



BSI Standards Publication

Railway applications — Rescue coupler — Performance requirements, specific interface geometry and test methods

National foreword

This British Standard is the UK implementation of EN 15020:2022. It supersedes BS EN 15020:2006+A1:2010, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee RAE/3/-/7, Railway applications - Couplers.

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

The UK committee draws users' attention to the distinction between normative and informative elements, as defined in Clause 3 of the CEN/CENELEC Internal Regulations, Part 3.

Normative: Requirements conveying criteria to be fulfilled if compliance with the document is to be claimed and from which no deviation is permitted.

Informative: Information intended to assist the understanding or use of the document. Informative annexes do not contain requirements, except as optional requirements, and are not mandatory. For example, a test method may contain requirements, but there is no need to comply with these requirements to claim compliance with the standard.

When speeds in km/h require unit conversion for use in the UK, users are advised to use equivalent values rounded to the nearest whole number. The use of absolute values for converted units should be avoided in these cases. Please refer to the table below for agreed conversion figures:

INS, RST and ENE speed conversions	
km/h	mph
7	4.5
9	5.5
10	6
12	7.5
20	12.5

The requirements and recommendations of this standard are based on an existing established rescue coupler in use in Continental Europe. Caution should be exercised before using this rescue coupler in the UK, since it may be incompatible with many of the potential rescue vehicles. There is information on the special national conditions for use in the UK in Annex D (normative) in BS EN 16839:2022.

Many older UK-based locomotives in service are fitted with draw gear which is not designed for a buff load. Additionally, locomotives fitted with the Swing-Head Automatic Coupler (which is compatible with buff loads) have very limited space around the draw hook. The UK committee believes the rescue coupler is not compatible with any coupler except the draw hook given in BS EN 15566:2022.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

This publication has been prepared under a mandate given to the European Standards Organizations by the European Commission and the European Free Trade Association. It is intended to support requirements of the EU legislation detailed in the European Foreword. A European Annex, usually Annex ZA or ZZ, describes how this publication relates to that EU legislation.

For the Great Britain market (England, Scotland and Wales), if UK Government has designated this publication for conformity with UKCA marking (or similar) legislation, it may contain an additional National Annex. Where such a National Annex exists, it shows the correlation between this publication and the relevant UK legislation. If there is no National Annex of this kind, the relevant Annex ZA or ZZ in the body of the European text will indicate the relationship to UK regulation applicable in Great Britain. References to EU legislation may need to be read in accordance with the UK designation and the applicable UK law. Further information on designated standards can be found at www.bsigroup.com/standardsandregulation.

For the Northern Ireland market, UK law will continue to implement relevant EU law subject to periodic confirmation. Therefore Annex ZA/ZZ in the European text, and references to EU legislation, are still valid for this market.

UK Government is responsible for legislation. For information on legislation and policies relating to that legislation, consult the relevant pages of www.gov.uk.

© The British Standards Institution 2022
Published by BSI Standards Limited 2022

ISBN 978 0 539 03557 5

ICS 45.060.01

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 September 2022.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

Railway applications - Rescue coupler - Performance requirements, specific interface geometry and test methods

Applications ferroviaires - Attelage de secours -
Exigences concernant la performance, la géométrie des
interfaces et les méthodes d'essai

Bahnanwendungen - Abschleppkupplung -
Leistungsanforderungen, spezifische
Schnittstellengeometrie und Prüfverfahren

