



BSI Standards Publication

Cranes – Power driven winches and hoists

Part 2: Power driven hoists

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National foreword

This British Standard is the UK implementation of EN 14492-2:2019. It supersedes BS EN 14492-2:2006+A1:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MHE/3/-/6, Winches, hoists, lifting blocks and accessories.

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

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Cranes - Power driven winches and hoists - Part 2: Power driven hoists

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European foreword

This document (EN 14492-2:2019) has been prepared by Technical Committee CEN/TC 147 "Cranes - 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of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.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 document supersedes EN 14492-2:2006+A1:2009.

CEN/TC 147 WG 17 has reviewed EN 14492-2:2006+A1:2009 to adapt the standard to the technical progress, new requirements and changes in standards referenced; the main topics are:

- the design and calculation references to EN 13001-1, EN 13001-2 and EN 13001-3-1 are adopted in the document FEM-documents FEM 1.001, FEM 9.901 are no longer referenced;
- the design and calculation to EN 13001-3-2, *Limit states and proof of competence of wire ropes in reeving systems* is adopted in the document. The standard ISO 4308-1:2003, in the Chapter 5.7 Rope drives is no longer referenced.
- the design and calculation to EN 13001-3-5, *Limit states and proof of competence of forged hooks* is adopted in the document. The standards DIN 15400, UNI 9465 in the Annex H (informative) are no longer referenced;
- a guidance of relationships between the FEM and ISO-Classification (Hoist Classification) and the new Classification according to the EN 13001 series is added; see Annex C;
- the EN 14492-2 references to EN 13135;
- this document will supersede EN 14492-2:2006+A1:2009 and the relevant clauses of EN 14492-1:2006+A1:2009 winches dealing with lifting applications.

This is the second part of the standard "*Cranes — Power driven winches and hoists*". The parts of the standard are:

- *Part 1: Power driven winches*
- *Part 2: Power driven hoists* [the present document]

For the relationship with other European Standards for cranes, see Annex O.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document.

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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.

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Introduction

This European standard is a harmonized standard to provide one means for power driven hoists to conform to the essential health and safety requirements of the EU Directive 2006/42/EC (Machinery) and essential safety requirements of EU Directive 2014/34/EU (ATEX).

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

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

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

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1 Scope

This document is applicable to the design, information for use, maintenance and testing of power driven hoists, compact or open construction, with or without trolleys for which the prime mover is an electric, hydraulic or pneumatic motor. They are designed for the lifting and lowering of loads that are suspended on hooks or other load lifting attachments. Hoists can be used either in cranes, in other machines, e.g. rail dependent storage and retrieval equipment, monorail conveyors or by itself.

This document is applicable to the following types of hoist:

- a) rope hoist;
- b) chain hoist;
- c) belt hoist, except belt hoist with steel belts as hoisting media;
- d) NGL building hoists including supporting structures;
- e) Winches used for lifting operation.

This document is not applicable of the following hazards:

- f) this document does not cover hazards related to builders hoists for the transport of goods as defined in Noise Outdoor Directive (OND) 2000/14/EC;
- g) this document does not cover hazards related to the lifting of persons.

This document does not specify additional requirements for hazards related to the use of hoists in explosive atmospheres in underground mines.

The significant hazards covered by this document are identified in Clause 4.

This document is not applicable to power driven hoists that are manufactured before the date of publication of this document by CEN.

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 81-50:2014, *Safety rules for the construction and installation of lifts — Examinations and tests — Part 50: Design rules, calculations, examinations and tests of lift components*

EN 818-1:1996+A1:2008, *Short link chain for lifting purposes — Safety — Part 1: General conditions of acceptance*

EN 818-7:2002+A1:2008, *Short link chain for lifting purposes — Safety — Part 7: Fine tolerance hoist chain, Grade T (Types T, DAT and DT)*

EN 1127-1, *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology*

EN 12077-2:1998+A1:2008, *Cranes safety — Requirements for health and safety — Part 2: Limiting and indicating devices*

EN 12644-2, *Cranes — Information for use and testing — Part 2: Marking*