



**NSAI**  
Standards

Irish Standard  
I.S. EN 13135:2013+A1:2018

# Cranes - Safety - Design - Requirements for equipment

**I.S. EN 13135:2013+A1:2018**

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

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## National Foreword

I.S. EN 13135:2013+A1:2018 is the adopted Irish version of the European Document EN 13135:2013+A1:2018, Cranes - Safety - Design - Requirements for equipment

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EUROPEAN STANDARD

**EN 13135:2013+A1**

NORME EUROPÉENNE

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English Version

## Cranes - Safety - Design - Requirements for equipment

Appareils de levage à charge suspendue - Sécurité -  
Conception - Prescriptions relatives à l'équipement

Krane - Sicherheit - Konstruktion - Anforderungen an  
die Ausrüstungen

This European Standard was approved by CEN on 5 January 2013 and includes Amendment 1 approved by CEN on 22 November 2017.

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.

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<b>Contents</b>	<b>Page</b>
European foreword.....	4
Introduction .....	5
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	8
4 List of significant hazards .....	11
5 Safety requirements and/or protective measures .....	14
5.1 General.....	14
5.2 Electrical equipment.....	14
5.2.1 General.....	14
5.2.2 Physical environment and operating conditions .....	15
5.2.3 Electrical supply .....	15
5.2.4 Protection against electric shock by direct contact.....	15
5.2.5 Control circuits and control functions.....	15
5.2.6 Operator interface and mounted control devices .....	16
5.2.7 Power driven motions .....	16
5.2.8 Selection of motors.....	16
5.3 Mechanical equipment.....	25
5.3.1 General.....	25
5.3.2 Clutches and couplings.....	25
5.3.3 Brakes.....	25
5.3.4 Gear drives.....	28
5.3.5 Wheels on rails.....	29
5.3.6 Rope systems .....	30
5.3.7 Chain systems .....	33
5.3.8 Belt systems .....	34
5.3.9 Adjustment rods .....	36
5.3.10 Compensating means.....	36
5.4 Structures associated with mechanical equipment.....	36
5.4.1 Structures.....	36
5.4.2 Structural equipment .....	37
5.5 Fluid power systems .....	38
5.5.1 Controls and control devices of fluid power systems .....	38
5.5.2 Protective measures .....	38
5.5.3 Overload testing .....	39
5.5.4 Hydraulic equipment.....	39
5.5.5 Pneumatic equipment .....	42
5.6 Fixed load lifting attachments.....	43
5.6.1 General.....	43
5.6.2 Hooks.....	44
5.7 Equipment for safeguarding .....	45
5.7.1 General.....	45
5.7.2 Safety related functions of control systems.....	46
5.7.3 Measures to decrease the consequences of loss of drive power.....	46

5.7.4	Safety devices to prevent overrunning of movements.....	46
5.7.5	Derailment safety device .....	47
5.7.6	Provisions to prevent tipping.....	48
5.7.7	Storm-locking.....	48
5.7.8	Anti-collision device .....	49
5.8	Environmental effects .....	49
5.8.1	Protection against weakening of material .....	49
5.8.2	Temperature .....	49
5.9	High risk applications .....	50
5.9.1	General .....	50
5.9.2	Decreasing of the probability of occurrence of harm.....	50
5.9.3	Additional requirements for the transportation of hot molten metal .....	52
6	Verification of the safety requirements and/or protective measures .....	56
7	Information for use .....	60
7.1	General .....	60
7.2	Instructions for operation in special situations.....	60
7.3	Instructions for installation and maintenance .....	60
7.4	Maintenance instructions in the case of high risk applications .....	61
7.5	Marking .....	61
Annex A (informative)	Selection of a suitable set of crane standards for a given application .....	63
Annex B (informative)	Design of rail wheel flanges .....	65
Annex C (informative)	Guidance on rope systems.....	68
Annex D (informative)	Specification of endurance of equipment.....	69
D.1	Basic approach.....	69
D.2	Examples of application .....	70
D.2.1	Roller bearing .....	70
D.2.2	Lifting attachment, fixed or non-fixed.....	70
D.2.3	Turnbuckle.....	71
D.2.4	Electromechanical component .....	71
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC.....	72
Bibliography	.....	73

## **EN 13135:2013+A1:2018 (E)**

### **European foreword**

This document (EN 13135:2013+A1:2018) 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 October 2018, and conflicting national standards shall be withdrawn at the latest by October 2018.

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 22 November 2017.

This document supersedes A1 EN 13135-1:2013 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 mandate 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 Annex ZA, which is an integral part of this document.

Since the previous edition, major changes have been made in 5.2.8, 5.3.3.2, 5.3.3.5, 5.3.6.2, 5.6.2, 5.7.2, 5.9 and in Annex D, which deals with a new issue. There are several updates in standard references, and a number of clauses have been redrafted for reasons of clarity and technical and editorial accuracy.

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

This European Standard has been prepared to provide one means for equipment of cranes to conform with the essential health and safety requirements of the Machinery Directive.

The machinery concerned and the extent to which hazards, hazardous situations and 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.

## EN 13135:2013+A1:2018 (E)

### 1 Scope

This European Standard specifies requirements for the design and selection of electrical, mechanical, hydraulic and pneumatic equipment used in all types of cranes and their associated fixed load lifting attachments with the objectives of protecting personnel from hazards affecting their health and safety and of ensuring reliability of function.

NOTE Specific requirements for particular types of cranes, and for load lifting attachments, are given in the appropriate European Standard.

The electrical equipment covered by this European Standard commences at the point of connection of the supply to the crane (the crane supply switch) including systems for power supply and control feeders situated outside the crane, e.g. flexible cables, conductor wires or bars, electric motors and cableless controls.

The principles to be applied for cranes transporting hazardous loads are given in this standard. Particular requirements are given for cranes transporting hot molten metal.

The standard does not cover the detail design of individual items of equipment except with regard to their selection for specific aspects of use.

In general, the proof of competence calculations and related strength requirements or safety margins of equipment and components are not covered by this standard. These questions are covered in EN 13001 parts 1 and 2, and in the EN 13001-3 series that is partly under preparation (see Annex A). Exceptionally, some safety margins are given here for items not covered in EN 13001-series.

Hazards due to noise are not covered by this standard. They are addressed in safety standards specific to each type of crane.

The specific hazards due to potentially explosive atmospheres, ionising radiation, and operation in electromagnetic fields beyond the range of EN 61000-6-2 are not covered by this European Standard.

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

This European Standard is not applicable to cranes, which are manufactured before the date of publication by CEN of this standard.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

EN 1037, *Safety of machinery — Prevention of unexpected start-up*

EN 1561, *Founding — Grey cast irons*

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

EN 12385-4, *Steel wire ropes — Safety — Part 4: Stranded ropes for general lifting applications*

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