This European Standard was approved by CEN on 10 July 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	5
4 Product requirements.....	5
4.1 General.....	5
4.1.1 Metallic products.....	5
4.1.2 Non-metallic products.....	5
4.2 Rescue coupler characteristics	6
4.2.1 Mechanical requirements	6
4.2.2 Pneumatic requirements.....	6
4.3 Interface of rescue coupler to rescue vehicle	6
4.4 Requirements linked to the fitting procedure.....	7
4.5 Requirements linked to the coupling and uncoupling conditions	7
4.5.1 Mechanical coupling.....	7
4.5.2 Pneumatic coupling.....	7
4.6 Requirements linked to the operating conditions.....	7
4.7 Uncoupling conditions	8
5 Tests.....	10
5.1 Type tests	10
5.1.1 General.....	10
5.1.2 Static test.....	10
5.1.3 Coupling and uncoupling.....	11
5.2 Routine tests	11
Annex A (normative) Rescue coupler	12
A.1 General.....	12
A.2 Special components to be checked	14
Annex ZA (informative) Relationship between this European Standard and the Essential requirements of EU Directive 2016/797/EC aimed to be covered	18
Bibliography.....	19

European foreword

This document (EN 15020:2022) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, 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 February 2023, and conflicting national standards shall be withdrawn at the latest by February 2023.

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 supersedes EN 15020:2006+A1:2010.

The main modifications to EN 15020:2006+A1:2010 are:

- a) Modifications on Scope;
- b) Verifying of Clause 2 “Normative references”;
- c) Modification in Clause 3 “Terms and definitions”, in particular 3.1 “rescue coupler”;
- d) Clause 4 completely revised;
- e) Change of all Figures;
- f) Annex A “Automatic coupler” is deleted and referred to in EN 16019:2014;
- g) Annex C “Characteristics of the rescue vehicle” is deleted and referred to in EN 16839:2022;
- h) Annex D “Air pipe coupling heads” is deleted and referred to in EN 15807:2021;
- i) Extension of the components to be dimensionally checked – New Figures A.5 to A.10;
- j) Adaptation of Annex ZA to Directive 2016/797;
- k) editorially revised.

This document has been prepared under a standardization request addressed to CEN by the European Commission, and it aims to support essential or other requirements of EU Directive(s) or Regulation(s).

For relationship with EU Directive(s) or Regulation(s), see informative Annex ZA, which is an integral part of this document.

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 implement this European Standard: 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, Turkey and the United Kingdom.

1 Scope

This document specifies the requirements for the rescue coupler for train sets compliant with the Technical Specification for Interoperability Locomotives and Passenger rolling stock (TSI Loc and Pas).

This document defines the rescue coupler foreseen to connect a rescue vehicle equipped with a draw hook, according to EN 15566:2022 and a headstock layout according to EN 16839:2022 together with the train to be rescued equipped with a Type 10 automatic coupler according to EN 16019:2014.

Provisions going beyond the scope of this document are defined in the Technical Specification. The Technical Specification is not a mandatory document.

This document deals with requirements and tests on rescue coupler.

The requirements on coupling interfaces of end couplers are defined in EN 16019:2014.

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 10204:2004, *Metallic products - Types of inspection documents*

EN 12663-1:2010+A1:2014, *Railway applications - Structural requirements of railway vehicle bodies - Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)*

EN 15085 (all parts):—,¹ *Railway applications — Welding of railway vehicles and components*

EN 15566:2022, *Railway applications — Railway rolling stock — Draw gear and screw coupling*

EN 15807:2021, *Railway applications - Pneumatic half couplings*

EN 16019:2014, *Railway applications - Automatic coupler - Performance requirements, specific interface geometry and test method*

EN 16839:2022, *Railway applications — Rolling stock — Head stock layout*

¹ Under preparation. Stage at time of publication: Consists of the following parts: prEN 15085-1:2021, *Railway applications — Welding of railway vehicles and components — Part 1: General*; EN 15085-2:2020, *Railway applications — Welding of railway vehicles and components — Part 2: Requirements for welding manufacturer*; prEN 15085-3:2021, *Railway applications — Welding of railway vehicles and components — Part 3: Design requirements*; prEN 15085-4:2020, *Railway applications — Welding of railway vehicles and components — Part 4: Production requirements*; prEN 15085-5:2020, *Railway applications — Welding of railway vehicles and components — Part 5: Inspection, testing and documentation*; EN 15085-6:2022, *Railway applications — Welding of railway vehicles and components — Part 6: Maintenance welding requirements*. (Part 6 not relevant)