PD CEN/TS 1317-9:2023



BSI Standards Publication

Road restraint systems

Part 9: Impact tests and test methods for removable barrier sections

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National foreword

This Published Document is the UK implementation of CEN/TS 1317-9:2023. Together with PD CEN/TS 1317-7:2023 and PD CEN/TR 1317-10:2023, it supersedes DD ENV 1317-4:2002 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/509/1, Road restraint systems.

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

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English Version

Road restraint systems - Part 9: Impact tests and test methods for removable barrier sections

Dispositifs de retenue routiers - Essais de choc et méthodes d'essai pour les sections amovibles de barrière de sécurité

Rückhaltesysteme an Straßen - Leistungsklassen, Abnahmekriterien für Anprallprüfungen und Prüfverfahren für leicht entfernbare Schutzeinrichtungsabschnitte

This Technical Specification (CEN/TS) was approved by CEN on 4 September 2023 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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European foreword

This document (CEN/TS 1317-9:2023) has been prepared by Technical Committee CEN/TC 226 “Road equipment”, the secretariat of which is held by AFNOR.

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

This document partially supersedes ENV 1317-4:2001.

This document, fully dedicated to removable barrier sections (RBS) will partly supersede ENV 1317-4:2001 in which RBS are addressed only in subclause 6.2, in which they are treated as special transitions for lengths up to 40 m, and safety barriers for higher lengths.

In comparison with ENV 1317-4, the following technical modifications have been made:

— emergency passage: considered in 3.7,

— deformation of the RBS (5.4): specification of Dynamic Deflection, Working Width and System intrusion. Reporting of completely detached parts,

— connection force (5.5): reporting of the longitudinal forces acting under impact on the connections with the two barriers,

— impact points (6.3): different definition of the location and of the number of impact points,

— length of test installation (8): minimum length of the connected barriers,

— modular RBS of different length (9): reduced test matrix for products derived from a parent RBS, by assembling a different number of the same modules.

This document is read in conjunction with EN 1317-1:2010 and EN 1317-2:2010 and EN 1317-5:2007+A2:2012 and CEN/TR 1317-10.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

Introduction

In order to improve safety, the design of roads might require the installation of road safety barriers. Provisions are sometimes necessary for sections of barrier that can be temporarily opened whilst maintaining the capacity to contain errant vehicles in the closed configuration.

This document partially replaces the ENV 1317-4:2001 regarding the assessment of performance and test methods for Removable Barrier Sections. In the afore-mentioned document, these Removable Barrier Sections were considered to be special transitions and were assessed as such.

The performance of any required transition elements or assemblies that connect the removable barrier section to a standard road safety barrier may be assessed according to CEN/TR 1317-10.

1 Scope

This document specifies performance categories and test methods for the assessment of removable barrier sections.

The transitions between the Removable Barrier Section and the two connected safety barriers are outside the scope of this document and are assessed using CEN/TR 1317-10

The transitions between the Removable Barrier Section and the two connected safety barriers are outside the scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 1317-1:2010, *Road restraint systems - Part 1: Terminology and general criteria for test methods*

EN 1317-2:2010, *Road restraint systems - Part 2: Performance classes, impact test acceptance criteria and test methods for safety barriers including vehicle parapets*

CEN/TR 1317-10, *Road restraint systems — Part 10: Assessment methods and design guidelines for transitions, terminals and crash cushion connection - transitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1317-1:2010, EN1317-2:2010 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
removable barrier section
section of barrier, connected at both ends to sections of standard safety barrier, which allows for removal and reinstallation for temporary openings, mainly used during maintenance of the road or for the passage of emergency vehicles, and which, in the closed position, offers containment performances

Note 1 to entry: The width of the RBS may be different from the width of the barriers.

Note 2 to entry: Although these products are called “removable” they are nevertheless permanent products. “Removable” indicates only that they can be opened.

Note 3 to entry: RBS shorter than or equal to 4,0 m should be considered as barriers interruptions.

Note 4 to entry: Figure 1 shows schematically the location of an RBS between two barriers.