

**Kaitserõivad mootorratturitele mehaaniliste löökide eest. Osa 4: Täispuhutavad turvapadjad mootorratturile. Nõuded ja katsemeetodid**

**Motorcyclists' protective clothing against mechanical impact - Part 4: Motorcyclists' inflatable protectors - Requirements and test methods**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 1621-4:2013 sisaldab Euroopa standardi EN 1621-4:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 1621-4:2013 consists of the English text of the European standard EN 1621-4:2013.
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ICS 13.340.10

English Version

## Motorcyclists' protective clothing against mechanical impact - Part 4: Motorcyclists' inflatable protectors - Requirements and test methods

Vêtements de protection contre les chocs mécaniques pour  
motocyclistes - Partie 4 : Protectors gonflables pour  
motocyclistes - Exigences et méthodes d'essai

Motorradfahrer-Schutzkleidung gegen mechanische  
Belastung - Teil 4: Aufblasbare Protektoren für  
Motorradfahrer - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 3 November 2012.

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## Foreword

This document (EN 1621-4:2013) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

EN 1621 consists of the following parts, under the general title "Motorcyclists' protective clothing against mechanical impact":

- Part 1: Motorcyclists' limb joint impact protectors — Requirements and test methods
- Part 2: Motorcyclists' back protectors — Requirements and test methods
- Part 3: Motorcyclists' chest protectors — Requirements and test methods<sup>1)</sup>
- Part 4: Motorcyclists' inflatable protectors — Requirements and test methods

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1) Under development

## Introduction

Motorcyclists' inflatable protectors are devices either embedded within or worn on top of other clothing, which aim to reduce the severity of injuries in case of motorcycle accidents.

The protectors covered by this standard give protection only when inflated.

The performance requirements have been selected to provide the best practical compromise between protection, comfort, and ergonomic requirements. Protectors that are too stiff or heavy will not be worn. The test methods are designed to provide information on protection against mechanical impacts. The force levels in the tests do not relate directly to the forces riders are exposed to in accidents, but experiences have shown that products meeting the requirements of this European Standard may reduce the severity of injuries caused by impacts.

In order to encourage the adoption of certified protection by the highest possible number of users, two performance levels are specified for inflatable protectors. These are level 1 for protectors designed to give protection whilst having low ergonomic penalties associated with its use and level 2 for protectors providing an increased protection with respect to level 1. There may be, however, weight and restriction penalties associated with level 2 protection.

## 1 Scope

This European Standard covers requirements and test methods for mechanically activated inflatable protectors for motorcycle riders (in the following text called „protector“). It specifies the minimum level of protection, the minimum intervention time of inflated bag, and the minimum coverage to be provided by motorcyclists' protectors worn by riders. The requirements of this standard are applicable to various design of inflatable protectors and refers to all body areas and their combinations which are claimed to be protected. Inflatable protectors covered by this standard may be incorporated in motorcycle garments or equipped with by appropriate restraint systems and worn on their own.

This European Standard contains the requirements for the performance of the system during an accident and details of the test methods, requirements for sizing, ergonomics, innocuousness, labelling and the provision of information.

Inflatable protectors other than mechanically activated are not covered by this standard.

## 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.

EN 340, *Protective clothing — General requirements*

EN 1621-1:2012, *Motorcyclists' protective clothing against mechanical impact — Part 1: Motorcyclists' limb joint impact protectors — Requirements and test methods*

EN 1621-2, *Motorcyclists' protective clothing against mechanical impact — Part 2: Motorcyclists' back protectors — Requirements and test methods*

EN ISO 105-E01, *Textiles — Tests for colour fastness — Part E01: Colour fastness to water (ISO 105-E01)*

EN ISO 11642, *Leather — Tests for colour fastness — Colour fastness to water (ISO 11642)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1621-1:2012 and the following apply.

### 3.1

#### **inflatable motorcyclist's protector**

specific device worn by motorcyclists, which will automatically inflate in the event of an accident

### 3.2

#### **intervention time**

sum of the activation time plus the inflation time in milliseconds

### 3.3

#### **activation time**

period of time used by the triggering system to fire the gas generator, corresponding to the interval of time from the beginning of the accident to the start of the inflation of the protector

### 3.4

#### **inflation time**

time period required for the airbag to be fully inflated