

Motorcycles — Measurement methods for moments of inertia

ICS 43.140

National foreword

This British Standard is the UK implementation of ISO 9129:2008.

The UK participation in its preparation was entrusted to Technical Committee AUE/14, Motor cycles and mopeds.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2008

© BSI 2008

ISBN 978 0 580 57908 0

Amendments/corrigenda issued since publication

Date	Comments

INTERNATIONAL STANDARD

ISO
9129

Second edition
2008-05-15

Motorcycles — Measurement methods for moments of inertia

Motorcycles — Méthodes de mesure des moments d'inertie



Reference number
ISO 9129:2008(E)



Documents

Document Sharing Hub

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions.....	1
4 Measurement conditions	2
5 Measuring instruments	2
6 Measuring procedure	3
6.1 Measurement of location of centre of gravity	3
6.2 Roll moment of inertia about x-axis (physical pendulum principle)	3
6.3 Pitch moment of inertia about y-axis (physical pendulum principle)	7
6.4 Yaw moment of inertia about z-axis (bifilar pendulum principle)	11
7 Test results	16
Annex A (normative) Format for measurement results.....	17

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 9129 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 22, *Motorcycles*.

This second edition cancels and replaces the first edition (ISO 9129:1988), which has been technically revised.

Introduction

The stability of a motorcycle is a very important element of its active safety. The motorcycle/rider combination and the environment in which this combination is used form a unique closed-loop system. However, the evaluation of motorcycle/rider combination stability is extremely complex because of interaction of the intrinsic motorcycle stability, the influence of the position of the rider and his response to continuously changing conditions.

In the evaluation of motorcycle stability, the determination of the kinetic characteristics of the motorcycle/rider combination is considered an important part of the design parameters of the vehicle itself.

The test procedure described in this International Standard deals with one aspect of the kinetic characteristics: the determination of the moments of inertia of the motorcycle and of the motorcycle/rider combination.

