SLOVENSKI STANDARD
oSIST prEN 18413:2026

01-december-2026

Mobilne črpalke za beton s premičnimi in fiksnimi razdelilnimi rokami - predpostavljene obremenitve

Mobile concrete pumps with placing boom and stationary placing booms - load assumptions

Mobile Betonpumpen mit Verteilermast und stationäre Verteilermaste - Lastannahmen

Pompes à béton mobiles avec flèches de distribution et flèches de distribution fixes - hypothèses de charge

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ICS:

91.220	Gradbena oprema	Construction equipment

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 18413

October 2026

ICS 91.220

English Version

Mobile concrete pumps with placing boom and stationary placing booms - load assumptions

Pompes à béton mobiles avec flèches de distribution et flèches de distribution fixes - hypothèses de charge

Mobile Betonpumpen mit Verteilermast und stationäre Verteilermaste- Lastannahmen

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European foreword

This document (prEN 18413:2026) has been prepared by Technical Committee CEN/TC 151 "Construction equipment and building material machines - Safety", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

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Introduction

This document is a type-C standard as stated in EN ISO 12100:2010 [1].

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 in 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.

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1 Scope

This document defines load assumptions and verifications for the design of load-bearing structures of mobile concrete pumps with placing boom and stationary placing booms.

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 12001:2012, *Conveying, spraying and placing machines for concrete and mortar - Safety requirements*

EN 13001-2:2021, *Crane safety - General design - Part 2: Load actions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12001:2012 and the following apply.

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

3.1
boom tip
last coupling permanently connected to the last part of the placing boom

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3.2
boom tip load
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weight of all free-hanging components (e.g. last swivelling elbow, shut-off valve, end hose, coupling and safety elements) and contained concrete acting at the *boom tip* (3.1)

3.3
intended motion range of the placing boom
space which can be covered by all geometrically possible concrete-placing boom segments configurations allowed by the manufacturer rotated 360° around the vertical slewing axis of the boom foreseen by the manufacturer

3.4
drives
structural units with the primary task to alter the position of the machine or the individual components by acceleration, steady movement or deceleration

3.5
tilting edges
imaginary lines connecting the centres of the supports at the level of contact with the ground

3.6
pump operation
operating phase of the machine when concrete is pumped through the placing boom

Note 1 to entry: During the pump operation, the machine rests on its supporting structure, the pumping unit including hopper and the delivery line are partially or completely filled with concrete.

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