

RATTAD. JALGRATASTE OHUTUSNÕUDED. OSA 6:
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Cycles - Safety requirements for bicycles - Part 6: Frame
and fork test methods (ISO 4210-6:2015)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 4210-6:2015 sisaldab Euroopa standardi EN ISO 4210-6:2015 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 4210-6:2015 consists of the English text of the European standard EN ISO 4210-6:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 16.09.2015.	Date of Availability of the European standard is 16.09.2015.
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ICS 43.150

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European foreword

This document (EN ISO 4210-6:2015) has been prepared by Technical Committee ISO/TC 149 "Cycles" in collaboration with Technical Committee CEN/TC 333 "Cycles" the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 4210-6:2014.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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Endorsement notice

The text of ISO 4210-6:2015 has been approved by CEN as EN ISO 4210-6:2015 without any modification.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Frame test methods	1
4.1 Frame — Impact test (falling mass).....	1
4.1.1 General.....	1
4.1.2 Test method.....	1
4.2 Frame and front fork assembly — Impact test (falling frame).....	3
4.2.1 General.....	3
4.2.2 Test method.....	4
4.3 Frame — Fatigue test with pedalling forces.....	6
4.3.1 General.....	6
4.3.2 Test method.....	6
4.4 Frame — Fatigue test with horizontal forces.....	7
4.4.1 General.....	7
4.4.2 Test method.....	8
4.5 Frame — Fatigue test with a vertical force.....	9
4.5.1 General.....	9
4.5.2 Test method.....	9
5 Fork test methods	10
5.1 Suspension forks — Tyre-clearance test.....	10
5.2 Suspension forks — Tensile test.....	11
5.3 Front fork — Static bending test.....	11
5.4 Front fork — Rearward impact test.....	11
5.4.1 Test method 1.....	11
5.4.2 Test method 2.....	13
5.4.3 Test method 3.....	13
5.5 Front fork — Bending fatigue test and rearward impact test.....	14
5.6 Forks intended for use with hub or disc brakes.....	15
5.6.1 General.....	15
5.6.2 Fork for hub/disc brake — Static brake-torque test.....	15
5.6.3 Fork for hub/disc brake — Brake mount fatigue test.....	16
5.7 Tensile test for a non-welded fork.....	17
Annex A (normative) Dummy fork characteristics	18
Annex B (normative) Fork mounting fixture	20
Annex C (informative) Suspension frames — Tyre-clearance test	21

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 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*.

This second edition cancels and replaces the first edition (ISO 4210-6:2014), which has been technically revised.

ISO 4210 consists of the following parts, under the general title *Cycles — Safety requirements for bicycles*:

- *Part 1: Terms and definitions*
- *Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles*
- *Part 3: Common test methods*
- *Part 4: Braking test methods*
- *Part 5: Steering test methods*
- *Part 6: Frame and fork test methods*
- *Part 7: Wheels and rims test methods*
- *Part 8: Pedal and drive system test methods*
- *Part 9: Saddles and seat-post test methods*

Introduction

This International Standard has been developed in response to demand throughout the world, and the aim has been to ensure that bicycles manufactured in compliance with this International Standard will be as safe as is practically possible. The tests have been designed to ensure the strength and durability of individual parts as well as of the bicycle as a whole, demanding high quality throughout and consideration of safety aspects from the design stage onwards.

The scope has been limited to safety considerations and has specifically avoided standardization of components.

If the bicycle is to be used on public roads, national regulations apply.

Cycles — Safety requirements for bicycles —

Part 6: Frame and fork test methods

1 Scope

This part of ISO 4210 specifies the frame and fork test methods for ISO 4210-2.

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 4210-1, *Cycles — Safety requirements for bicycles — Part 1: Terms and definitions*

ISO 4210-2:2015, *Cycles — Safety requirements for bicycles — Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles*

ISO 4210-3:2014, *Cycles — Safety requirements for bicycles — Part 3: Common test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4210-1 apply.

4 Frame test methods

4.1 Frame — Impact test (falling mass)

4.1.1 General

Manufacturers of frames are permitted to conduct the test with a dummy fork (see [Annex A](#)) fitted in place of a front fork.

Where a frame is convertible for male and female riders by the removal of a bar, test it with the bar removed.

Where a suspension fork is fitted, test the assembly with the fork extended to its unloaded free length. Where a rear suspension system is incorporated in the frame, secure the suspension in a position equivalent to that which would occur with an 80 kg rider seated on the bicycle. For young adult bicycles, secure the suspension in a position equivalent to that which would occur with a 40 kg rider seated on the bicycle; if the type of suspension system does not permit it to be locked, then replace the spring/damper unit by a solid link of the appropriate size and with end fittings similar to those of the spring/damper unit.

4.1.2 Test method

Assemble a roller of mass less than or equal to 1 kg and with dimensions conforming to those shown in [Figure 1](#) in the fork. The hardness of roller shall be not less than 60 HRC at impact surface. If a dummy fork is used in place of a fork, the bar shall have a rounded end equivalent in shape to the roller. Hold