



NSAI
Standards

Irish Standard
I.S. EN 16842-9:2019&AC:2020

Powered industrial trucks - Visibility -
Test methods and verification - Part 9:
Order-picking, lateral- and front-stacking
trucks with elevating operator position

I.S. EN 16842-9:2019&AC:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 16842-9:2019/AC:2020

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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 16842-9:2019&AC:2020 is the adopted Irish version of the European Document EN 16842-9:2019, Powered industrial trucks - Visibility - Test methods and verification - Part 9: Order-picking, lateral- and front-stacking trucks with elevating operator position

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EUROPEAN STANDARD

EN 16842-9:2019/AC

NORME EUROPÉENNE

April 2020

EUROPÄISCHE NORM

ICS 53.060

English version

Powered industrial trucks - Visibility - Test methods and verification - Part 9:
Order-picking, lateral- and front-stacking trucks with elevating operator
position

Chariots de manutention automoteurs -
Visibilité - Méthode d'essai et vérification -
Partie 9 : Chariots préparateurs de
commande, à prise latérale et frontale avec
poste de conduite élevable

Kraftbetriebene Flurförderzeuge -
Sichtverhältnisse - Prüfverfahren und
Verifikation - Teil 9: Kommissionier-
Flurförderzeuge und Dreiseitenstapler mit
anhebbarer Bedienerposition

This corrigendum becomes effective on 15 April 2020 for incorporation in the official English version of the EN.



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

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

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Ref. No.: EN 16842-9:2019/AC:2020 E

EN 16842-9:2019/AC:2020 (E)

1 Modification to Table 1 in 7.4

Replace Table 1 with the following one:

"

Table 1 — Requirements for order-picking and lateral- and front-stacking trucks

Test No.	Test	Test Direction	Distance of lights to axis of rotation (mm)	Number of lights	Test Path	Test object	Required minimum illuminated area of test object	
							Only following test surface should be considered (See EN 16842-1:2018 Figure 2) ^b	Area of test surfaces [1 × Square = 10 ⁴ mm ²] Number of complete or combined squares on the test body as per EN 16842-1:2018, 5.1.1
1	Travelling	Forward	125	9	P1.1 – P1.2	Test body	5	20
2	Travelling	+135° or -135°	125	9	P2.1 – P2.2	Test body	5	20
3	Manoeuvring	Forward	125	13	P3.1 – P3.2	Test body	2 + 5	30
4	Manoeuvring	+45°	125	13	P4.1 – P4.2	Test body	2 + 5 + (3 or 4)	25
5	Manoeuvring	+135°	125	13	P5.1 – P5.2	Test body	2 + 5 + (3 or 4)	25
6	Manoeuvring	+135°	125	13	P6.1 – P6.2	Test body	2 + 5	30
7	Manoeuvring	-135°	125	13	P7.1 – P7.2	Test body	2 + 5	30
8	Manoeuvring	-135°	125	13	P8.1 – P8.2	Test body	2 + 5 + (3 or 4)	25
9	Manoeuvring	-45°	125	13	P9.1 – P9.2	Test body	2 + 5 + (3 or 4)	25
10	Travelling	Forward	125	2	P1.1 – P1.2	Test screen	5 squares of any 500 mm x 500 mm surface ^a	
11	Fork Arms	Direction of load centre	125 up to 275 (see EN 16842-1:2018, Figure 4)	13		Fork Arms	25 % of the load carrying surface of the forward half of one fork shall be illuminated. The illuminated area shall be connected to the fork tip.	

^a Not considering the dark shadows cast by vertical structural sections of the mast beams.

^b If the minimum requirement is met on one surface the other surfaces need not to be considered.

"

EUROPEAN STANDARD

EN 16842-9

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2019

ICS 53.060

English Version

Powered industrial trucks - Visibility - Test methods and verification - Part 9: Order-picking, lateral- and front-stacking trucks with elevating operator position

Chariots de manutention automoteurs - Visibilité -
Méthode d'essai et vérification - Partie 9 : Chariots
préparateurs de commande, à prise latérale et frontale
avec poste de conduite éleuable

Kraftbetriebene Flurförderzeuge - Sichtverhältnisse -
Prüfverfahren und Verifikation - Teil 9:
Kommissionier-Flurförderzeuge und Dreiseitenstapler
mit anhebbarer Bedienerposition

This European Standard was approved by CEN on 26 November 2018.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 16842-9:2019) 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 August 2019, and conflicting national standards shall be withdrawn at the latest by August 2019.

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 European Standard is intended to be used in combination with the requirements in EN 16842-1. The EN 16842 series consists of the following parts under the general title "Powered industrial trucks – Visibility – Test methods and verification":

- *Part 1: General requirements;*
- *Part 2: Sit-on counterbalance trucks and rough terrain masted trucks up to and including 10 000 kg capacity;*
- *Part 3: Reach trucks up to and including 10 000 kg capacity;*
- *Part 4: Industrial variable reach trucks up to and including 10 000 kg capacity;*
- *Part 5: Industrial variable reach trucks greater than 10 000 kg capacity (under preparation);*
- *Part 6: Sit-on counterbalance trucks and rough terrain masted trucks greater than 10 000 kg capacity;*
- *Part 7: Variable reach and masted container trucks handling freight containers of 6 m (20 ft) length and longer;*
- *Part 8: Stand on counterbalance trucks up to and including 10 000 kg capacity (under preparation).*
- *Part 9: Order-picking, lateral- and front-stacking trucks with elevating operator position;*
- *Part 10: Towing and pushing tractors and burden carrier.*

It is intended to develop the parts related to the following machinery:

- Pallet stacking trucks (rider controlled);
- Single side loader;
- Multi-directional forklift truck;
- Articulated counterbalance lift truck;
- Non-stacking low-lift straddle carrier (as defined in ISO 5053-1:2015, 3.18);
- Stacking high-lift straddle carrier (as defined in ISO 5053-1:2015, 3.19).

EN 16842-9:2019 (E)

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

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

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.

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

EN 16842-9:2019 (E)

1 Scope

This document specifies the requirements and test procedures for 360° visibility of self-propelled industrial order-picking, lateral- and front-stacking trucks with elevating operator position in accordance with ISO 5053-1 (herein after referred to as trucks), without a load and it is intended to be used in conjunction with EN 16842-1.

The visibility of trucks driving in very narrow aisles and/or driving with elevated operator (above 500 mm) is not within the scope of this standard.

Where specific requirements in this part are modified from the general requirements in EN 16842-1, the requirements of this part are truck specific and to be used for self-propelled industrial order-picking, lateral- and front-stacking trucks with elevating operator position.

This part of EN 16842 deals with all significant hazards, hazardous situations or hazardous events relevant to the visibility of the operator for applicable machines when used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.

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 16842-1:2018, *Powered industrial trucks - Visibility - Test methods and verification - Part 1: General requirements*

EN ISO 3691-1:2015, *Industrial trucks - Safety requirements and verification - Part 1: Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks (ISO 3691-1:2011, including Cor 1:2013)*

EN ISO 3691-3:2016, *Industrial trucks - Safety requirements and verification - Part 3: Additional requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads (ISO 3691-3:2016)*

ISO 5053-1:2015, *Industrial trucks — Terminology and classification — Part 1: Types of industrial trucks*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16842-1, ISO 5053-1 and ISO 3691-1 apply.

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

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

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