BS EN 1459-4:2020+A1:2025

BSI Standards Publication

# Rough-terrain trucks — Safety requirements and verification

Part 4: Additional requirements for variable-reach trucks handling freely suspended loads

bsi.

Documents
Document Sharing Hub

Full document details: BS EN 1459-4:2020+A1:2025

# National foreword

This British Standard is the UK implementation of EN 1459-4:2020+A1:2025. It supersedes BS EN 1459-4:2020, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by ⟨A1⟩ ⟨/A1⟩.

The UK participation in its preparation was entrusted to Technical Committee MHE/7, Industrial trucks.

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

**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.

AVA Documents
Document Sharing Hub

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 22068 1

ICS 53.060

**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 31 January 2021.

**Amendments/corrigenda issued since publication**

| Date | Text affected |
|---|---|
| 30 April 2025 | Implementation of CEN amendment A1:2025 |

Documents
Document Sharing Hub

Full document details: BS EN 1459-4:2020+A1:2025

Documents
Document Sharing Hub

Full document details: BS EN 1459-4:2020+A1:2025

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 1459-4:2020+A1

April 2025

ICS 53.060

English Version

# Rough-terrain trucks - Safety requirements and verification - Part 4: Additional requirements for variable-reach trucks handling freely suspended loads

Chariots tout-terrain - Prescriptions de sécurité et vérification - Partie 4 : Prescriptions supplémentaires pour les chariots à portée-variable manutentionnant des charges suspendues à oscillation libre

Geländegängige Stapler - Sicherheitstechnische Anforderungen und Verifizierung - Teil 4: Zusätzliche Anforderungen für Stapler mit veränderlicher Reichweite zum Befördern angehängter Lasten

This European Standard was approved by CEN on 23 November 2020 and includes Amendment 1 approved by CEN on 2 March 2025.

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, Türkiye 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**

© 2025 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 1459-4:2020+A1:2025 E

Documents
Document Sharing Hub

Full document details: BS EN 1459-4:2020+A1:2025

# Contents

Page

European foreword ... 3
Introduction ... 4
1 Scope ... 5
2 Normative references ... 5
3 Terms and definitions ... 6
4 Safety requirements and/or protective/risk reduction measures ... 7
4.1 General ... 7
4.1.1 Context ... 7
4.1.2 Specific relation to EN 1459-1 and EN 1459-2 ... 7
4.2 Stability ... 8
4.2.1 Load chart for suspended load lifting attachment(s) ... 8
4.3 Connection point for lifting accessories ... 8
4.3.1 General ... 8
4.3.2 Maximum rated load lifting capacity ... 8
4.3.3 Strength of the connection point for lifting accessories ... 8
4.4 Dynamic structural integrity ... 8
5 Verification of safety requirements and/or protective/risk reduction measures ... 8
5.1 Tests for trucks and for lifting attachments ... 8
5.2 Dynamic structural test ... 9
5.2.1 General ... 9
5.2.2 General test set up ... 9
5.2.3 Test procedure ... 10
5.2.4 Acceptance criteria ... 11
5.3 Additional requirements for pick and carry ... 11
5.3.1 General ... 11
5.3.2 Lateral test procedure ... 11
5.3.3 Longitudinal stability by test loading ... 12
5.3.4 Acceptance criteria ... 13
5.4 Strength tests for the connection point for lifting accessories ... 13
6 Information for use ... 13
6.1 General ... 13
6.2 Instruction handbook ... 13
6.3 Load chart ... 14
6.3.1 Load chart for lifting attachments ... 14
6.3.2 Load chart for connection point for lifting accessories ... 14
6.3.3 Marking ... 14
Annex A (informative) List of significant hazards ... 15
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC on machinery ... 17
Bibliography ... 22



Documents
Document Sharing Hub
Full document details: BS EN 1459-4:2020+A1:2025

## European foreword

This document (EN 1459-4:2020+A1:2025) has been prepared by Technical Committee CEN/TC 150 “Industrial Trucks - Safety”, the secretariat of which is held by BSI.

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 October 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

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 includes Amendment 1 approved by CEN on 2 March 2025.

This document supersedes ⟨A1⟩ EN 1459-4:2020 ⟨A1⟩.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟨A1⟩ ⟨A1⟩.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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

EN 1459 consists of the following parts, under the general title Rough-terrain trucks — Safety requirements and verification:

— *Part 1: Variable-reach trucks;*

— *Part 2: Slewing variable-reach trucks;*

— *Part 3: Interface between the variable-reach truck and the work platform;*

— *Part 4: Additional requirements for variable-reach trucks handling freely suspended loads;*

— *Part 5: Additional requirements for attachments and attachment interface;*

— *Part 6: Application of EN ISO 13849-1 to slewing and non-slewing variable-reach rough-terrain trucks;*

— *Part 8: Variable-reach tractors.*

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 organizations 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, Türkiye and the United Kingdom.

AVA Documents
Document Sharing Hub



Full document details: BS EN 1459-4:2020+A1:2025

# Introduction

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e.g. for maintenance (small, medium and large enterprises);

— consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

All quantities are in SI units, and this includes metric units.

This document is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.



Documents
Document Sharing Hub

Full document details: BS EN 1459-4:2020+A1:2025

# 1 Scope

This document specifies the safety requirements and means of verification in addition to ⟨A1⟩ EN 1459-1:2025 ⟨A1⟩ and EN 1459-2:2015+A1:2018 as applicable, for rough-terrain variable-reach trucks (hereafter referred to as trucks) designed and intended for handling suspended loads which can swing freely in one or more directions. It is applicable to trucks covered by ⟨A1⟩ EN 1459-1:2025 ⟨A1⟩ and EN 1459-2:2015+A1:2018.

This document does not apply to:

— the lifting of suspended loads which by design of the load or the lifting attachments does not allow the load to swing freely in any direction;

— the handling of flexible intermediate bulk containers, as defined in ⟨A1⟩ EN ISO 21898:2005 ⟨A1⟩, carried under the forks of the truck or with attachments intended for this purpose;

— any attachments / means used for lifting personnel;

— lifting accessories;

— freight container handling trucks;

— mobile cranes (covered by EN 13000:2010+A1:2014).

This document deals with all significant hazards, hazardous situations or hazardous events, related to trucks handling a freely suspended load, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Annex A).

This document does not deal with load limiter for attachments.

This document is not applicable to rough-terrain variable-reach trucks designed and intended for handling suspended loads manufactured before the date of its publication.

# 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.

⟨A1⟩ EN 1459-1:2025 ⟨A1⟩, *Rough-terrain trucks — Safety requirements and verification — Part 1: Variable-reach trucks*

EN 1459-2:2015+A1:2018, *Rough-terrain trucks — Safety requirements and verification — Part 2: Slewing variable-reach trucks*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

ISO 7000:2019, *Graphical symbols for use on equipment — Registered symbols*

ISO 22915-1:2016, *Industrial trucks — Verification of stability — Part 1: General*

⟨A1⟩ ISO 22915-10:2023 ⟨A1⟩, *Industrial trucks — Verification of stability — Part 10: Additional stability test for trucks operating in the special condition of stacking with load laterally displaced by powered devices*



Documents
Document Sharing Hub
Full document details: BS EN 1459-4:2020+A1:2025