



SLOVENSKI STANDARD
SIST EN 12999:2011+A1:2012/oprA2:2014
01-september-2014

Žerjavi - Nakladalni žerjavi (vključno z dopolnilom A1)

Cranes - Loader cranes

Krane - Ladekrane

Appareils de levage à charge suspendue - Grues de chargement

Ta slovenski standard je istoveten z: EN 12999:2011+A1:2012/prA2

[SIST EN 12999:2011+A1:2012/kFprA2:2016](https://standards.iteh.ai/catalog/standards/sist/af20075d-36ae-4795-87d4-12b2291e4924/sist-en-12999-2011a1-2012-kfpra2-2016)

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ICS:

53.020.20 Dvigala Cranes

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
EN 12999:2011+A1:2012
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May 2014

ICS 53.020.20

English Version

Cranes - Loader cranes

Appareils de levage à charge suspendue - Grues de
chargement

Krane - Ladekrane

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 147.

This draft amendment A2, if approved, will modify the European Standard EN 12999:2011+A1:2012. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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

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Foreword

This document (EN 12999:2011+A1:2012/prA2:2014) has been prepared by Technical Committee CEN/TC 147 “Cranes - Safety”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

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).

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EN 12999:2011+A1:2012/prA2:2014 (E)**Change clauses to the following;****Clause 2 – Normative references**

Add the following after 1st paragraph "NOTE: In the event of conflicting statements between referenced documents and this document, the statements in this document apply"

Delete "pr" before EN 13001-3-1: and delete "2010" and replace with "2012+A1:2013"

Add "UN ECE R10 Rev 4, Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility" to end of clause 2

Clause 3 – Terms, definitions and terminology**3.1.1****loader crane**

Add to read: "a power driven attachment for a chassis" and delete "powered crane"

Add into same sentence after "...to the top of the column," "designed to be" and delete "usually"

Add to NOTE 1, after ".....installed on" : " another type of vehicle or on a"

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Amend new para 3.1.21 to read :

3.1.21**lifting movement**

raising or lowering of the load which causes a change in its vertical position

and then renumber all the definitions (3.1.22 – 3.1.45):

3.1.22**load holding valve**

valve which is normally closed and is opened by an external force to enable flow of fluid out of a hydraulic actuator

to

3.1.45**total lifting moment**

sum of net lifting moment and the moment produced by dead loads

Clause 5 - Safety requirements and/or safety measures**5.2.2.1 Hoisting and gravity effects of the mass of the crane**

Add to first paragraph after 2nd sentence: "For load combinations A1, B1 and C1, the .."

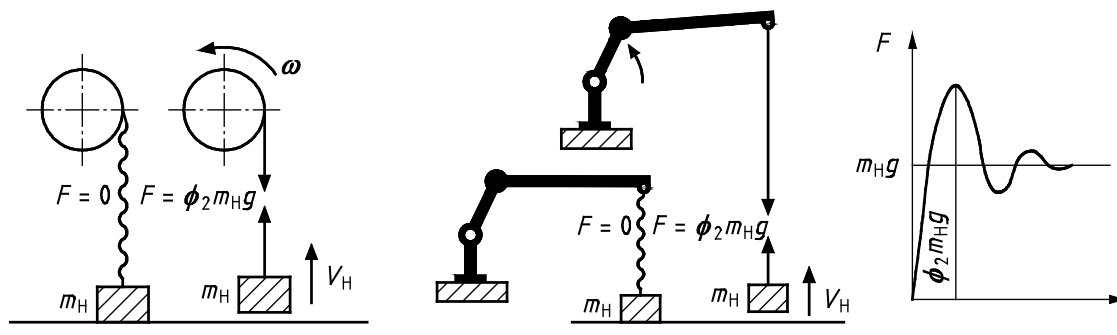
and after : " or expressed as an equation:

$$\phi_1 = \min (1,1 ; \phi_2)$$

Add new sentence to read: "For load combinations A2 and B2, the value of ϕ_1 shall be 0.95."

5.2.2.2 Hoisting and gravity effects of the gross load

Add following figure:



Add figure title: "Figure 2: Dynamic effect when hoisting a load"

Change in Table 2a to read:

| Hoisting class of appliance | β_2 | $\phi_{2,\min}$ for HD1 and HD4 | $\phi_{2,\min}$ for HD5 |
|-----------------------------|-----------|---------------------------------|-------------------------|
| HC 1 | 0,17 | 1,05 | 1,05 |
| HC 2 | 0,34 | 1,10 | 1,05 |

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Change in Table 2b after "Type of " insert "control system" and delete "hoist drive"

Change in description of HD1, HD4 and HD5 to read as follows:

- HD1 is when the lifting movement can only be operated at a fixed speed, e.g. simple on- off control;
- HD4 is when the start of the lifting movement is performed with continuously increasing speed, e.g. proportional spool valve by electrical or manual control;
- HD5 is when the step-less control automatically ensures that the dynamic factor ϕ_2 does not exceed $\phi_{2,\min}$, e.g. electronically controlled proportional pressure compensated spool valve;

5.3 Stress analysis

Delete: first paragraph

Add: New first paragraph to read:

"The strength of the steel structure shall be assessed in accordance with EN 13001-1, EN 13001-2 and EN 13001-3-1."

