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**Passenger vehicle wheels — Clip balance  
weight and rim flange nomenclature, test  
procedures and performance  
requirements**

*Roues pour véhicules particuliers — Nomenclature des masselottes  
d'équilibrage clippées et des rebords de jantes, méthodes d'essai et  
exigences de performance*



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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.

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ISO 13988 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 19, *Wheels*.

## Introduction

This International Standard addresses clip balance weights used on passenger car wheels. It provides general features and configurations of the clip balance weights and rim dimensions and defines terms used to describe these features.

This International Standard provides test procedures to evaluate weight retention on the wheel.

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# Passenger vehicle wheels — Clip balance weight and rim flange nomenclature, test procedures and performance requirements

## 1 Scope

This International Standard specifies procedures and minimum performance requirements for testing without tyres the retention of clip balance weights for use on wheels for passenger vehicles. It also specifies general features for configurations of clip balance weights and rim flanges for light alloy and steel wheels intended for use on passenger cars. Alternative materials and geometries can be considered in the future.

## 2 Normative reference

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3911, *Wheels and rims for pneumatic tyres — Vocabulary, designation and marking*

ISO 4000-1, *Passenger car tyres and rims — Part 1: Tyres (metric series)*

ISO 4000-2, *Passenger car tyres and rims — Part 2: Rims*

ISO 4223-1, *Definitions of some terms used in the tyre industry — Part 1: Pneumatic tyres*

## 3 Terms and definitions

For the purposes of this document, the definitions given in ISO 4223-1, ISO 4000-1, ISO 4000-2, ISO 3911 and the following apply.

### 3.1

#### **balance weight assembly**

assembly of the weight and the clip, which is intended for mounting on the rim flange to balance the tyre/wheel assembly about its axis of rotation and thus minimize vibrations due to the rotation of the tyre/wheel assembly

NOTE Figure 1 gives the terminology and nomenclature of balance weight assembly.

#### 3.1.1

##### **weight**

material of a specified mass with contours to conform to the surface of the rim flange

#### 3.1.2

##### **clip**

specially formed metal affixed to the weight to mount the balance weight on the rim flange

#### 3.1.3

##### **spur**

optional part of a clip that protrudes from its surface interfacing with the rim flange