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## Arbete med spänning – Isolerande lyftutrustningar för montering på fordon eller vagn

*Live working –  
Insulating aerial devices for mounting on a chassis*

Som svensk standard gäller europastandarden EN 61057:2017. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61057:2017.

### Nationellt förord

Europastandarden EN 61057:2017

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61057, Second edition, 2017 - Live working - Insulating aerial devices for mounting on a chassis**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61057, utgåva 1, 1994 och SS-EN 61057 C1, utgåva 1, 2008, gäller ej fr o m 2020-07-24.

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English Version

**Live working - Insulating aerial devices for mounting on a  
chassis  
(IEC 61057:2017)**

Travaux sous tension - Dispositifs élévateurs isolants pour  
montage sur un châssis  
(IEC 61057:2017)

Arbeiten unter Spannung - Isolierende Hubarbeitsbühnen  
für die Montage auf einem Fahrgestell  
(IEC 61057:2017)

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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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## **European foreword**

The text of document 78/1182/FDIS, future edition 2 of IEC 61057, prepared by IEC/TC 78 "Live working" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61057:2017.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-04-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-07-24

This document supersedes EN 61057:1993.

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

## **Endorsement notice**

The text of the International Standard IEC 61057:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60270	NOTE	Harmonized as EN 60270.
IEC 60743:2013	NOTE	Harmonized as EN 60743:2013 (not modified).
IEC 60855-1	NOTE	Harmonized as EN 60855-1.
IEC 61109	NOTE	Harmonized as EN 61109.
IEC 61235	NOTE	Harmonized as EN 61235.
IEC 61472:2013	NOTE	Harmonized as EN 61472:2013 (not modified).

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60060-1	-	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	-
IEC 60060-2	-	High-voltage test techniques - Part 2: Measuring systems	EN 60060-2	-
IEC 60212	2010	Standard conditions for use prior to and during the testing of solid electrical insulating materials	EN 60212	2011
IEC 60417-DB	-	Graphical symbols for use on equipment	-	-
IEC 61318	-	Live working - Conformity assessment applicable to tools, devices and equipment	EN 61318	-
IEC 62237 (mod)	2003	Live working - Insulating hoses with fittings for use with hydraulic tools and equipment	EN 62237	2005
ISO 16368	2010	Mobile elevating work platforms - Design, calculations, safety requirements and test methods	-	-
ISO 13850	-	Safety of machinery - Emergency stop function - Principles for design	EN ISO 13850	-
SAE J343	-	Test and Test Procedures for SAE 100R Series Hydraulic Hose and Hose Assemblies	-	-
SAE J517	-	Hydraulic hose	-	-

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## **LIVE WORKING – INSULATING AERIAL DEVICES FOR MOUNTING ON A CHASSIS**

### FOREWORD

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International Standard IEC 61057 has been prepared by IEC technical committee 78: Live working.

This second edition cancels and replaces the first edition published in 1991 and IEC TS 61813:2000. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) general review of the requirements and test provisions;
- b) preparation of the elements of evaluation of defects, and general application of IEC 61318:2007;
- c) distinguishes between tests for hollow booms and those for foam filled booms;
- d) references ISO 16368 for particular mechanical tests;

- e) further information on vacuum protection and leakage current monitoring and a mandatory requirement that aerial devices for bare hand work be fitted with a permanently installed lower test electrode system;
- f) *controls* of high electrical resistance;
- g) reference to SAE for insulating hydraulic hoses;
- h) inclusion of IEC TS 61813 for care, maintenance and in-service testing of aerial devices with insulating booms.

The text of this standard is based on the following documents:

FDIS	Report on voting
78/1182/FDIS	78/1183/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

Terms defined in Clause 3 are given in italic print throughout this standard.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

## INTRODUCTION

This document covers *insulating aerial devices* for use at temperatures between  $-25\text{ °C}$  and  $+55\text{ °C}$ . Where aerial devices are for use in unusual atmospheric conditions (for example, higher or lower temperatures), other considerations may be appropriate and will be identified by the *manufacturer* both in the markings and instructions for use.

The products covered by this document are primarily intended to be used for live working or for work within the live working zone. It recognizes that a user may specify a product, or products complying with this document where there is a risk of accidental contact with live (energized) part(s). In such circumstances users are reminded that national or local regulations regarding maintaining of Minimum Approach Distances to live parts, or those obtained from IEC 61472 are to be applied. Annex A of this document gives advice and information.

The product covered by this document may have an impact on the environment during some or all stages of its life cycle. These impacts can range from slight to significant, be short-term or long-term, and occur at the global, regional or local level.

Except for a disposal statement in the Instructions for use, this document does not include requirements and test provisions for the *manufacturers* of the product, or recommendations to the users of the product for environmental improvement. However, all parties intervening in its design, manufacture, packaging, distribution, use, maintenance, repair, reuse, recovery and disposal are invited to take account of environmental considerations.

# LIVE WORKING – INSULATING AERIAL DEVICES FOR MOUNTING ON A CHASSIS

## 1 Scope

This document is applicable to *insulating aerial devices* for mounting on a *chassis*, to be used for live working on electrical installations at nominal voltages above 1 000V r.m.s. AC in the range 45 Hz to 65 Hz and 1 500V DC.

The primary purpose of an aerial device is for work positioning of personnel. Other devices, such as jibs, may be fitted in order to assist the *operator* in performing the work.

This document also includes requirements and tests for the parts of the *chassis* influencing the performance of the *insulating aerial devices* to be used for live working.

When mounted on a *chassis*, the *insulating aerial device* becomes a component of a mobile elevating work *platform* (MEWP). Complementary requirements for the resulting MEWP are included in ISO 16368.

NOTE 1 In Europe, EN 280 instead of ISO 16368 is often used as reference for complementary requirements.

The products designed and manufactured according to this document contribute to the safety of users, provided they are used by skilled persons, in accordance with safe methods of work and the instructions for use.

NOTE 2 Any requirements that are in conflict with or are meant to be complementary to ISO 16368 are delineated herein.

Radial boom (digger) derricks are not covered by 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.

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60060-2, *High-voltage test techniques – Part 2: Measuring systems*

IEC 60212:2010, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60417, *Graphical symbols for use on equipment* (available at <http://www.graphical-symbols.info/equipment>)

IEC 61318, *Live working – Conformity assessment applicable to tools, devices and equipment*

IEC 62237:2003, *Live working – Insulating hoses with fittings for use with hydraulic tools and equipment*

ISO 16368:2010, *Mobile elevating work platforms – Design, calculations, safety requirements and test methods*

ISO 13850, *Safety of machinery – Emergency stop function – Principles for design*

SAE J343, *Test and Test Procedures for SAE 100R Series Hydraulic Hose and Hose Assemblies*

SAE J517, *Hydraulic hose*