Delete in second paragraph before EN: "pr"

EN 12999:2011+A1:2012/prA2:2014 (E)**5.4.1.3 Stabilizer extension**

Add new wording first sentence "There shall be an indication showing that the s"

Change capital "S" to lower case "s"

Delete: " shall be marked to show when they" and "correctly" and "deployed"

The full sentence should read:

"There shall be an indication showing that the stabilizers extensions are fully extended"

5.4.4 Hoists

Delete second sentence:

"The nominal capacity of a hoist shall not be larger than 0,4 times the pushing capacity of the extension system unless the rated capacity limiter limits the hoist capacity with respect to the pushing capacity of the extension system."

5.5.5 Hoses, tubes and fittings

Add to first paragraph first sentence after "..for hoses shall" : "in general"

Add to first paragraph a new sentence:

" For HD5 drives, burst pressure for hoses shall be minimum 3.5 times the maximum working pressure."

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5.5.6.1 Loader cranes other than timber handling cranes

Change second paragraph c) : delete "or" and change to "and"

5.6.1 General**5.6.1.8**

Add after first sentence a second sentence:

"In this case it is essential that the rated capacity limiter reacts quickly enough in all working boom positions, in particular at high boom angles, where the lifting radius could increase very rapidly."

Add new subclause:

"5.6.5.3 Inclination limiter for timber handling cranes"

"Timber handling cranes may be equipped with a device, measuring increased inclination of the crane base due to load moment and stopping all crane movements, which need pump pressure, when the inclination reaches the predetermined maximum

Note: this device should not be confused with an inclination sensing device which may be incorporated into the rated capacity limiter of a loader crane not being a timber handling crane."

5.7.2 Symbols

Change first paragraph at a) second sentence: delete "2" change to "3"

Change first paragraph at c) second sentence: delete "2" change to "3"

Change under the Figure : delete "2" change to "3"

5.8.2.2 High seat (see informative Annex K)

Add at first paragraph, at a) : after "by the controls" insert "but may" and delete "or"

First paragraph, at b) shall read: "the minimum rated capacity of the seat with supporting members shall be 150 kg"

Delete: First paragraph, at b) fixing the seat to the loader crane shall withstand a force of 1 500 N acting centrally on the horizontal area of the seat without permanent deformation;

5.9.2 Electromagnetic compatibility

Add to first sentence after "EN 61000-6-2" : "or the technical requirements within UN ECE R10 Rev4".

Add to first sentence after "EN 61000-6-4": "or the technical requirements within UN ECE R10 Rev4"

5.10.2.1 Vehicle mounting

Add new paragraph after Note 2:

"When the vehicle engine can be started by the crane control, means shall be provided to ensure that the vehicle will not move as a result of the engine being started."

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5.10.6.2 Electromagnetic compatibility

Add to first sentence after "EN 61000-6-2" : "or the technical requirements within UN ECE R10 Rev4".

Add to second sentence after "EN 61000-6-4": "or the technical requirements within UN ECE R10 Rev4"

Table 4 — Methods to be used to verify conformity with the safety requirements and/or measures

Change in Table 4, 5.6.2.1 under a) : change "Figure 3" to "Figure 4"

Delete under the figure the text: "Figure 3" and change to "Figure 4"

Add title to Figure 4 : " Figure 4 — Graph of rated capacity against outreach"

Change in Table 4, 5.6.2.1 paragraph after j) : change "Figure 3" to "Figure 4"

Change in Table 4, 5.6.2.1 second paragraph after j) : Add a new second sentence to read :

"This also means that the response time should be short enough with respect to movements that increase the working radius and thus compromise the stability of the vehicle in all configurations."

Add in Table 4, 5.9.2: insert after ...EN 61000-6-2 "and EN 61000-6-4, or alternatively tests in accordance with technical requirements of UN ECE R10 Rev 4."

Add in Table 4, 5.10.6.2 : insert after ...EN 61000-6-2 "and EN 61000-6-4, or alternatively tests in accordance with technical requirements of UN ECE R10 Rev 4."