the general requirements for ensuring measurement traceability, establishing the basis for deciding calibration intervals, and estimating measurement uncertainty.

Methods of calibration for a range of parameters applicable to rubber test equipment are briefly described with reference to relevant standards where appropriate.

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 9000, *Quality management systems — Fundamentals and vocabulary*

ISO 10012, *Measurement management systems — Requirements for measurement processes and measuring equipment*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

3 Terms and definitions

For the purposes of this document, the (metrological) terms and definitions given in ISO 9000 and ISO 10012 and the following apply.

NOTE The terminology used in this International Standard is also in line with the terms and definitions given in ISO Guide 30.

3.1 calibration

process of establishing the relationship between the values of a quantity indicated by a measuring instrument and the corresponding values indicated by a reference instrument

3.2 verification

activity whereby measuring or test equipment is subjected to a specified examination or calibration and found to perform within stipulated tolerances

3.3 metrological confirmation

set of operations required to ensure that an item of measuring equipment is in a state of compliance with the requirements for its intended use

3.4 calibration system

part of a quality system which includes the calibration and metrological confirmation of test equipment and any reference standards held