
Stroji za izdelavo gradbenih proizvodov iz betona in apnenega peščenca - Varnost - 8. del: Stroji in oprema za izdelavo gradbenih proizvodov iz apnenega peščenca (in betona)

Machines for the manufacture of constructional products from concrete and calcium-silicate - Safety - Part 8: Machines and equipment for the manufacture of constructional products from calcium-silicate (and concrete)

Maschinen für die Herstellung von Bauprodukten aus Beton und Kalksandsteinmassen - Sicherheit - Teil 8: Maschinen zur Herstellung von Bauprodukten aus Kalksandsteinmassen (und Beton)

Machines pour la fabrication de produits de construction en béton et silico-calcaire - Sécurité - Partie 8: Machines et installations pour la fabrication de produits de construction en silico-calcaire (et en béton)

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**Machines for the manufacture of constructional products from
concrete and calcium-silicate - Safety - Part 8: Machines and
equipment for the manufacture of constructional products from
calcium-silicate (and concrete)**

Machines pour la fabrication de produits de construction en
béton et silico-calcaire - Sécurité - Partie 8: Machines et
installations pour la fabrication de produits de construction
en silico-calcaire (et en béton)

Maschinen für die Herstellung von Bauprodukten aus Beton
und Kalksandsteinmassen - Sicherheit - Teil 8: Maschinen
zur Herstellung von Bauprodukten aus
Kalksandsteinmassen (und Beton)

This European Standard was approved by CEN on 1 November 2002 and includes Amendment 1 approved by CEN on 5 August 2010.

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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 Management Centre has the same status as the official versions.

[SIST EN 12629-8:2004+A1:2010](https://standards.iteh.ai/catalog/standards/sist/2004-08-01/12629-8-2002-a1)

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Foreword

This document (EN 12629-8:2002+A1:2010) 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 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 March 2011, and conflicting national standards shall be withdrawn at the latest by March 2011.

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

This document includes Amendment 1, approved by CEN on 2010-08-05.

This document supersedes EN 12629-8:2002.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{A_1}$ $\boxed{A_1}$.

$\boxed{A_1}$ 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. $\boxed{A_1}$

$\boxed{A_1}$ The series "*Machines for the manufacture of constructional products from concrete and calcium – silicate – Safety*" consists of following parts:

Part 1: Common requirements [standards.iteh.ai/catalog/standards/sist/3f0895c5-06ac-4d9b-8ba3-](https://standards.iteh.ai/catalog/standards/sist/3f0895c5-06ac-4d9b-8ba3-3266427d77a2/sist-en-12629-8-2004a1-2010)

Part 2: Block making machines [3266427d77a2/sist-en-12629-8-2004a1-2010](https://standards.iteh.ai/catalog/standards/sist/3f0895c5-06ac-4d9b-8ba3-3266427d77a2/sist-en-12629-8-2004a1-2010)

Part 3: Slide and turntable machines

Part 4: Concrete rooftile making machines

Part 5.1: Concrete pipe machines manufacturing in the vertical axis

Part 5.2: Concrete pipe machines manufacturing in the horizontal axis

Part 5.3: Pipe prestressing machines

Part 5.4: Concrete pipe coating machines

Part 6: Stationary and mobile equipment for the manufacture of precast reinforced products

Part 7: Stationary and mobile equipment for the benched manufacture of prestressed products

Part 8: Machines and equipment for the manufacture of constructional products from calcium silicate (and concrete). $\boxed{A_1}$

$\boxed{A_1}$ *deleted text* $\boxed{A_1}$

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EN 12629-8:2002+A1:2010 (E)

Introduction

A1 This European Standard is a Type C-standard as stated in EN ISO 12100.

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

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

This document specifies the additional requirements to and/or the deviations from EN 12629-1:2000+A1:2010 specific for the machines and equipment for the manufacture of constructional products from calcium silicate (and concrete) as described in 1.1.

With the aim of clarifying the intentions of the document it should be noticed that the following assumptions were made when producing it:

- specific conditions of use or environmental conditions out of the scope of the document shall be the subject of negotiations between the manufacturer and the user/owner,
- the equipment will only be used by competent and designated persons,
- the place of use/installation is adequately lit,
- all operations are carried out by specially trained operators. **A1**

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1 Scope

1.1 **A1** This part of EN 12629, taken together with EN 12629-1:2000+A1:2010 applies to hydraulic machines for the manufacture of bricks, blocs and elements of calcium-silicate (as illustrated in Annexes A and B).

NOTE Calcium-silicate can be replaced by concrete.

EN 12629-1:2000+A1:2010 specifies general requirements applicable to machines for the manufacture of constructional products from concrete and calcium-silicate.

This document specifies the additional requirements to and/or the deviations from EN 12629-1:2000+A1:2010 specific to the machines it covers. **A1**

1.2 **A1** This European Standard deals with all significant hazards pertinent to these machines, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4). This European Standard specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards.

