



**NSAI**  
Standards

Irish Standard  
I.S. EN 1459-4:2020

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

**I.S. EN 1459-4:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 1459-4:2020

*Published:*

2020-12-23

*This document was published  
under the authority of the NSAI  
and comes into effect on:*

2021-01-25

ICS number:

53.060

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

I.S. EN 1459-4:2020 is the adopted Irish version of the European Document EN 1459-4:2020, Rough-terrain trucks - Safety requirements and verification - Part 4: Additional requirements for variable-reach trucks handling freely suspended loads

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

**EUROPEAN STANDARD**  
**NORME EUROPÉENNE**  
**EUROPÄISCHE NORM**

**EN 1459-4**

December 2020

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.

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**

## EN 1459-4:2020 (E)

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>6</b>
<b>4 Safety requirements and/or protective/risk reduction measures</b> .....	<b>7</b>
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
<b>5 Verification of safety requirements and/or protective/risk reduction measures</b> .....	<b>8</b>
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.....	12
5.4 Strength tests for the connection point for lifting accessories.....	13
<b>6 Information for use</b> .....	<b>13</b>
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
<b>Annex A (informative) List of significant hazards</b> .....	<b>15</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC on machinery</b> .....	<b>17</b>
<b>Bibliography</b> .....	<b>22</b>

## European foreword

This document (EN 1459-4:2020) 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 June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

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 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 2006/42/EC.

For relationship with EU Directive, 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.*

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.

## **EN 1459-4:2020 (E)**

### **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.



## 1 Scope

This document specifies the safety requirements and means of verification in addition to EN 1459-1:2017+A1:2020 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 EN 1459-1:2017+A1:2020 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 ISO 21898:2004, 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.

EN 1459-1:2017+A1:2020, *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*

ISO 22915-10:2008, *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*

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-