Noise hazard and vibration hazard are considered as not significant for those machines. **A1**

1.3 This European Standard applies to the machines from the point at which the mixture enters the machine (see point 1 at annex A, B) until the point where the green products are removed from the machine to the curing system (see point 2 of annex A, B).

A1 *deleted text* **A1**

1.4 **A1** This document is not applicable to machines and equipment for the manufacture of constructional products from calcium silicate (and concrete), which are manufactured before the date of publication of this document by CEN. **A1**

2 Normative references

A1 The following referenced documents are indispensable for the application 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 12629-1:2000+A1:2010, *Machines for the manufacture of constructional products from concrete and calcium-silicate — Safety — Part 1: Common requirements.*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles (ISO 12100-2:2003)* **A1**

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3 Terms and definitions

A1 For the purposes of this document, the terms and definitions given in EN ISO 12100-1:2003, EN 12629-1:2000+A1:2010 and the following apply. **A1**

3.1

table

part of the machine in which the mould is set up-down

3.2

transmission levers

those parts of the machine that convert rotary motive power into reciprocal movement through gears and cams

3.3

drawing box

container having the shape of a box with an open or movable bottom. The drawing box fills the mould with the mixture

3.4

feed hopper

device that contains the mixture which is transported to the drawing box by a discharge gate or a dosing belt

3.5

take off device

integral part of the machine, that takes off the formed (green) products and puts them on a green product collection system or arranges them into formation for removal from the machine

3.6

green product collection system

integral transport system which is part of the machine that carries the green product from the take off device to the stacking equipment, or to the point where the green product is removed from the machine

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3.7

stacking equipment

transport system which is an integral part of the machine that takes the green products from either the green product collection system or the take off device and arranges them into formation for removal from the machine

3.8

brick wagon pusher

transport system which is an integral part of the machine which pushes the brick wagons from one position to the other within the area of the stacking equipment or take off device. It is only used at machines producing calcium-silicate products

3.9

stirring gear

mechanically driven equipment within the drawing box used to maintain the mixture flushing

4 List of significant hazards

This clause contains all hazards, hazardous situations and events as far as they are dealt with in this European Standard, identified by risk assessment significant for this type of machinery and which require action to eliminate or reduce risk.

A1 deleted text **A1**

4.1 Mechanical hazards (see informative annexes C and D)

Annexes C and D (informative) illustrate examples of common machine types.

In accordance with clause 5 of **A1** EN 12629-1:2000+A1:2010 **A1** the hazard zones, marked 1-10 at annexes C and D of this standard, are described in the following table (see also 4.1.1 to 4.1.7 for detailed mechanical hazards).

Table 1 — Mechanical hazards, hazard zones

Hazard zones	Hazard	References clause 4
1	Shearing	4.1.2
	Cutting or severing	4.1.3
2	Shearing	4.1.2
	Cutting or severing	4.1.3
	Drawing-in or trapping	4.1.5
	Impact	4.1.6
3	Crushing	4.1.1
	Shearing	4.1.2
	Cutting or severing	4.1.3
	Drawing-in or trapping	4.1.5
	Impact	4.1.6
4	Crushing	4.1.1
	Cutting or severing	4.1.3
	Entanglement	4.1.4
	Drawing-in or trapping	4.1.5

Hazard zones	Hazard	References clause 4
5	Shearing	4.1.2
	Cutting or severing	4.1.3
	Entanglement	4.1.4
	Drawing-in or trapping	4.1.5
6	Crushing	4.1.1
	Shearing	4.1.2
	Cutting or severing	4.1.3
7	Entanglement	4.1.4
	Drawing-in or trapping	4.1.5
8	Cutting or severing	4.1.3
9	Crushing	4.1.1
	Impact	4.1.6
10	Cutting or severing	4.1.3
	Entanglement	4.1.4
Equipment	High pressure	4.1.7

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4.1.1 Crushing hazards

Beneath descending stacking equipment (see hazard zone 3, annex C).

Beneath descending take off device (see hazard zone 2, annex D).

Between transmission levers and fixed parts (see hazard zone 9, annex C).

Between the moving drawing box and fixed parts (see hazard zone 4, annexes C and D).

Between brick wagons and between brick wagons and fixed structure of the machine (see hazard zone 6, annexes C and D).

4.1.2 Shearing hazards

The area in which the take off device reciprocates between the take off device and other machine parts (see hazard zone 2, annexes C and D).

Between the inner mould and the outside mould (see hazard zone 1, annexes C and D).

The area where the stacking equipment is moving, between moving and fixed parts (see hazard zone 3, annex C).

All moving parts of power transmission, between those parts and fixed parts of the machine (see hazard zone 5, annexes C and D).

Between brick wagons and fixed parts of the machine (see hazard zone 6, annexes C and D).